

Land at Malmesbury Road, Cricklade

Mac Mic Strategic Land Limited

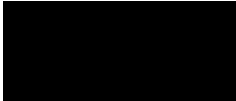
Ecological Impact Assessment (EcIA)

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1. Introduction

1.1. Site Background and Proposals

- 1.1.1. Ecology Solutions was initially commissioned by Mac Mic Strategic Land Limited in January 2022 to undertake a suite of ecological survey and assessment work of Land at Malmesbury Road, Cricklade, hereafter known as the 'Application Site'.
- 1.1.2. Outline planning permission is sought for up to 315 dwellings with associated access and infrastructure including Suitable Alternative Natural Greenspace (SANG). All matters are reserved except for access. The position of the Application Site relative to European designated sites in the locality is shown on Plan ECO1.
- 1.1.3. A large area of the Application Site is proposed to be allocated as bespoke SANG to mitigate for potential recreational impacts on the nearby SAC/SSSI. This area totalling approximately 6.9ha will be easily accessible from residential dwellings within the development and will comprise a circular route of sufficient distance to not only provide an attractive greenspace for any future residents of the development, but also of the wider area.

1.2. Site Characteristics

- 1.2.1. The Application Site comprises two parcels of land to the north and south of Stones Lane, in the west of the town of Cricklade. The Application Site comprises four grassland fields used as grazing pasture for cattle.

1.3. Ecological Assessment

- 1.3.1. This document assesses the ecological interest of the Application Site. The importance of the habitats within the Application Site is evaluated with due consideration given to the guidance published by the Chartered Institute of Ecology and Environmental Management (CIEEM)¹.
- 1.3.2. Where necessary, mitigation measures are recommended so as to safeguard any significant existing ecological interest within the Application Site and, where appropriate, potential enhancement measures are put forward and reference made to both national and local biodiversity priorities.

¹ CIEEM (2022). *Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine*. Version 1.3 – Updated February 2023. Chartered Institute of Ecology and Environmental Management, Winchester.

2. Survey Methodology

- 2.1. The methodology utilised for the survey work can be split into three areas, namely desk study, habitat survey and faunal survey. These are discussed in more detail below.

2.2. Desk Study

- 2.2.1. In order to compile background information on the Application Site and the surrounding area, Ecology Solutions contacted Gloucestershire Centre for Environmental Records (GCER) and Wiltshire & Swindon Biological Records Centre (WSBRC) for protected species records and recognised statutory and non-statutory designated sites.
- 2.2.2. The data search area included a 2km radius centred on the Application Site for protected species records and statutory and non-statutory designated sites.
- 2.2.3. Further information on designated sites from a wider search area was obtained from the online Multi-Agency Geographic Information for the Countryside (MAGIC)² database, which uses information held by Natural England and other organisations.
- 2.2.4. This information is reproduced at Appendix 1, and where appropriate on Plan ECO1.

2.3. Habitat Survey

- 2.3.1. The Application Site was initially surveyed in August 2023 with updates completed in July 2025 (F1 and F2) and October 2025 (F3 and F4) based on UK Habitat Classification (UKHab)³ methodology as recommended by Natural England.
- 2.3.2. UKHab is a comprehensive system for mapping and recording habitats, designed to provide a simple and robust approach to survey and monitoring, and replaces the Phase 1 survey methods. UKHab comprises of a principal hierarchy ranging from level 1 (ecosystems) to level 5 (defined habitats including Annex 1 habitats) when classifying habitats, for this survey, all primary habitats were recorded to level 4 minimum. Secondary habitats are also used to provide further information on a main primary habitat where appropriate.
- 2.3.3. Using the above method, the Application Site was classified into areas of similar botanical community types, with a representative species list compiled for each habitat identified.

² <https://www.magic.gov.uk>

³ UKHab Ltd (2023) *UK Habitat Classification Version 2.0* (at <https://ukhab.org>)

- 2.3.4. It is important to note that all the species that occur in each habitat would not necessarily be detectable during survey work carried out at any given time of the year, since different species are apparent at different seasons.
- 2.3.5. The UKHab survey was undertaken in July and October 2025 in suitable weather conditions and a robust botanical inventory has been collated allowing for a robust identification and classification on the habitats present.

2.4. Faunal Survey

- 2.4.1. Obvious faunal activity recorded during the Application Site survey, such as birds or mammals observed visually or by call, was recorded. Specific attention was paid to any potential use of the Application Site by protected species, priority species or other notable species.
- 2.4.2. In addition to general observations of faunal activity, specific surveys were undertaken to assess habitat suitability for dormouse, reptiles, great crested newt, badgers *Meles meles* and bats. Further detailed survey work was conducted with regards to badgers, bats, birds, great crested newt, dormouse and reptiles.

Badgers

- 2.4.3. The Application Site and immediate vicinity were subject to specific surveys for badgers in August 2023, July 2025 and October 2025.
- 2.4.4. The surveys comprised two main elements: firstly, searching thoroughly for evidence of badger setts. If any setts were encountered each sett entrance was noted and plotted, even if the entrance appeared disused. The following information was recorded where present:
 - i) The number and location of well used or very active entrances if present; these are clear of any debris or vegetation and are obviously in regular use and may, or may not, have been excavated recently.
 - ii) The number and location of inactive entrances; these are not in regular use and have debris such as leaves and twigs in the entrance or have plants growing in or around the edge of the entrance.
 - iii) The number of disused entrances; these have not been in use for some time, are partly or completely blocked and cannot be used without considerable clearance. If the entrance has been disused for some time all that may be visible is a depression in the ground where the hole used to be, together with the remains of the spoil heap.
- 2.4.5. Secondly, any evidence of badger activity such as well-worn paths, run-throughs, snagged hair, footprints, latrines and foraging signs was sought and if present recorded so as to build up a picture of the use of the Application Site by badgers.

Bats

Ground-level Tree Assessment

- 2.4.6. All trees within the Application Site were assessed for their potential to support roosting bats in August 2023 with an update completed in July 2025 and October 2025. This was done from the ground level using binoculars to visually search for any Potential Roost Features (PRFs). Features typically favoured by bats, or evidence of past use by bats were searched for, including:

- Obvious holes, e.g. rot holes and old Woodpecker holes;
- Dark staining on a tree below a hole;
- Tiny scratch marks around a hole from bats' claws;
- Cavities, splits and / or loose bark from broken or fallen branches, lightning strikes etc.; and
- Very dense covering of mature Ivy *Hedera helix* over the trunk.

Night-time Bat Walkover Surveys (NBW)

- 2.4.7. Three NBW surveys were undertaken in May, July and September 2025 respectively. The NBW survey methodology replaces the previous bat activity survey methodology that was recommended in previous survey guidelines produced by the Bat Conservation Trust. The surveyors were equipped with Echo Meter Touch 2 PRO bat detectors with all recorded data reviewed and analysed via Kaleidoscope software.
- 2.4.8. Surveyors were on-site prior to sunset and stationed along potential flight lines close to any potential roost structures. The NBW survey began at sunset. Surveyors remained in position to count, observe behaviour and make recordings of any bats observed for up to an hour after sunset. If streams of commuting bats are observed the surveyor may back track to move towards a roost.
- 2.4.9. The surveyors then began walking a transect that covered the majority of the Application Site with the aim of identifying any bats using the Application Site for foraging or dispersal. In order to maximise the encounter rate of bats (i.e. of both early- and late-emerging species), the walked transect portion of the NBW commenced around 30 to 60 minutes after sunset and continued until approximately two hours after sunset.
- 2.4.10. The surveyors observed the behaviour of any bat recorded, i.e. foraging or commuting, together with noting the species present and number of bats present at that location.
- 2.4.11. Surveys were conducted when the night-time temperature was above 10°C. The insectivorous diet of bats means there is little or no food available when temperature falls below this level and consequently levels of activity are low and may not accurately reflect the value of the application site for bats. The weather conditions for the surveys were recorded and any limitations noted.

- 2.4.12. Previous bat activity surveys were conducted in July, early September and late September 2023. The area covered in these surveys includes parcels of land that were not surveyed in 2025 due to access restrictions. The methodology for activity consists of surveyors starting the surveyor 15 minutes before sunset and following a transect along features like hedgerows and treelines and record bat activity describing the type of activity.

Remote Surveys

- 2.4.13. The NBW and activity surveys were complemented by the deployment of four SM4BAT static detectors in order to conduct remote surveys. These remote surveys were undertaken monthly from June to October 2025 and July, early September and late September 2023, to monitor activity across a minimum of five consecutive nights on each occasion. The static detectors were positioned in strategic areas to capture information on bat species and numbers of species using areas of the Application Site.
- 2.4.14. These detectors were programmed to record from 30 minutes before sunset until 30 minutes after sunset and were deployed for a period of at least five consecutive nights. The recorded data has been subsequently analysed with Kaleidoscope software. The total number of bat registrations per species was then calculated to gives an impression of the overall level of bat activity on a given survey night, as well as the proportion of activity attributed to a given species or group of species (*Myotis* species are not generally separated).

Constraints

- 2.4.15. Field surveys were undertaken with regard to best practice guidelines issued by Natural England (2023⁴), the Joint Nature Conservation Committee (2012⁵) and the Bat Conservation Trust (2023⁶).
- 2.4.16. It is acknowledged that night-time bat walkover and automated detector surveys were only taken in the southern and eastern parcels during the most recent suite of bat surveys. However, it is considered that the results of the surveys are sufficient in providing robust information on the Application Site's usage by bats, as the disconnected north parcel will not be developed and used for SANG purposes only and development on the western parcel would be located along the central hedgerow which was surveyed. Therefore, it is considered that there are no constraints to the survey effort.

⁴ Reason, P.F. and Wray, S. (2023) *UK Bat Mitigation Guidelines: a guide to impact assessment, mitigation and compensation for developments affecting bats*. Chartered Institute of Ecology and Environmental Management (CIEEM).

⁵ Mitchell-Jones, A.J. & McLeish, A.P. (2012). *Bat Workers' Manual*. 3rd edition. Joint Nature Conservation Committee (JNCC).

⁶ Collins, J. (2023). *Bat Surveys for Professional Ecologists: Good Practice Guidelines*. 4th Edition. The Bat Conservation Trust, London.

Birds

- 2.4.17. A suite of six breeding bird surveys was conducted by Ecology Solutions across the period April 2025 - July 2025, encapsulating the Application Site and the wider area.
- 2.4.18. To ascertain the breeding status of birds using the Application Site, a methodology based around Common Bird Census (CBC)⁷. The following activities are considered to denote breeding (including those probably breeding although definite proof was lacking):
- Bird apparently holding territory;
 - Courtship and display;
 - Nest-building (including excavating nest-hole);
 - Distraction display or feigning injury;
 - Adult carrying faecal sac or food;
 - Adult entering or leaving apparently occupied nest site;
 - Nest with eggs or eggshells found, or bird sitting but not disturbed;
 - Nest with young; or downy young of ducks, game-birds, waders and other nidifugous species; and
 - Recently fledged young.
- 2.4.19. All surveys were undertaken during suitable weather conditions, with each survey consisting of an experienced ornithologist slowly walking a transect of the Application Site designed to take in all the different on-site habitats. The direction walked was varied in between surveys, with the surveyor recording the locations, numbers and activity of all bird species present in and adjacent to the Application Site.

Constraints

- 2.4.20. Access to the northern and western parcel was not granted at the time of the breeding bird surveys. As such surveys of these parcels was completed from public land and the other land parcels using scopes and binoculars. Whilst there is a chance that some individual may have been missed due to the distance this is not considered to be a significant constraint given the habitats present within these parcels and the assemblage of bird species recorded.

Great Crested Newts

- 2.4.21. Six ponds were identified using aerial imagery and OS maps to be within 250m of the Application Site boundary, with only one being recorded within the Application Site. As the Application Site supports potential habitat for Great Crested Newts, Ecology Solutions conducted a Great Crested Newt eDNA survey in June 2022.

⁷ *Bird Census Techniques*: Second Edition, Bibbey et al., 2000.

eDNA Surveys

- 2.4.22. To determine the presence or absence of Great Crested Newts within the off-site pond (pond P1) located 50m south the Application Site, Ecology Solutions undertook eDNA testing in June 2022 (see Plan ECO4). The onsite 'pond' was not found to be holding water at the time of the survey and as such could not be surveyed.
- 2.4.23. While residing within a waterbody, Great Crested Newts deposit traces of DNA which can be detected through sampling the pond water and undergoing analysis within the laboratory. Pond samples can be collected between 15 April and 30 June inclusive.
- 2.4.24. Water samples of any given waterbody are taken in 20 separate locations, with a focus on areas of high suitability for Great Crested Newts. The samples are then pooled together into a self-supporting Whirl-pak Bag.
- 2.4.25. Once the pooled samples have been mixed thoroughly 15ml of water is removed and transferred into an ethanol filled test tube. This is repeated a further five times leaving six test tubes that contain a mix of the sampled water and ethanol. These are then immediately sent to a laboratory to undergo analysis.
- 2.4.26. Within the laboratory the samples are pooled together and tested via real time PCR (or q-PCR) in order to amplify select parts of the DNA allowing it to be detected and measured. A result of presence or absence is returned by the laboratory. If present (indicating presence of the species) no measure of the population size is obtained through this survey method.

Hazel Dormouse

- 2.4.27. Specific surveys for hazel dormouse were carried out between August and November 2022. The methodology utilised was principally derived from guidance given in the Dormouse Conservation Handbook⁹.
- 2.4.28. The survey technique involves the erection of nest tubes within all suitable habitat for hazel dormouse. A total of 100 nest tubes were installed in the hedgerows around the boundaries of the Application Site.
- 2.4.29. Nest tubes were placed in accordance with the guidance provided by the Mammal Society and Natural England and as recommended in the Dormouse Conservation Handbook⁹. Tubes were placed within hedgerows at approximately 10 metre intervals where suitable locations were identified. The nest tubes were attached with wire ties underneath suitably sturdy horizontal branches and positioned on average at approximately 1.5 metres above ground level.

⁹ Bulion, S., Wolton, R., & White, I. (2025) *Hazel Dormouse Conservation Handbook – Third edition*. The Mammal Society. ISBN: 978-1-0687982-3-8

- 2.4.30. Following deployment in August, monitoring surveys were undertaken monthly from July until November 2022.
- 2.4.31. The surveys can be scored for effort according to the method developed from the South West Dormouse Project (Chanin and Woods 2003). The system used provides an overall score that reflects the chances of Dormice being discovered if present, and thus provides an indicator of 'thoroughness' of a survey. This score is calculated based on the number of tubes used and the number of months the tubes were in place.
- 2.4.32. The months of the year are weighted according to the likelihood of recording dormice as set out below.

Table 1: Monthly Score Weighting (Chanin & Woods 2003)

Month	Weighting
April	1
May	4
June	2
July	2
August	5
September	7
October	2
November	2

- 2.4.33. A score of 20 (or above) is deemed a thorough survey, and a score of 15 to 19 may be regarded as adequate where circumstances do not permit more time or more tubes (particularly if other survey methods have also proved negative).
- 2.4.34. A full season of surveys would result in a score of 25 based on the weighting list above. This is based on the deployment of 50 nest tubes. Ecology Solutions deployed a total of 100 nest tubes for the period July to November resulting in a score of 36. A robust surveys was therefore conducted and the results can be relied upon to inform the Development Proposals.
- 2.4.35. It is noted that new guidelines for dormouse surveys were published in 2025. The new guidelines move away from assigning scores to certain months and instead the number of months required to demonstrate a robust survey is dependent on the quality of habitat present.
- 2.4.36. Given the species present and the level of connectivity to high suitability habitats surrounding the Application Site, it is considered to contain good quality habitat and therefore a survey completed across the period August to November would also be considered robust with regard to the new survey guidelines.

Reptiles

- 2.4.37. Specific surveys for reptiles were carried out between during between September and October 2022 and July and October 2023. The methodology utilised was principally derived from guidance given in Froglife Advice Sheet 10¹⁰, the Herpetofauna Workers' Manual¹¹, the Herpetofauna Groups of Britain and Ireland's (HGBI) advisory note¹² and Natural England's Standing Advice for Reptiles¹³.
- 2.4.38. Areas of suitable habitat were surveyed for the presence of reptiles using artificial refugia ("tins"). These tins provide shelter and heat up more quickly than the surroundings in the morning and can remain warmer than the surroundings in the late afternoon. Being ectothermic (cold blooded), reptiles use them to bask under and raise their body temperature which allows them to forage earlier and later in the day. A total of 72 and 180 approximately 0.5m x 0.5m roofing felt tins were deployed across Application Site in 2022 and 2023 respectively.
- 2.4.39. To determine presence / absence of reptiles, the tins are checked for reptile activity over seven visits at appropriate times of the day (avoiding the middle of the day when the ambient air temperature is at its highest) in accordance with Natural England guidance. Optimum weather conditions for reptile surveying are temperatures between 10°C and 18°C, intermittent or hazy sunshine and little or no wind.
- 2.4.40. All surveys to date were completed by experienced ecologists following species guidelines and survey protocols.

¹⁰ Froglife (1999) *Reptile Survey: an introduction to planning, conducting and interpreting surveys for snake and lizard conservation*. Froglife Advice Sheet 10. Froglife, Halesworth.

¹¹ Gent, T and Gibson, S. (2003). *Herpetofauna Workers' Manual*. JNCC, Peterborough.

¹² Herpetofauna Groups of Britain and Ireland (HGBI). (1998). *Evaluating Local Mitigation / Translocation Programmes: Maintaining Best Practice and Lawful Standards*.

¹³ Natural England (2011). Standing Advice for Reptiles.

http://www.naturalengland.org.uk/Images/Reptile%20feb11_tcm6-21712.pdf

3. Ecological Features

3.1. A UKHab survey was undertaken within the Application Site by Ecology Solutions in May (F1 and F2) and October 2025 (F3 and F4) recording the following primary habitats:

- Modified Grassland
- Ruderal / Ephemeral
- Other Woodland; Broadleaved
- Native hedgerow
- Native hedgerow with trees
- Line of trees
- Individual trees

3.2. The above habitats are illustrated in Plan ECO2.

3.3. Modified Grassland (UKHab code g4)

3.3.1. The Application Site comprises of four modified grassland fields that are cattle grazed. In order to confirm the type of grassland present, a total of 22 1m² quadrats were taken across the four fields. Quadrat locations were chosen at random prior to the survey. Findings of each quadrat are detailed in the table 3.3 below.

3.3.2. Alongside the quadrat surveys a list of species recorded within the field was taken. Species present include chickweed *Stellaria media*, creeping thistle *Cirsium arvense*, perennial ryegrass *Lolium perenne*, Yorkshire fog *Holcus lanatus*, white clover *Trifolium repens*, meadowgrass *Poa sp.*, creeping buttercup *Ranunculus repens*, timothy *Phleum pratense*, common sorrel *Rumex acetosa*, smooth meadow grass *Poa pratensis*, crested dog's-tail *Cynosurus cristatus*, pendulous sedge *Carex pendula*, meadow buttercup *Ranunculus acris*, meadow barley *Hordeum brachyantherum*, common couch *Elymus repens*, creeping bent *Ranunculus repens*, common bent *Agrostis capillaris*, tufted hairgrass *Deschampsia cespitosa*, hard rush *Juncus inflexus*, red clover *Trifolium pratense*, creeping cinquefoil *Potentilla reptans*, broadleaf plantain *Plantago major*, scented mayweed *Matricaria chamomilla*, bird's foot trefoil *Lotus corniculatus*, lady's bedstraw *Galium verum*, knotgrass *Polygonum aviculare*, white goosefoot *Chenopodium album*, fig leaved goosefoot *Chenopodium ficifolium* and cock's-foot *Dactylis glomerata*.

Table 3.3 Quadrat results

Quadrat number (Field)	Species present	Number of species
Quadrat 1 (F1)	creeping cinquefoil, smooth meadow grass, perennial rye grass, crested dog tail, creeping buttercup, meadow barley, white clover, red clover	8

Quadrat 2 (F1)	creeping cinquefoil, perennial ryegrass, crested dog tail, creeping bent, white clover, creeping buttercup, red clover and Yorkshire fog	8
Quadrat 3 (F1)	creeping buttercup, perennial rye grass, creeping bent and red clover	4
Quadrat 4 (F1)	meadow barley, creeping thistle, perennial rye grass, crested dog's-tail, creeping cinquefoil, white clover, creeping buttercup and red clover	8
Quadrat 11 (F1)	meadow buttercup, perennial rye grass, white clover, creeping bent, crested dog's-tail and Yorkshire fog	6
Quadrat 12 (F1)	creeping thistle, meadow barley, crested dog's-tail, creeping cinquefoil, perennial rye grass and white clover	6
Average number of species per quadrat F1		6.67
Quadrat 5 (F2)	smooth meadow grass, creeping buttercup, perennial rye grass, crested dog's-tail, meadow buttercup, Yorkshire fog, pendulous sedge and white clover	8
Quadrat 6 (F2)	smooth meadow grass, creeping buttercup, meadow buttercup, Yorkshire fog, perennial ryegrass, crested dog's-tail, white clover	7
Quadrat 7 (F2)	crested dog's-tail, meadow buttercup, Yorkshire fog, smooth meadow grass, meadow barley, creeping bent, white clover, perennial rye grass	8
Quadrat 8 (F2)	smooth meadow grass, meadow buttercup, creeping buttercup, creeping bent, perennial rye grass, common bent, white clover, crested dog's-tail and tufted hair grass	9
Quadrat 9 (F2)	white clover, creeping buttercup, meadow barley smooth meadow grass, Yorkshire fog, perennial rye grass, meadow buttercup and common couch	8
Quadrat 10 (F2)	meadow barley, creeping buttercup, crested dog's-tail, Yorkshire fog, perennial rye grass and smooth meadow grass	6
Average number of species per quadrat F2		7.67
Quadrat 13 (F3)	white clover, creeping buttercup, perennial rye grass, chickweed and Yorkshire fog	5

Quadrat 14 (F3)	white clover, creeping buttercup, perennial rye grass and Yorkshire fog	4
Quadrat 15 (F3)	creeping thistle, creeping buttercup, perennial ryegrass, smooth meadow grass, common sorrel	5
Quadrat 16 (F3)	creeping buttercup, perennial ryegrass, Yorkshire fog and smooth meadow grass	4
Quadrat 17 (F3)	creeping buttercup, perennial rye grass, smooth meadow grass, Yorkshire fog, chickweed and white clover	6
Average number of species per quadrat for F3		4.8
Quadrat 18 (F4)	chickweed, creeping thistle, perennial rye grass and Yorkshire fog	4
Quadrat 19 (F4)	creeping thistle, white clover, Yorkshire fog, perennial rye grass and meadow grass <i>sp</i>	5
Quadrat 20 (F4)	creeping thistle, creeping buttercup, white clover, perennial rye grass and meadow grass <i>sp</i>	5
Quadrat 21 (F4)	white clover, creeping buttercup, perennial rye grass, meadow grass <i>sp</i> and Yorkshire fog	5
Quadrat 22 (F4)	creeping thistle, timothy, white clover, perennial rye grass and meadow grass <i>sp</i>	5
Average number of species per quadrat for F4		4.8

3.4. Ruderal / Ephemeral (UKHab code u - 81)

- 3.4.1. A small area of ruderal is found in F3. This area was previous a wooded copse although the trees had been cutdown to stumps prior to the initial survey visit in 2023. Species in the tall ruderal include teasel *Dipsacus sp*, common sorrel, broadleaf dock *Rumex obtusifolius*, oxeye daisy *Leucanthemum vulgare*, spear thistle *Cirsium vulgare*, creeping cinquefoil *Potentilla reptans* and creeping thistle.

3.5. Lowland Mixed Deciduous (UKHab code w1f)

- 3.5.1. A small woodland is located in F4 of the Application Site, species present in the woodland include Oak *Quercus sp*, Sycamore *Acer pseudoplatanus*, Hazel *Corylus avellana*, Lime *Tilia sp*, Field maple *Acer campestre* and Dutch elm *Ulmus x hollandica*.

3.6. Native Hedgerows (UKHab code h2a)

- 3.6.1. A total of 17 hedgerows are present within the Application Site, all of which are native.
- 3.6.2. **H1** is a native hedgerow located to the south of stones lane on the northern boundary of the eastern parcel and is approximately 2.5m in height and 4m in width. Species present include hawthorn *Crataegus monogyna*, bramble *Rubus fruticosus*, blackthorn *Prunus spinosa*, dutch elm, ivy *Hedera helix*, black bryony *Tamus communis*, ash *Fraxinus excelsior*, hedge bindweed *Calystegia sepium*.
- 3.6.3. **H2** is a native hedgerow located separating field 1 and 3. **H2** is approximately 2m in height and 2m in width. Species present include blackthorn, hawthorn, bramble, white willow *Salix alba*, Rose *rosa sp*, hard rush, smooth meadow grass and field maple.
- 3.6.4. **H3** is a species-rich native hedgerow separating F1 and F12. **H3** is approximately 3m in height and 3m in width. Species present include Dutch elm, holly, hawthorn, blackthorn, bramble, rose *sp*, stone parsley *Sison amomum*, lords and ladies *Arum maculatum*, ash, ivy, creeping thistle, crested dogs tail, field maple, tufted hair grass, soft rush, common fleabane *Pulicaria dysenterica* and timothy.
- 3.6.5. **H4** is identified as a native hedgerow located to the east of F2. **H4** is approximately 2.5m in height and 4m in width. Species present include hawthorn, blackthorn, Dutch elm, bramble, rose *sp* and common nettle.
- 3.6.6. **H5** is a small hedgerow located to the southeast of F2. **H5** is approximately 5.5m in height and 4m in width. A number of trees are present at its southern extent of a maximum height of approximately 14m. Species present includes hawthorn, blackthorn, Dutch elm, sycamore, bramble, ash, field maple, rose *sp*, clustered dock *Rumex conglomeratus* and common nettle.
- 3.6.7. **H6** was identified as a native hedgerow located to the south of F2. **H6** is approximately 3m in height and 2m in width. Species present include hawthorn, blackthorn, bramble, creeping thistle, creeping cinquefoil, upright hedge parsley, ivy, wild privet *Ligustrum vulgare*, field maple, clustered dock and Dutch elm.
- 3.6.8. **H7** was identified as a native hedgerow and is located to the south of F2 separated from **H6** by treeline **TL1**. **H7** is approximately 3m in height and 2m in width. Species present include Rose *rosa sp*, hawthorn, bramble, lords and ladies, ivy, ash, blackthorn, tufted hair grass, soft rush, creeping thistle, stone parsley and Yorkshire fog.
- 3.6.9. **H8** was identified as a native hedgerow and is located along the western boundary of F2. **H8** is approximately 2.5m in height and 2m in width. Species present hawthorn, Rose *rosa sp*, Dutch elm, pendulous sedge, broad leaved dock, blackthorn, stone parsley, creeping thistle and common nettle.

- 3.6.10. **H9** was identified as native hedgerow and is located separating F2 and F3. **H9** is approximately 2.5m in height and 2m in width. Species present include creeping thistle, bramble, hawthorn, willowherb sp, bittersweet *Solanum dulcamara*, field maple, broad leaved dock and elder *Sambucus nigra*.
- 3.6.11. **H10** was identified as a native hedgerow with trees and is located to the north west of F3. Species present includes hawthorn, blackthorn, dog rose *Rosa canina*, Dutch elm, field maple and bramble.
- 3.6.12. **H11** was identified as a native hedgerow with trees and is located to the north west of F3. Species present includes hawthorn, blackthorn, dog rose, Dutch elm, field maple and bramble.
- 3.6.13. **H12** was identified as a native hedgerow and is located to the west of F3. Species present includes Dutch elm, ash, hawthorn, blackthorn, bramble and dog rose.
- 3.6.14. **H13** was identified as a native hedgerow with trees located to the south west of F3. Species present include hawthorn, blackthorn, Dutch elm, bramble and field maple.
- 3.6.15. **H14** was identified as a native hedgerow located to the south of F4. Species present includes Dutch elm, rowan *Sorbus aucuparia*, ash, hawthorn, blackthorn and bramble.
- 3.6.16. **H15** was identified as a native hedgerow located to the northwest of F4. Species present includes blackthorn, hawthorn, dog rose, bramble, Dutch elm, ash, crab apple and elder.
- 3.6.17. **H16** was identified as a native hedgerow with trees located to the south east of F4. Species present includes hawthorn, blackthorn, field maple, bramble, ivy, Dutch elm, ash and dog rose.
- 3.6.18. **H17** was identified as a native hedgerow with trees located to the northeast of F4. Species present includes ash, hawthorn, blackthorn, bramble and dog rose.
- 3.7. **Line of Trees**
- 3.7.1. **TL1** is a line of trees present on the southern boundary of F2 located between **H6** and **H7**. Species present in TL1 include English oak, blackthorn, hawthorn and ash.
- 3.8. **Individual Tree (UKHab code g - 100)**
- 3.8.1. **T1** was identified as a field maple with ivy growing around the trunk of the tree, located in hedgerow 2. T1 is approximately 8m in height and was deemed to have no potential for roosting bat.
- 3.8.2. **T2** was identified to be two trees being field maple and *rose sp*, located in hedgerow 3. T2 is approximately 7m in height and was deemed to have no potential for roosting bats.

- 3.8.3. **T3** was identified as a dying ash tree with ivy growing up the trunk also located in hedgerow 3. T3 is approximately 15m in height and was deemed to have low potential for bats.
- 3.8.4. **T4** was identified as a dying ash tree located in hedgerow 3 approximately 9m in height. T4 was deemed to have potential for roosting bats with broken limbs and lifted bark and was therefore labelled as a PRF-M
- 3.8.5. **T5** was identified as an oak tree with ivy growing up the trunk, located in hedgerow 9. T5 was deemed to have low potential for roosting bats.
- 3.8.6. **T6** was identified as a field maple, also located in hedgerow 9. T5 was deemed to have low potential for roosting bats.
- 3.8.7. **T7** was identified as an oak tree with ivy growing up the trunk in hedgerow 7. T7 was deemed to have potential for roosting bats due to ivy coverage and was therefore labelled as PRF-I
- 3.8.8. **T8** was identified as an oak tree with ivy growing up the trunk in hedgerow 7. T8 was deemed to have potential for roosting bats due to the ivy coverage and broken limbs and was therefore labelled as PRF-I
- 3.8.9. **T9** was not identified as the tree was dead. T9 was covered in ivy located in hedgerow 7. T9 was deemed to have potential for roosting bats due to the ivy coverage, lifted bark and broken limbs and was therefore labelled as PRF-I

3.9. Background Records

- 3.9.1. No species listed under the Schedule 8 of the Wildlife and Countryside Act 1981 (as amended) nor in Section 41 of the Natural Environment Rural Communities (NERC) Act 2006 (as amended) were returned by the data search from within the Application Site.
- 3.9.2. The nearest record for such a plant species was for bluebell *Hyacinthoides non-scripta* recorded in a location approximately 0.55km west of the Application Site boundary and recorded in 1995. Other such species returned by the data search include tubular water-dropwort *Oenanthe fistulosa* and pasqueflower *Pulsatilla vulgaris*. None of these species were recorded within the Application Site.

Invasive non-native Species (INNS)

- 3.9.3. No INNS plant species listed under Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) was returned by the data search. None were recorded within the Application Site.

4. Wildlife use of the Application Site

- 4.1. General observations were made during the surveys of any faunal use of the Application Site, with specific attention paid to the potential presence of protected, priority, or otherwise notable species. Specific surveys have been completed regarding bats and reptiles.

4.2. Badgers

- 4.2.1. No confirmed evidence of badger activity and no setts have been recorded within the Application Site during any of the survey work completed since 2023. It is however noted, that a badger sett is located to the east of the Application Site underneath offsite farm buildings. This is detailed within the ecological reporting submitted in support of a planning application (Planning Ref = PL/2021/10404). Therefore, the Application Site is assumed to be used by badgers for foraging and commuting purposes by the local badger population.

Background Records

- 4.2.2. A total of 5 badger records were returned in the data search between 2015 and March 2025. The closest being approximately 1.3km to the south of the Application Site in 2016. The most recent of the recordings was in 2024 and was approximately 1.6km to the northwest of the Application Site.

4.3. Bats

- 4.3.1. The grassland which is present throughout the Application Site was identified as having potential for foraging bats. The on-site hedgerows and treelines provide further foraging and commuting opportunities for locally present bat species. Accordingly, a suite of bat surveys was conducted in July and September 2023, and April – September 2025. The results of the surveys are detailed below.

Ground Level Tree Assessment

- 4.3.2. All trees within and directly adjacent to the Application Site were appraised for their suitability to support roosting bats during the UKHab survey in July and October 2025.
- 4.3.3. A total of six trees were deemed to have potential roost features these are T4, T7, T8, T9, T10 and T11. T4, an ash tree suffering with ash dieback was found to have a hole likely leading to a cavity present on the north-eastern aspect that could support multiple bats (PRFM). The remaining trees were deemed to have roost features able to support individual or small numbers of bats including lifted bark, small cracks and ivy coverage (PRFI). All trees recorded to have roosting features are illustrated on Plan Eco4.

NBW Surveys

- 4.3.4. To ascertain the general abundance of foraging and commuting bats across site, Ecology Solutions conducted a total of three NBW surveys in June –

August 2023 April, July and September 2025. The results of these surveys are illustrated on Plans ECO3a, ECO3b and ECO3c.

- 4.3.5. The surveys were undertaken in favourable weather conditions, with these, alongside the timings of the surveys, summarised in Table 3.1 below.

Table 3.1a. NBW survey timings and conditions in 2025

Date	14.05.25	15.07.25	16.09.25
Survey Type	NBW	NBW	NBW
Sunset	20:03	21:18	19:19
Survey Start	20:03	21:18	19:19
Survey End	22:03	23:18	21:19
Cloud cover (%)	25	40	25
Temperature (°C)	12 to 11	15	16 to 13
Weather and Wind	Light rain towards end of survey, dry light breeze	Slightly wet under foot light breeze	Light breeze and dry

Table 3.1b. NBW survey timings and conditions in 2023

Date	31.07.23	04.09.23	26.09.23
Survey Type	NBW	NBW	NBW
Sunset	20:26	20:57	19:58
Survey Start	20:11	20:42	19:43
Survey End	22:26	22:57	21:58
Cloud cover (%)	0	90	70
Temperature (°C)	22 to 19	21 to 19	19 to 17
Weather and Wind	Light breeze and dry	Slight drizzle and slight breeze	Moderate winds and dry

NBW Survey 14.05.25

- 4.3.6. The results of the NBW survey completed on 14th May 2025 are summarised below and in Table 3.2a and are illustrated on Plan ECO3a.
- 4.3.7. This survey recorded a moderate level of bat activity which was relatively evenly distributed around the field boundary habitats. The registrations were dominated by noctule *Nyctalus noctula* with fewer numbers of common pipistrelle, soprano pipistrelle, serotine and *Myotis* sp also recorded.

Table 3.2a. NBW Survey results 14.05.25

Species	Number of Registrations	First Recording after Sunset 20:52 (time of recording)
Common pipistrelle	15	21:54
Soprano pipistrelle	3	21:32
Noctule	55	21:18
Serotine	1	21:58
Myotis	1	21:55
Total	75	

NBW Survey 15.07.25

- 4.3.8. The results of the NBW survey completed on 15th July 2025 are summarised below and in Table 3.2b and are illustrated on Plan ECO3b.
- 4.3.9. This survey recorded a low level of bat activity which was relatively evenly distributed around the field boundaries. The registrations were largely dominated by common pipistrelle with fewer registrations of soprano pipistrelle, noctule and *Myotis* sp also recorded.

Table 3.2b. NBW Survey results 15.07.25

Species	Number of Registrations	First Recording after Sunset 20:00 (time of recording)
Common pipistrelle	18	21:54
Soprano pipistrelle	7	21:32
Noctule	1	21:18
Myotis	1	21:55
Total	27	

NBW Survey 16.09.25

- 4.3.10. The results of the NBW survey completed on 16th September 2025 are summarised below and in Table 3.2c and are illustrated on Plan ECO3c.
- 4.3.11. This survey recorded a low level of bat activity with the activity largely focused towards the eastern boundary, with several bats recorded commuting and foraging along the eastern boundary. The registrations were largely dominated by common pipistrelle with fewer registrations of soprano pipistrelle, noctule and Leisler's also recorded.

Table 3.2c. NBW Survey results 16.09.25

Species	Number of Registrations	First Recording after Sunset 19:19 (time of recording)
Common pipistrelle	40	19:46
Soprano pipistrelle	12	19:51
Noctule	8	19:49
Leisler's	1	19:42
Total	61	

NBW Survey 31.07.23

- 4.3.12. The results of the NBW survey completed on 31st July 2023 are summarised below and in table 3.2d and are illustrated on Plan ECO3d.
- 4.3.13. The survey recorded a moderate level of bat activity with the activity largely focused towards the south and eastern boundaries, with several bats commuting and foraging. The registrations were largely dominated by serotine, common pipistrelle and noctule, fewer numbers of soprano pipistrelle, *Myotis* spp and Leisler's were also recorded.

Table 3.2d NBW Survey results 31.07.23

Species	Number of Registrations	First Recording after Sunset 20:58 (time of recording)
Common pipistrelle	98	21:05
Soprano pipistrelle	16	21:23
Noctule	56	21:05
Leisler's	5	22:13
<i>Myotis</i>	14	22:00
Serotine	181	21:24
Total	370	

NBW Survey 04.09.2023

- 4.3.14. The results of the NBW survey completed on 4 September 2023 are summarised below and in table 3.2e and are illustrated on Plan ECO3e.
- 4.3.15. The survey recorded a low level of bat activity with the activity mainly spread out across the south and east boundary with activity also on central hedgerows. The registrations were largely dominated by noctule, common pipistrelle and soprano pipistrelle, with a single registration of *Myotis* sp also recorded.

Table 3.2e NBW Survey results 04.09.23

Species	Number of Registrations	First Recording after Sunset 19:47 (time of recording)
Common pipistrelle	26	20:16
Soprano pipistrelle	20	20:27
Myotis	1	20:40
Noctule	33	19:55
Total	80	

NBW Survey 26.09.2023

- 4.3.16. The results of the NBW survey completed on 26th September 2023 are summarised below and in table 3.2f and are illustrated on Plan ECO3f.
- 4.3.17. The survey recorded a moderate level of bat activity with the activity spread mainly across the southern central hedgerow and the southern hedgerow. The registrations are largely dominated by common pipistrelle, noctule and soprano pipistrelle with fewer numbers of *Myotis* spp, serotine, brown long-eared bat, Nathusius' pipistrelle and Leisler's.

Table 3.2f NBW Survey results 26.09.23

Species	Number of Registrations	First Recording after Sunset 18:57 (time of recording)
Common pipistrelle	61	19:17
Soprano pipistrelle	30	19:17
Nathusius pipistrelle	1	19:34
Noctule	48	19:17
Leisler's	1	20:00
Myotis	13	19:31
Brown long-eared	4	20:32
Serotine	15	19:34
Total	173	

Remote Surveys - 2025

- 4.3.18. Remote surveys were undertaken monthly from April 2025 – October 2025 with the static detectors positioned in the northeast and southwest of the Application Site. Their locations are shown on Plan ECO3. The results of the remote surveys are discussed below.

Remote Survey 1 (25.04.25 to 29.04.25)

- 4.3.19. The four static bat detectors deployed over the five nights between 24th and 29th April 2025 recorded a total of 5774 registrations.

- 4.3.20. The static located at Position 1 along the western central hedgerow recorded a total of 979 registrations, averaging 196 registrations per evening. Further details are provided in the below Table 3.4a.

Table 3.3a. Static Bat Detector at Position 1 Survey Results in April

	Total at Position	Earliest registration post sunset at Position	Latest registration pre sunrise at Position
PIPPIP	886	00:43:51	05:43:33
PIPPYG	39	00:39:37	05:54:27
MYOSP	14	01:23:28	05:45:15
BARBAR	3	03:03:19	06:25:41
PLEAUR	5	01:15:59	06:16:10
NYCLEI	3	01:00:29	06:23:52
NYCNOC	29	00:27:26	06:30:50

- 4.3.21. The static located at position 2 recorded a total of 1026 registrations, averaging 205 registrations per evening. Further details provided in the below table 3.4b.

Table 3.3b Static Bat Detector at position 2 survey results in April

	Total at Position	Earliest registration post sunset at Position	Latest registration pre sunrise at Position
PIPPIP	673	00:27:10	05:45:19
PIPPYG	265	00:25:38	05:49:36
MYOSP	31	00:52:22	05:45:43
BARBAR	1	06:09:41	03:15:19
EPTSER	8	00:55:41	06:05:44
NYCNOC	42	00:24:57	05:51:56

- 4.3.22. The static at Position 3 along the southern central hedgerow recorded a total of 668 of these registrations, which is approximately 134 registrations per evening. Further details are provided in the below Table 3.3c.

Table 3.3c. Static Bat Detector at Position 3 Survey Results in April

	Total at Position	Earliest registration post sunset at Position	Latest registration pre sunrise at Position
PIPIPI	566	00:39:12	05:45:04
PIPPYG	42	00:42:59	05:49:15
MYOSP	11	01:35:00	05:51:25
PLEAUR	1	01:24:52	08:00:08
NYCLEI	2	00:53:35	08:28:25
NYCNOC	46	00:30:10	06:28:10

- 4.3.23. The static located at position 4 in the southern corner of the Application Site recorded the highest number of registration of the four statics with 3101 registrations, averaging 620 registrations per evening. Further details provided in the below table 3.4d.

Table 3.3d Static Bat Detector at position 4 survey results in April

	Total at Position	Earliest registration post sunset at Position	Latest registration pre sunrise at Position
PIPIPI	2100	00:30:21	05:43:55
PIPPYG	769	00:28:22	05:48:17
PIP NAT	2	01:37:26	06:06:33
MYOSP	115	00:45:09	06:49:38
BARBAR	2	06:18:00	06:25:41
PLEAUR	30	00:53:28	06:16:10
RHIHIP	1	07:03:43	02:10:17
EPTSER	11	00:46:45	06:59:30
NYCLEI	0	01:00:29	06:23:52
NYCNOC	71	00:27:26	06:30:50

- 4.3.24. Ten bat species were recorded by the four static detectors during the April survey. The registrations were dominated by common pipistrelle, with this species comprising of 4210 of the 5774 total registrations, with the second most numerous species, soprano pipistrelle, accumulating an additional 1115 of the registrations.

- 4.3.25. The earliest registration was recorded one minute before sunset and is attributed to noctule. Relatively early registrations were also recorded for common pipistrelle and soprano pipistrelle, with these species recorded 27 and 25 minutes after sunset respectively. The last registration was recorded 1 hour and 34 minutes before sunrise and is attributed to common pipistrelle.

Remote Survey 2 (14.05.25 to 19.05.25)

- 4.3.26. Across the four static detectors deployed during the May survey, there was a slightly higher level of activity recorded when compared to April. In total there were 6780 registrations across the period of five nights between 14th and 19th May 2025, which equates to approximately 1356 registrations per evening.
- 4.3.27. As detailed below in Table 3.4a, 240 registrations were recorded at Position 1 during the May survey period, which equals approximately 48 registrations per night.

Table 3.4a Static Bat Results at position 1 in May

	Total at Position	Earliest registration post sunset at Position	Latest registration pre sunrise at Position
PIPIPI	113	00:50:20	00:39:27
PIPPYG	20	00:57:39	02:01:45
MYOSP	1	03:10:10	05:06:50
PLEAUR	2	01:43:50	03:36:50
NYCLEI	4	02:10:14	06:29:32
NYCNOC	100	00:24:11	06:30:50

- 4.3.28. The static located at position 2 recorded a large amount of bat activity with 2537 registrations, averaging 508 registrations per evening. Further details provided in the below table 3.4b.

Table 3.4b Static Bat Results at position 2 in May

	Total at Position	Earliest registration post sunset at Position	Latest registration pre sunrise at Position
PIPIPI	1582	00:35:21	00:43:02
PIPPYG	517	00:33:44	00:34:16
PIP NAT	55	00:37:03	00:47:17
MYOSP	85	00:56:18	01:12:50

RHIHIP	2	02:03:20	01:47:57
PLEAUR	7	01:43:50	03:36:50
EPTSER	4	02:08:49	05:33:12
NYCNOC	285	00:24:10	00:25:09

- 4.3.29. The static in position 3 recorded a lower amount of bat activity in comparison to other positions with a total of 284 registrations, averaging 57 registrations per evening. Further details provided in the below table 3.4c.

Table 3.4c Static Bat Results at position 3 in May

	Total at Position	Earliest registration post sunset at Position	Latest registration pre sunrise at Position
PIPIPI	179	-00:10:23	01:50:29
PIPPYG	21	-00:13:59	02:08:02
MYOSP	7	03:52:40	04:12:19
EPTSER	3	01:19:11	04:35:56
NYCLEI	7	01:35:55	02:47:20
NYCNOC	67	-00:30:36	01:40:48

- 4.3.30. The static located in position 4 in the southern corner of the Application Site recorded a total of 3719 registrations, averaging 744 registrations per evening. Further details provided in the below table 3.4d.

Table 3.4d Static Bat Results at position 4 in May

	Total at Position	Earliest registration post sunset at Position	Latest registration pre sunrise at Position
PIPIPI	2128	00:32:38	00:45:16
PIPPYG	401	00:37:00	00:43:52
PIP NAT	11	01:13:09	01:07:41
MYOSP	138	00:52:10	01:31:48
PLEAUR	39	01:15:27	00:54:23
EPTSER	14	01:58:34	01:52:22
NYCNOC	988	00:26:39	00:41:57

- 4.3.31. Nine bat species were recorded across the four statics during the May survey. The registrations were largely dominated by common pipistrelle, with this species comprising of 4002 of the 6720 total registrations.
- 4.3.32. The earliest registration was of a noctule 30 minutes before sunset, early registrations also came from common pipistrelle and soprano pipistrelle. The latest of the registrations before sunrise was also of a noctule 25 mins before sunrise.

Remote survey 3 (12.06.2025 to 17.06.2025)

- 4.3.33. Across the four static detectors deployed during the May survey, there was a higher level of activity recorded at all positions when compared to May. In total there were 10563 registrations across the period of five nights between 12th and 17th May 2025, which equates to approximately 1761 registrations per evening.
- 4.3.34. As detailed in Table 3.5a, 882 registrations were recorded at position 1 during the June survey period, which equals 148 registrations per night.

Table 3.5a Bat Static Results at position 1 in June

	Total at Position	Earliest registration post sunset at Position	Latest registration pre sunrise at Position
PIPPIP	725	01:23:07	00:48:26
PIPPYG	46	01:10:41	00:53:57
PIP NAT	11	00:36:21	01:48:37
MYOSP	10	01:51:00	01:12:32
EPTSER	4	02:19:38	04:30:29
NYCNOC	86	00:08:36	00:32:44

- 4.3.35. The static located in position 2 of the Application Site recorded a total of 3719 registrations, averaging 599 registrations per evening. Further details provided in the below table 3.5b.

Table 3.5b Bat Static Results at position 2 in June

	Total at Position	Earliest registration post sunset at Position	Latest registration pre sunrise at Position
PIPPIP	2753	00:57:12	00:34:56
PIPPYG	396	01:03:45	00:32:22

PIPNAT	13	00:59:11	01:31:39
MYOSP	73	01:57:19	01:22:52
EPTSER	6	01:58:04	03:43:29
PLEAUR	26	01:33:49	06:34:10
NYCNOC	325	00:10:35	00:29:16

- 4.3.36. The static located in position 3 recorded a total of 1259 registrations, averaging 210 registrations per evening. Further details provided in the below table 3.5c.

Table 3.5c Bat Static Results at position 3 in June

	Total at Position	Earliest registration post sunset at Position	Latest registration pre sunrise at Position
PIPPIP	911	00:37:57	00:49:46
PIPPYG	86	00:43:26	01:27:43
PIPNAT	18	00:41:48	03:18:59
MYOSP	33	01:27:28	01:42:15
EPTSER	8	01:32:39	04:18:47
NYCNOC	203	00:12:03	00:33:09

- 4.3.37. The static located in position 4 in the southern corner of the Application Site recorded a total of 4703 registrations, averaging 784 registrations per evening. Further details provided in the below table 3.5d.

Table 3.5d Bat Static Results at position 4 in June

	Total at Position	Earliest registration post sunset at Position	Latest registration pre sunrise at Position
PIPPIP	3321	00:16:48	00:29:05
PIPPYG	645	00:23:35	00:30:00
PIPNAT	315	00:31:10	00:34:54
MYOSP	83	00:39:15	00:56:40
EPTSER	43	01:33:06	01:57:58
NYCNOC	296	00:02:26	00:43:12

- 4.3.38. Six bat species were recorded across the four statics during the June survey. The registrations were largely dominated by common pipistrelle, with this species comprising of 7710 of the 10563 total registrations.
- 4.3.39. The earliest registration was of a noctule 2 minutes after sunset, early registrations also came from common pipistrelle and soprano pipistrelle. The latest of the registrations before sunrise was of a noctule 29 mins before sunrise.

Remote survey 4 (22.07.25 to 27.07.25)

- 4.3.40. Due to a technical fault position 2 and 4 recorded no data during the July period therefore overall numbers of registrations are lower.
- 4.3.41. Across the two static detectors deployed there were 818 registrations across the period of five nights between 22nd and 28th July 2025, which equates to approximately 164 registrations per evening.
- 4.3.42. The static located in position 1 recorded a lower amount of bat activity with 153 registrations, averaging 31 registrations per evening. Further details provided in the below table 3.6a

Table 3.6a Bat Static Results at position 1 in July

	Total at Position	Earliest registration post sunset at Position	Latest registration pre sunrise at Position
PIPPIP	114	00:34:41	01:12:58
PIPPYG	17	00:27:35	01:07:40
MYOSP	5	00:39:09	01:39:19
NYCNOC	17	00:20:51	00:43:12

- 4.3.43. The static located in position 3 in the southern central hedgerow of the Application Site recorded a total of 665 registrations, averaging 133 registrations per evening. Further details provided in the below table 3.5b.

Table 3.5b Bat Static Detector at position 3 in July

	Total at Position	Earliest registration post sunset at Position	Latest registration pre sunrise at Position
PIPPIP	427	00:34:41	01:12:58
PIPPYG	62	00:27:35	01:07:40
MYOSP	74	00:39:09	01:39:19

PLEAUR	2	02:16:07	02:49:11
EPTSER	10	01:40:32	02:26:45
NYCNOC	90	00:23:11	00:43:39

4.3.44. Six bat species were recorded across the two statics during the July survey. The registrations were largely dominated by common pipistrelle, with this species comprising of 541 of the 818 total registrations.

4.3.45. The earliest registration was of a noctule 20 minutes after sunset, early registrations also came from common pipistrelle and soprano pipistrelle. The latest of the registrations before sunrise was of a noctule 43 mins before sunrise.

Remote survey 5 (12.08.25 to 17.08.25)

4.3.46. Across the four static detectors deployed during the August survey there were 4533 registrations across the period of five nights between 12th and 17th August 2025, which equates to approximately 907 registrations per evening.

4.3.47. The static located in position 1 recorded a moderate amount of bat activity with 741 registrations, averaging 148 registrations per evening. Further details provided in the below table 3.6a.

Table 3.6a Bat Static Results at position 1 in August

	Total at Position	Earliest registration post sunset at Position	Latest registration pre sunrise at Position
PIPPIP	343	00:37:13	01:59:38
PIPPYG	149	00:29:21	01:55:49
MYOSP	46	01:00:44	06:02:40
PLEAUR	16	01:56:45	06:15:58
EPTSER	37	00:52:02	08:45:37
BARBAR	1	05:19:42	04:07:18
NYCLEI	3	00:49:15	08:09:46
NYCNOC	146	00:11:32	00:02:46

4.3.48. The static located in position 2 recorded a total of 1440 records, averaging 288 registrations per evening. Further details provided in the below table 3.6b.

Table 3.6b Bat Static Results at position 2 in August

	Total at Position	Earliest registration post	Latest registration pre
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		sunset at Position	sunrise at Position
PIPPIP	963	00:34:03	00:51:14
PIPPYG	359	00:29:07	00:56:11
MYOSP	31	01:02:32	06:03:52
PLEAUR	3	01:30:44	07:56:16
EPTSER	11	01:22:44	06:01:25
NYCLEI	12	00:30:18	06:34:33
NYCNOC	61	00:20:48	01:34:17

- 4.3.49. The static located in position 3 in the southern hedgerow of the Application Site recorded a total of 450 registrations, averaging 90 registrations per evening. Further details provided in the below table 3.6c.

Table 3.6c Bat Static Results at position 3 in August

	Total at Position	Earliest registration post sunset at Position	Latest registration pre sunrise at Position
PIPPIP	238	00:35:20	00:53:30
PIPPYG	87	00:33:29	00:04:57
MYOSP	17	01:29:14	06:06:58
PLEAUR	3	02:03:41	06:43:01
EPTSER	7	01:34:45	06:05:20
NYCNOC	98	00:14:38	05:55:33

- 4.3.50. The static located in position 4 in the southern corner of the Application Site recorded a total of 2172 registrations, averaging 434 registrations per evening. Further details provided in the below table 3.6d.

Table 3.6d Bat Static Results at position 4 in August

	Total at Position	Earliest registration post sunset at Position	Latest registration pre sunrise at Position

PIPPIP	1308	00:26:24	00:51:18
PIPPYG	575	00:25:22	00:51:02
MYOSP	133	00:31:37	05:57:58
PLEAUR	13	01:25:08	06:51:54
BARBAR	2	06:17:10	03:04:32
EPTSER	17	00:47:36	06:54:56
NYCNOC	124	00:08:17	01:55:06

- 4.3.51. Seven bat species were recorded across the four statics during the August survey. The registrations were largely dominated by common pipistrelle, with this species comprising of 2852 of the 4533 total registrations.
- 4.3.52. The earliest registration was of a noctule 8 minutes after sunset, early registrations also came from common pipistrelle and soprano pipistrelle. The latest of the registrations before sunrise was of a noctule 2 mins before sunrise.

Static survey 6 (09.09.25 to 13.09.15)

- 4.3.53. Due to a technical error the static at position 4 did not record any data and will therefore reduce the overall count of bat registrations
- 4.3.54. Across the three static detectors deployed during the September survey, there were 4446 registrations across the period of five nights between 9th and 13th September 2025, which equates to approximately 712 registrations per evening.
- 4.3.55. The static located in position 1 recorded a total of 200 registrations, averaging 40 registrations per evening. Further details provided in the below table 3.7a

Table 3.7a Bat Static Results of Position 1 in September

	Total at Position	Earliest registration post sunset at Position	Latest registration pre sunrise at Position
PIPPIP	103	00:30:49	05:42:20
PIPPYG	38	00:27:40	05:45:02
MYOSP	10	00:33:37	05:57:58
PLEAUR	1	01:34:10	05:56:19
EPTSER	14	00:49:55	05:52:35
NYCNOC	34	00:10:24	05:35:06

- 4.3.56. The static located in position 3 in the southern central hedgerow of the Application Site recorded a total of 1108 registrations, averaging 222 registrations per evening. Further details provided in the below table 3.7b

Table 3.7b Bat Static Results of Position 3 in September

	Total at Position	Earliest registration post sunset at Position	Latest registration pre sunrise at Position
PIPPIP	714	00:35:19	04:32:19
PIPPYG	297	00:32:21	04:45:59
MYOSP	19	01:16:20	05:51:34
PLEAUR	3	01:20:09	06:51:54
EPTSER	6	00:52:46	06:54:56
NYCNOC	69	00:07:57	05:55:06

- 4.3.57. The static located in position 2 recorded a total of 3138 registrations, averaging 628 registrations per evening. Further details provided in the below table 3.7c.

Table 3.7c Bat Static Results of Position 2 in September

	Total at Position	Earliest registration post sunset at Position	Latest registration pre sunrise at Position
PIPPIP	1704	00:29:51	03:16:19
PIPPYG	648	00:32:56	03:43:01
MYOSP	320	01:20:23	05:31:49
PLEAUR	202	01:22:09	05:59:10
BARBAR	27	04:19:31	03:42:40
EPTSER	28	01:02:21	06:49:00
NYCNOC	209	00:05:05	01:52:10

- 4.3.58. Seven bat species were recorded across the four statics during the September survey. The registrations were largely dominated by common pipistrelle, with this species comprising of 2521 of the 4446 total registrations.

- 4.3.59. The earliest registration was of a noctule 5 minutes after sunset, early registrations also came from common pipistrelle and soprano pipistrelle. The latest of the registrations before sunrise was of a noctule 1 hour and 52 mins before sunrise.

Static survey 7 (07.10.25 to 11.10.25)

- 4.3.60. Across the four static detectors deployed during the October survey there were 10902 registrations across the period of five nights between 9th to 13th September 2025, which equates to approximately 2180 registrations per evening.
- 4.3.61. The static located in position 1 recorded a total of 3326 registrations, averaging 665 registrations per evening. Further details provided in the below table 3.8a.

Table 3.8a Bat Static Results of Position 1 in October

	Total at Position	Earliest registration post sunset at Position	Latest registration pre sunrise at Position
PIPPIP	2844	00:10:04	00:25:05
PIPPYG	16	00:06:09	00:21:04
PIP NAT	11	08:46:58	00:31:20
MYOSP	306	00:29:31	00:56:17
PLEAUR	15	01:14:51	03:03:27
BARBAR	2	04:04:36	08:32:36
EPTSER	12	00:22:39	11:03:19
NYCNOC	120	-00:13:01	07:28:48

- 4.3.62. The static located in position 2 in the southern corner of the Application Site recorded a total of 3845 registrations, averaging 769 registrations per evening. Further details provided in the below table 3.8b.

Table 3.8b Bat Static Results of Position 2 in October

	Total at Position	Earliest registration post sunset at Position	Latest registration pre sunrise at Position
PIPPIP	2849	00:10:13	00:18:14
PIPPYG	499	00:06:06	00:17:27

PIPINAT	20	00:45:22	04:10:58
MYOSP	389	00:16:14	00:37:04
PLEAUR	10	01:4:50	03:26:41
BARBAR	6	07:25:09	01:59:15
EPTSER	4	00:50:29	09:13:04
RHIHIP	5	00:57:09	03:09:08
NYCNOC	63	-00:01:00	06:21:09

- 4.3.63. The static located in position 3 in the southern corner of the Application Site recorded a total of 1155 registrations, averaging 231 registrations per evening. Further details provided in the below table 3.8c.

Table 3.8c Bat Static Results of Position 3 in October

	Total at Position	Earliest registration post sunset at Position	Latest registration pre sunrise at Position
PIPIPI	750	00:06:24	00:26:55
PIPPYG	308	00:08:44	00:19:56
PIPINAT	7	07:55:39	04:02:09
MYOSP	31	00:25:47	03:31:59
PLEAUR	27	01:04:38	00:56:59
NYCNOC	32	00:06:34	03:24:49

- 4.3.64. The static located in position 4 recorded a total of 2576 registrations, averaging 515 registrations per evening. Further details provided in the below table 3.8d.

Table 3.8d Bat Static Detector of Position 4 in October

	Total at Position	Earliest registration post sunset at Position	Latest registration pre sunrise at Position
PIPIPI	1633	00:05:25	00:18:09
PIPPYG	347	00:07:41	00:11:37
PIPINAT	22	00:26:29	05:46:35

MYOSP	226	00:44:47	02:32:50
PLEAUR	202	00:43:39	00:47:00
BARBAR	13	02:24:14	01:33:47
EPTSER	2	00:42:01	12:13:06
NYCNOC	129	-00:04:49	00:00:21
RHIHIP	2	01:27:38	11:47:28

- 4.3.65. Nine bat species were recorded across the four statics during the October survey. The registrations were largely dominated by common pipistrelle, with this species comprising of 8076 of the 10902 registrations.
- 4.3.66. Further species observed include soprano pipistrelle, *myotis sp*, serotine, noctule, leislers and brown long-eared.
- 4.3.67. The earliest registration was of a noctule 4 minute before sunset, early registrations also came from common pipistrelle and soprano pipistrelle. The latest of the registrations before sunrise was of a noctule 21 seconds before sunrise.

Remote Surveys - 2023

- 4.3.68. Previous surveys in 2023 were conducted on fields F3 and F4 that were not accessible during the 2025 survey period. These surveys followed the same methodology as those completed in 2025, but with two static detectors.

Additional area static survey 1 (31.07.23 to 05.08.23)

- 4.3.69. Across the two static detectors deployed during the July survey, there was a high level of activity recorded at both positions. The overall total there were 7771 registrations across the period of five nights between 31 July to 5 August 2025, which equates to approximately 1554 registrations per evening.
- 4.3.70. The static located in position 5 in the central hedgerow towards the west on the Application Site recorded a large amount of bat activity with 2586 registrations, averaging 517 registrations per evening. Further details provided in the below table 3.9a.

Table 3.9a Bat Static Detector of Position 5 in July 2023

	Total at Position	Earliest registration post sunset at Position	Latest registration pre sunrise at Position
PIPIIP	940	00:09:59	00:11:19
PIPPYG	333	00:03:31	00:13:07
PIP NAT	15	00:26:29	05:46:35
MYOSP	85	00:44:47	02:32:50

PLEAUR	61	00:25:00	00:43:03
EPTSER	920	00:23:52	00:13:46
NYCNOC	162	00:03:49	00:21:21
NYCLEI	70	00:29:23	00:15:24

- 4.3.71. The static located in position 6 towards the south of the northern parcel on the Application Site recorded a large amount of bat activity with 3478 registrations, averaging 696 registrations per evening. Further details provided in table 3.9b below.

Table 3.9b Bat Static Detector of Position 6 in July 2023

	Total at Position	Earliest registration post sunset at Position	Latest registration pre sunrise at Position
PIPIPI	1903	00:39:55	00:42:28
PIPPYG	221	00:47:01	00:16:51
PIP NAT	7	04:45:39	03:55:32
MYOSP	33	00:44:47	02:32:50
PLEAUR	6	01:26:40	01:07:34
EPTSER	718	00:30:40	00:27:48
NYCNOC	480	00:11:17	00:44:39
NYCLEI	110	00:37:40	00:42:39

- 4.3.72. Eight bat species were recorded across the two statics during the July survey. The registrations were largely dominated by common pipistrelle, with this species comprising of 2843 of the 7771 total registrations. Large numbers of serotine were also recorded with a total of 1638.
- 4.3.73. Further species observed include soprano pipistrelle, nathusius pipistrelle *myotis sp*, noctule, Leisler's and brown long-eared.
- 4.3.74. The earliest registration was of a noctule 3 minute after sunset, early registrations also came from serotine, common pipistrelle and soprano pipistrelle. The latest of the registrations before sunrise was of a common pipistrelle 11 minutes before sunrise.

Additional area static survey 2 (04.09.23 to 08.09.23)

- 4.3.75. Across the two static detectors deployed during the July survey, there was a high level of activity recorded at both positions. The overall total there were 7771 registrations across the period of five nights between 31 July to 5 August 2025, which equates to approximately 1554 registrations per evening.

- 4.3.76. The static located in position 5 in the central hedgerow towards the west on the Application Site recorded a large amount of bat activity with 2586 registrations, averaging 517 registrations per evening. Further details provided in table 3.10a below.

Table 3.10a Bat Static Results of Position 5 in early September 2023

	Total at Position	Earliest registration post sunset at Position	Latest registration pre sunrise at Position
PIPPIP	2027	00:07:14	00:16:32
PIPPYG	245	00:06:14	00:16:22
PIP NAT	4	02:36:40	04:20:54
MYOSP	45	00:37:58	00:39:30
PLEAUR	6	00:48:37	02:12:37
EPTSER	12	01:50:18	02:42:49
NYCNOC	56	00:06:58	00:30:30
NYCLEI	2	03:16:49	03:45:58

- 4.3.77. The static located in position 6 towards the south of the northern parcel on the Application Site recorded a large amount of bat activity with 2531 registrations, averaging 506 registrations per evening. Further details provided in table 3.10b below.

Table 3.10b Bat Static Results of Position 6 in early September 2023

	Total at Position	Earliest registration post sunset at Position	Latest registration pre sunrise at Position
PIPPIP	2104	00:45:49	00:24:09
PIPPYG	138	00:40:02	00:29:22
PIP NAT	1	00:53:16	10:07:44
MYOSP	62	00:53:38	00:29:21
PLEAUR	1	04:02:02	05:48:58
EPTSER	24	00:45:40	05:48:43
NYCNOC	170	00:07:31	00:34:41
NYCLEI	31	00:39:16	03:38:56

- 4.3.78. Eight bat species were recorded across the two statics during the early September survey. The registrations were largely dominated by common pipistrelle, with this species comprising of 2843 of the 7771 total registrations.
- 4.3.79. Further species observed include soprano pipistrelle, Nathusius' pipistrelle, serotine, *myotis sp*, noctule, Leisler's and brown long-eared.
- 4.3.80. The earliest registration was of a soprano pipistrelle 6 minute after sunset, early registrations also came from common pipistrelle and noctule 16 minutes. The latest of the registrations before sunrise was of a common pipistrelle 11 minutes before sunrise.

Additional area remote survey 3 (26.09.23 to 30.09.23)

- 4.3.81. The static located in position 5 in the central hedgerow towards the west on the Application Site recorded a large amount of bat activity with 2657 registrations, averaging 531 registrations per evening. Further details provided in the below table 3.11a.

Table 3.11a Bat Static Results of Position 5 in late September 2023

	Total at Position	Earliest registration post sunset at Position	Latest registration pre sunrise at Position
PIPPIP	1122	00:18:36	01:27:04
PIPPYG	1227	00:16:23	00:39:16
PIP NAT	7	00:30:02	05:35:55
MYOSP	79	00:30:59	01:40:37
BARBAR	1	02:55:35	09:08:25
PLEAUR	13	00:40:24	01:27:04
EPTSER	21	00:29:24	01:06:16
RHIHIP	1	11:33:04	01:27:56
NYCNOC	57	00:16:23	00:10:22
NYCLEI	1	01:14:03	11:46:57

- 4.3.82. The static located in position 6 towards the south of the northern parcel of the Application Site recorded a low amount of bat activity with 121 registrations, averaging 24 registrations per evening. Further details provided in the below table 3.11b.

Table 3.11b Bat Static Results of Position 6 in late September 2023

	Total at Position	Earliest registration post sunset at Position	Latest registration pre sunrise at Position
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PIPIIP	62	00:07:03	00:28:45
PIPPYG	9	00:19:56	00:30:45
MYOSP	8	00:28:59	02:22:04
PLEAUR	4	01:38:24	01:06:44
EPTSER	15	00:28:10	01:23:59
NYCNOC	22	00:41:32	00:10:38
NYCLEI	1	01:14:03	11:46:57

- 4.3.83. Ten bat species were recorded across the two statics during the late September survey. The registrations were largely dominated by soprano pipistrelle, with this species comprising of 1236 of the 2657 total registrations.
- 4.3.84. Further species observed include common pipistrelle, Nathusius' pipistrelle, serotine, lesser horseshoe *myotis sp*, noctule, Leisler's and brown long-eared.
- 4.3.85. The earliest registration was of a common pipistrelle 7 minute after sunset, early registrations also came from soprano pipistrelle and noctule 16 minutes. The latest of the registrations before sunrise was of a noctule 10 minutes before sunrise.

Background Records

- 4.3.86. A large number of records for bat species were returned in the data search. Species include Daubenton's bat *Myotis daubentonii*, whiskered bat *Myotis mystacinus*, Brandt's bat *Myotis Brandtii*, natterer's bat *Myotis nattereri*, noctule, Nathusius' pipistrelle, common pipistrelle, soprano pipistrelle and brown long-eared. The closest of the records was a common pipistrelle recorded within the Application Site in 2021.

4.4. Hedgehogs

- 4.4.1. No evidence of hedgehog *Erinaceus europaeus* was recorded on-site in July or October 2025. While no evidence was recorded, it is considered that the habitats present including hedgerow, treeline and grassland are suitable for the foraging and dispersal of hedgehog and as such the occasional use by this species cannot be eliminated. Local data records suggest presence of hedgehogs in the locality of the Application Site as summarised below.

Background Records

- 4.4.2. A total of 47 hedgehog records were returned in the data search between 2015 and March 2025. The closest of the recordings was from a location 0.11km north-east of the Application Site in 2021. The most recent of the recordings was in 2024 and approximately 1.3km to the north of the Application Site.

4.5. **Hazel Dormouse**

4.5.1. The hedgerows within the Application Site provide potential habitat for hazel dormouse. However, no hazel dormouse were recorded during the surveys completed in 2022 and a search of MAGIC found no granted European Protected Species Licences from within 10km of the Application Site. Furthermore, the connectivity from the Application Site to suitable offsite woodland is limited with the nearest area of dense woodland to the west separated from the Application Site by the River Thames which would act as a barrier to dispersal for dormice.

4.5.2. It is therefore considered that dormice are not likely to be present within the Application Site and no further consideration is given to this species in this report.

Background Records

4.5.3. The data search returned no records of hazel dormouse.

4.6. **Other Mammals**

4.6.1. The Application Site is approximately 0.3km from the River Thames. The field drain present within the Application Site ultimately discharges into the River Thames, but is within a hedgerow, heavily shaded and was dry at the time of the survey in October 2025, it is therefore considered that the field drain is unsuitable for semi-aquatic mammals such as otter *Lutra lutra* and water vole *Arvicola amphibius*.

4.6.2. Due to the habitats present, other small common mammal species would likely use the Application Site, although it is considered unlikely any notable species would be reliant on the Application Site.

Background Records

4.6.3. A large number of other mammals species records were returned in the data search between 2015 and March 2025. Notable species include water vole and otter. The closest and most recent otter recording is from approximately 0.45km to the west of the Application Site. Several water vole records were returned from the River Thames, the closest of which was 0.39km north of the Application Site.

4.7. **Birds**

4.7.1. The hedgerows and trees within the Application Site provide the greatest value for the local bird species by affording both potential nesting and foraging habitat, whilst the grassland would also provide some foraging opportunities. Given the habitats present and the close proximity to the North Meadow SAC as well as the Cotswold Water Park SSSI it was considered that the Application Site provides potentially suitable habitat for more notable bird species. As such, further breeding bird surveys were conducted in 2025.

Breeding Bird Surveys 2025

- 4.7.2. Six breeding bird surveys were undertaken between April and July 2025. The timings and weather conditions for these are detailed below in Table 4.1.

Table 4.1. 2025 Breeding Bird Survey conditions and timings

Date	Time	Cloud (%)	Precipitation	Temp (°C)	Wind
01.04.25	06:20 – 07:45	100	Dry	3	6 mph winds NE
06.05.25	05:30 – 07:00	60	Dry	3	5 mph winds N
10.05.25	05:20 – 06:45	70	Dry	9	7 mph winds SW
06.06.25	04:45 – 06:30	80	Dry	11	12 mph winds SW
17.06.25	04:45 – 06:30	20	Dry	12	3 mph winds NE
08.07.25	04:45 – 06:30	30	Dry	12	9 mph winds S

- 4.7.3. During the breeding bird surveys, 34 species were recorded within, immediately adjacent or flying over site. These are detailed further below and are illustrated on Plans ECO5a to ECO5f.
- 4.7.4. 17 species, recorded during the surveys are listed as species of principal importance, on the UK BoCC Red and Amber lists and / or listed as a local priority species in the WBAP. These species include linnet *Linaria cannabina*, greenfinch *Chloris chloris*, house sparrow *Passer domesticus*, starling *Sturnus vulgaris*, song thrush *Turdus philomelos*, herring gull *Larus argentatus*, swallow *Hirundo rustica*, cuckoo *Cuculus canorus*, shelduck *Tadorna tadorna*, goldfinch *Carduelis carduelis*, great spotted woodpecker *Dendrocopos major*, blackcap *Sylvia atricapilla*, chiffchaff *Phylloscopus collybita*, long tailed tit *Aegithalos caudatus*, fieldfare *Turdus pilaris*, lesser black-backed gull *Larus fuscus* and white-throat *Curruca communis*.
- 4.7.5. No species were confirmed to be breeding successfully on or adjacent to the Application Site. However, it is considered likely that common species such as wren, dunnock and chiffchaff nest within the hedgerows and / or field margins given the frequency of recording and behaviour during the surveys.
- 4.7.6. No species of importance as listed above were noted to be / or likely to be breeding within the Application Site. The record of cuckoo and shelduck were both recorded flying over and on a single survey visit.

Background Records

- 4.7.7. A large number of records were returned in the data search between 2015 and the March 2025. Notable species include barn owl *Tyto alba* the most

recent recording being from 2024 approximately 1.6km to the northwest of the Application Site, lapwing *Vanellus Vanellus* the most recent recording also in 2024 approximately 1.4km to the northwest of the Application Site and curlew *Numenius Arquata* the most recent recording being in 2024 found <100m to the northeast of the Application Site. Other notable species include ringed plover *Charadrius hiaticula*, goldeneye *Bucephala clangula* and yellow wagtail *Motacilla flava*.

4.8. **Amphibians (Great Crested Newt)**

- 4.8.1. A total of six ponds were identified within 250m from the Application Site (see PlanECO4) pond P1, approximately 50m to the south, was subject to eDNA survey in June 2022, P2 and P3 were dry at the time of the survey. The eDNA results were returned with a positive result (see Appendix confirming the presence of great crested newts *Triturus cristatus* (GCN) within P1, it therefore considered that P2 and P3 are also likely to be used by GCN.
- 4.8.2. The areas of woodland, grassland, tall ruderal and hedgerow within the Application Site offer some suitable habitat for amphibians during their terrestrial phase. Indeed, a single GCN was recorded under a reptile tin during the reptile surveys in 2023.
- 4.8.3. GCN are confirmed to be present in ponds in close proximity and do use the Application Site during their terrestrial phase.

Background Records

- 4.8.4. A total of 30 records were returned in the data search between 2015 and the March 2025. Species include common frog *Rana temporaria* and great crested newts. The closest being <100m south of the Application Site for both great crested newt and common frog in 2017. The most recent recording is of a great crested newt in 2022 approximately 1.4km to the southwest of the Application Site.

4.9. **Reptiles**

- 4.9.1. The majority of the grassland is of lower suitability for reptiles due to the short sward height of as a result of heavy grazing by cattle. There is also an area of ruderal vegetation in the north of the Application Site which could provide limited potential foraging, refuge and dispersal opportunities for common reptiles. Owing to the suitability for reptile, presence and absence surveys for reptile were conducted.
- 4.9.2. Seven presence / likely absence surveys for reptiles were subsequently completed in favourable conditions in September and October 2022 and updated in July - October 2023. The 2022 surveys comprised only F1 and F2, whilst the 2023 surveys covered the entire Application Site. The results of the surveys undertaken are summarised in Table 4.2a and 4.2b below.

Table 4.2a. Reptile survey conditions and results (September and October 2022)

Date	Survey	Temperature (°C)	Cloud Cover (%)	Reptiles recorded
14/09/22	1	16	30	0
16/09/22	2	15	0	0
22/09/22	3	17	75	0
27/09/22	4	12	100	0
30/09/22	5	15	100	0
06/10/22	6	15	5	0
12/10/22	7	15	20	0

Table 4.2b Reptile survey conditions and results (July to October 2023)

Date	Survey	Temperature (°C)	Cloud Cover (%)	Reptiles recorded
11.07.23	1	17	75	0
31.07.23	2	12	90	0
11.09.23	3	13	60	1 ♂ common lizard
15.09.23	4	10	5	0
22.09.23	5	17	100	0
03.10.23	6	17	100	0
20.10.23	7	16	15	0

Background Records

- 4.9.3. A total of 7 records were returned in the data search. Species include Slow-worm *Anguis fragilis*, Grass snake *Natrix helvetica*. The closest being a slow worm found approximately 0.4km to the east of the Application Site in 2024, this is also the most recent, the next is a grass snake found approximately 1.6km to the northwest of the Application Site in 2023.

4.10. Invertebrates

- 4.10.1. The presence of the grassland and hedgerow habitats supporting a range of common flowering species, nectar sources and fruit bearing species, the Application Site likely supports an assemblage of common invertebrate species. There is no substantial evidence to suggest that any rare or notable species would be present.

Background records

- 4.10.2. A large number of invertebrate records were returned in the data search. Species recorded include small heath *Coenonympha pamphilus*, Norfolk hawker *Aeshan isocles* and white admiral *Limenitis camilla* among other

more notable species. The closest of these records was of a common darter *Sympetrum striolatum* approximately 0.3km to the north of the Application Site recorded in August 2019. The most recent of these records was recorded in October 2024 and was also a common darter recorded approximately 2.0km to the west of the Application Site.

- 4.10.3. 12 species of high importance were returned by the data search. Species include marsh fritillary *Euphydryas aurinia*, Grizzled skipper *Pyrgus malvae*, White-letter hairstreak *Satyrrium w-album*, brown hairstreak *Thecla betulae*, wall brown *Lasiommata megera*, white admiral, scarce blue-tailed damselfly *Ischnura pumilio*, Norfolk hawker, red-shanked carder bee *Bombus ruderarius*, red-tailed cuckoo bee *Bombus rupestris*, forester moth *Adscita statices*, large wainscot *Rhizedra lutos*, giant water-veneer *Schoenobius gigantella*, bulrush veneer *Calamotrpha paludella*.

5. Ecological Evaluation

5.1. The Principles of Ecological Evaluation

- 5.1.1. The guidelines for ecological evaluation produced by CIEEM propose an approach that involves professional judgement, but makes use of available guidance and information, such as the distribution and status of the species or features within the locality of the project.
- 5.1.2. The methods and standards for site evaluation within the British Isles have remained those defined by Ratcliffe¹⁴. These are broadly used across the United Kingdom to rank sites so priorities for nature conservation can be attained. For example, current Sites of Special Scientific Interest (SSSI) designation maintains a system of data analysis that is roughly tested against Ratcliffe's criteria.
- 5.1.3. In general terms, these criteria are size, diversity, naturalness, rarity and fragility, while additional secondary criteria of typicalness, potential value, intrinsic appeal, recorded history and the position within the ecological / geographical units are also incorporated into the ranking procedure.
- 5.1.4. Any assessment should not judge sites in isolation from others, since several habitats may combine to make it worthy of importance to nature conservation.
- 5.1.5. Further, relying on the national criteria would undoubtedly distort the local variation in assessment and therefore additional factors need to be taken into account, e.g. a woodland type with a comparatively poor species diversity, common in the south of England, may be of importance at its northern limits, say in the border country.
- 5.1.6. Levels of importance can be determined within a defined geographical context from the immediate site or locality through to the international level.
- 5.1.7. The legislative and planning policy context are also important considerations and have been given due regard throughout this assessment.

5.2. Habitat Evaluation

Designated Sites

- 5.2.1. **Statutory Sites.** The Application Site does not fall within and is not adjacent to any statutory designated sites (see Plan ECO1).

North Meadow and Clattinger Farm SAC / NNR

¹⁴ Ratcliffe, D A (1977). *A Nature Conservation Review: the Selection of Biological Sites of National Importance to Nature Conservation in Britain*. Two Volumes. Cambridge University Press, Cambridge.

- 5.2.2. The closest designated site is North Meadow and Clattinger Farm Species Area of Conservation (SAC) / National Nature Reserve (NNR) located approximately 0.3km to the northwest of the Application Site. The SAC has been designated for its rare habitat in lowland hay meadows, as well as its large population of fritillary *Fritillaria meleagris*.
- 5.2.3. Potential adverse effects on this SAC have been considered in detail within the shadow Habitats Regulation Assessment (sHRA) produced by Ecology Solutions (10742.sHRA.vf dated March 2026). The findings of this are summarised below, however for greater detail please refer to the sHRA.
- 5.2.4. Several pathways for impact have been identified, these are as follows:
- Recreational Impacts
 - Drainage (water quality)
 - Hydrological regime
- 5.2.5. In order to mitigate for recreational impacts on the North Meadow and Clattinger Farm SAC, a Suitable Alternative Natural Greenspace (SANG) will be provided as part of the Development Proposals. Alongside the SANG provision Strategic Access Management and Monitoring (SAMM) payments will be made and secured via legal agreement as required by the published mitigation strategy. These measures will ensure no adverse effect will occur on the SAC on account of the Development Proposals either alone or in combination with other plans / projects.
- 5.2.6. Regarding potential impacts via drainage (water quality) and hydrological regime the drainage strategy for the Development Proposals includes a SuDS provision that will both control flow rates and clean water prior to discharge into the field drain that subsequently discharges into the River Thames. It is considered that these measures in addition to standard construction methods secured via a suitably worded condition would provide certainty that no adverse effect would arise on the SAC on account of the Development Proposals either alone or in combination with other plans / projects.

Sites of Special Scientific Interest

- 5.2.7. Four Sites of Species Scientific Interest (SSSI) are located within 2km of the Application Site. The closest of which is North Meadow, Cricklade SSSI which underpins the North Meadow and Clattinger Farm SAC and is located approximately 0.3km to the northeast of the Application Site. North Meadow, Cricklade SSSI is designated on account of the traditionally managed hay meadow that supports over 250 species of higher plant species including a healthy population of fritillary.
- 5.2.8. Upper Waterhay Meadow SSSI is located approximately 1.7km to the northwest of the Application Site. This SSSI is designated on account of the neutral alluvial meadow it supports as well as the population of fritillary.

- 5.2.9. Cotswold Water Park SSSI is located approximately 1.0km northwest of the Application Site. This SSSI comprises of ten lakes in an area of around 135ha. It is designated on account of the nationally important for populations of breeding and non-breeding birds and multiple species of aquatic plants.

Elmlea Meadows SSSI is located approximately 0.9km north of the Application Site. It is a designated site on account of the neutral alluvial meadow that it supports as well as the populations of fritillary and other rare species such as downy-fruited sedge *Carex tomentosa*.

- 5.2.10. Potential impacts on North Meadow, Cricklade SSSI have been discussed above when discussing the North Meadow and Clattinger Farm SAC.
- 5.2.11. With regard to the remaining SSSI's, given the Development Proposals and the distances between the Application Site and the SSSI's and the reasons for designation of said SSSI's, it is considered that no significant effect would occur on these sites on account of the proposals.

- 5.2.12. **Non-statutory Sites.** There are no non-statutory designated within or immediately adjacent to the Application Site. The closest non-statutory site is River Thames or Isis Local Wildlife Site (LWS) located approximately 0.31km north of the Application Site. The Application Site is hydrologically connected to this LWS via the onsite field drain. Mitigation measures including appropriate design of SuDS and hydrological controls have been suggested above to prevent impacts on the North Meadow and Clattinger Farm SAC and it is considered that these measures would also avoid any significant impact on the LWS.

Ancient Woodland

- 5.2.13. No ancient woodland is present on-site or immediately adjacent to the Application Site. No ancient woodland is found within the 2km search area.

Habitats within the Application Site

- 5.2.14. The majority of the Application Site consists of modified grassland with a small area of woodland and ruderal vegetation. Overall, these habitats provide limited ecological value. Habitats such as the native hedgerows are of higher interest in the context of the Application Site. All hedgerows within the Application Site are Habitats of Principal Importance under the NERC Act 2006 on account of consisting of at least one native woody species.
- 5.2.15. The Proposed Development will ensure that the habitats of most interest are largely retained where appropriate and enhanced where possible. Whilst the Development Proposals are outline and detail is yet to come forward, there is scope to retain the vast majority of hedgerows, with any losses for access being minimal.
- 5.2.16. The grassland which makes up the majority of the Application Site is species-poor and comprises common and widespread species typical of high nutrient input and levels of disturbance. Whilst large areas of grassland are to be lost there is scope for the proposals to enhance species diversity in retained areas

of grassland (including the onsite SANG) and create habitat of greater value including scrub, grassland, tree planting etc to provide increased opportunities for wildlife.

5.3. Faunal Evaluation

Badgers

- 5.3.1. **Legislation.** The Protection of Badgers Act 1992 consolidates the previous Badgers Acts of 1973 and 1991. The legislation aims to protect the species from persecution, rather than being a response to an unfavourable conservation status.
- 5.3.2. As well as protecting the animal itself, the 1992 Act also makes the intentional or reckless destruction, damage or obstruction of a Badger sett an offence. A sett is defined as "any structure or place, which displays signs indicating current use, by a Badger". 'Current use' is defined by Natural England as any use within the preceding 12 months.
- 5.3.3. In addition, the intentional elimination of sufficient foraging area to support a known social group of Badgers may, in certain circumstances, be construed as an offence by constituting 'cruel ill treatment' of a Badger.
- 5.3.4. Local Authorities are therefore obliged to consult Natural England over any application that is likely to adversely affect Badgers.
- 5.3.5. Any work that disturbs Badgers is illegal without a licence granted by Natural England. Unlike the general conservation legislation, the Badgers Act 1992 makes specific provision for the granting of licences for development purposes, including for the destruction of setts.
- 5.3.6. Guidance produced by Natural England in 2002, and subsequently amended, developed guidelines on the types of activity that it considers should be licensed within certain distances of sett entrances. Any work on-site must be completed in accordance with that guidance.
- 5.3.7. **Site Usage.** One known badger sett categorised as a subsidiary sett by EAD Ecology is present to the east of the Application Site underneath a barn. Whilst no setts were recorded within the Application Site, given the dynamic nature of this species and the close proximity of known populations of badger it is likely that badger use the Application Site for foraging and commuting purpose and it cannot be ruled out that this species may build setts with the Application Site in the future.
- 5.3.8. **Mitigation and Enhancement Measures.** It is recommended that a badger sett check is carried out prior to the commencement of any future development as a precaution to ensure that no new setts have been excavated since the surveys.
- 5.3.9. Given the potential for badgers to be within the vicinity of the Application Site and potentially entering during the construction phase, a number of precautionary measures should be put in place. These will include:

- During the construction process all dug ground should be levelled and compacted wherever possible. This will prevent badgers from attempting to excavate setts prior to completion of the works;
- All excavations should be covered overnight. If this is not possible, planks should be left in any uncovered trenches to allow any badger that may stray onto the Application Site an escape route;
- Any open trenches will be checked at the beginning (to ensure that badgers are not present) and at the end of each day (to ensure that the means of escape remain in place);
- Tools and loose materials will be stored in an appropriate container to reduce the risk of badgers injuring themselves;
- Materials should be stored in a storage container in order to avoid the chance of Badgers coming onto site and potentially injuring themselves;
- Fires and chemicals should not be used; and
- Any open pipework greater than 150mm outside diameter should be blanked off at the end of each working day.

5.3.10. Badgers are an especially mobile species that often extend existing setts and excavate new ones in areas of suitable habitat. New setts may be excavated within the construction zone during the period between the survey work undertaken and the drafting of this report and the commencement of site clearance and construction works. Were construction to proceed directly, involving the use of heavy machinery, newly excavated setts or entrances may be adversely affected, leading to collapse of entrances and tunnels and possible badger injury or mortality.

5.3.11. If any suspected badger activity is observed during construction, Ecology Solutions should be contacted immediately for advice.

5.3.12. The Development Proposals have scope to provide an increase in foraging and commuting opportunities for badgers through provision of species-rich grassland, native scrub and individual trees planting.

Bats

5.3.13. **Legislation.** All bats are protected under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) and included on Schedule 2 of the Conservation of Habitats and Species Regulations 2017 ("the Habitats Regulations"). These include provisions making it an offence to:

- Deliberately kill, injure or take (capture) bats;
- Deliberately disturb bats in such a way as to:-
- be likely to impair their ability to survive, to breed or rear or nurture their young; or to hibernate or migrate; or
- affect significantly the local distribution or abundance of the species to which they belong;
- To damage or destroy any breeding or resting place used by bats; and

- Intentionally or recklessly obstruct access to any place used by bats for shelter or protection (even if bats are not in residence).
- 5.3.14. The words deliberately and intentionally include actions where a court can infer that the defendant knew that the action taken would almost inevitably result in an offence, even if that was not the primary purpose of the act.
- 5.3.15. The offence of damaging (making it worse for the bat) or destroying a breeding site or resting place is an absolute offence. Such actions do not have to be deliberate for an offence to be committed.
- 5.3.16. In accordance with the Habitats Regulations the licensing authority (Natural England) must apply the three derogation tests as part of the process of considering a licence application. These tests are that:
1. the activity to be licensed must be for imperative reasons of overriding public interest or for public health and safety;
 2. there must be no satisfactory alternative; and
 3. the favourable conservation status of the species concerned must be maintained.
- 5.3.17. Licences can usually only be granted if the development is in receipt of full planning permission.
- 5.3.18. **Site Usage.** The Application Site is noted to be utilised by mainly common and widespread species for commuting and foraging purposes. The grassland that makes up the majority of the Application Site is of limited value to bats for foraging.
- 5.3.19. A number of trees were designated as PRF-I during the survey work completed with one designated as PRF-M. None of these trees are currently shown as lost under the Development Proposals and as such no specific mitigation measures are required.
- 5.3.20. **Mitigation / Recommendations.** The on-site grassland provides limited foraging opportunities for local bat species, with the on-site native hedgerows and treelines providing the most notable foraging, commuting and dispersal opportunities. The main habitat of interest is the southern boundary of the Application Site with the highest levels of activity identified here from the results of the remote surveys. This activity included higher levels of activity from rarer bat species including Serotine, and low levels of activity of rarest bat species including Barbastelle and Lesser horseshoe.
- 5.3.21. The habitats that offer the greatest interest for bats, such as the native hedgerows, large individual tree and off-site treelines, will be retained and protected throughout the construction phase of the development. The new hedgerow and tree planting that is to be incorporated into the scheme will promote wildlife corridors around the Application Site and improve the foraging and commuting opportunities for bats. The provision of new introduced shrub, hedgerow and tree planting will heighten the invertebrate suitability of the Application Site, therefore improving food resource for bats.

- 5.3.22. With regard to lighting, the development will adhere to the Bat Conservation Trust and Institute of Lighting Professionals (ILP) Guidance Note 08/23 Bats and Artificial Lighting at Night to limit light spill onto the retained hedgerows across the Application Site. During the construction period lighting should be angled away from suitable commuting habitat to avoid impacting dispersal of bats.
- 5.3.23. It is recommended that the lighting strategy produced when further detail comes forward at the RM stage limits lighting on all suitable commuting routes for bats as low as possible but to a maximum of 1 lux. This will retain dark corridors at the boundaries and across the Application Site.
- 5.3.24. As part of the Development Proposals, a number of bat boxes should be installed on suitable retained trees (e.g. 5). In addition to the tree mounted boxes a percentage of the dwellings should have integrated bat boxes installed (e.g., 25%) in order to provide additional roosting opportunities within the Application Site.
- 5.3.25. The following recommendations will be implemented in respect of bat boxes to maximise the chances of box adoption by bats:
- Boxes will be located close to suitable foraging and / or dispersal habitats;
 - The chosen designs should be suitable for erection within buildings / trees as relevant;
 - The flight-path leading to and from each bat box will be kept clear, with no significant barriers such as tree branches;
 - Boxes will be positioned so that they are sheltered from wind, rain and strong sunlight, with a typical orientation of south-west through south to south-east;
 - Boxes on buildings will be placed over three metres from the ground to limit disturbance (with some boxes erected above five metres where feasible to make them attractive to different species).
- 5.3.26. Examples of suitable bat boxes are provided at Appendix 4.

Hedgehogs

- 5.3.27. **Legislation.** Hedgehog is a species of principal importance for the conservation of biodiversity under Section 41 (England) of the NERC Act 2006.
- 5.3.28. The NERC Act 2006 requires the Secretary of State to:
- ... take such steps as appear... to be reasonably practicable to further the conservation of the living organisms and types of habitat included in any list published under this section, or... promote the taking by others of such steps.**
- 5.3.29. **Site Usage.** While no evidence was recorded while undertaking the surveys, it is considered that the habitats including the grassland and hedgerows may

provide opportunities for the foraging and dispersal of the species. As it is known that hedgehog are present in the local area from the data search, occasional use by this species on-site cannot be eliminated.

- 5.3.30. **Mitigation / Recommendations.** Any clearance of suitable vegetation, such as the grassland and hedgerows, during the hibernation season (October to February inclusive) will be subject to a check survey for hibernation features. Any vegetation clearance should be carried out in a systematic and controlled manner to allow hedgehogs to disperse.
- 5.3.31. If in the event a hedgehog is found during construction works, the hedgehog should be carefully placed in a lidded box (with air holes and vegetation cover) and safely translocated to an area of retained vegetation or within suitable off-site habitats away from construction areas.
- 5.3.32. Any trenches or deep pits associated with construction that are left open overnight pose a significant risk to dispersing hedgehogs, especially if the trench fills with water. It is recommended that appropriate mitigation measures be put in place during the construction phase to safeguard against entrapment. Specifically, if trenches cannot be covered overnight, a means of escape needs to be provided. This can be achieved by placing planks or similar structures in the trenches to allow hedgehogs and other small animals to climb out safely.
- 5.3.33. The majority of hedgerow will be retained as part of the Development Proposals and there is scope to provide new native hedgerow, scrub and grassland habitat that will offer improved shelter, foraging and hibernation opportunities for hedgehogs and other wildlife. New fences should include hedgehog gateway (13cm x 13cm) gaps at the base to facilitate passage of the species. This will allow for continued dispersal of hedgehog across the site and between on-site and off-site habitats.

Other Mammals

- 5.3.34. **Legislation.** Common mammals receive protection under the Wild Mammals (Protection) Act 1996 making it an offence to crush or asphyxiate any wild mammal with intent to inflict unnecessary suffering.
- 5.3.35. This also extends to the Animal Welfare Act 2006 making it an offence to cause unnecessary suffering or fail to meet the needs of vertebrates in the temporary control of man.
- 5.3.36. **Site Usage.** The Application Site provides some limited suitable opportunities for several common mammal species.
- 5.3.37. **Mitigation and Enhancement Measures.** General regard to mammals following standard practise to avoid unnecessary harm and distress when undertaking site clearance works. Any common mammals found, which are not in distress, will be encouraged to disperse to the wider area where suitable habitat is present outside of work zones (same methodology as hedgehogs).

- 5.3.38. New landscaping will provide new shelter and foraging opportunities for locally present mammals.

Birds

- 5.3.39. **Legislation.** Section 1 of the Wildlife and Countryside Act 1981 (as amended) is concerned with the protection of wild birds, whilst Schedule 1 lists species that are protected by special penalties. All species of birds receive general protection whilst nesting.
- 5.3.40. **Site Usage.** The majority of the Application Site comprises short grazed grassland and therefore is of low suitability for ground nesting birds. The hedgerows and individual tree provide nesting and foraging opportunities for a range of common and widespread bird species. No evidence of rare birds breeding within the Application Site was recorded during the suite of breeding bird surveys completed in 2025.
- 5.3.41. **Mitigation / Recommendations.** In order to avoid impacts on nesting birds, and to avoid a potential offence under the Wildlife and Countryside Act 1981 (as amended), clearance of vegetation that is suitable for nesting birds should be undertaken outside of the nesting season (typically March to August inclusive) wherever possible. Where this cannot be achieved, a nest-check survey for birds should be undertaken by a suitably experienced ecologist no more than 48 hours prior to vegetation removal. If any nests are confirmed, works should cease immediately, with the nest safeguarded by a buffer of at least 5m. The buffer should be left in situ until the young have fledged and the nest is no longer active.
- 5.3.42. Losses to suitable nesting and foraging habitat for birds will be minimal. However, there is scope to provide an increase in such opportunities through the creation of species-rich grassland, native scrub and tree planting (fruit / berry producing species) as part of the landscape strategy.
- 5.3.43. In addition to the creation of natural nesting opportunities for birds it is recommended that a number of bird boxes (e.g., 5) are installed on retained mature trees. Furthermore, it is recommended that a percentage of the new dwellings (e.g., 50%) have a range of bird boxes suitable for different species either integrated into the fabric of the building or affixed to it. See Appendix 5 for suitable examples.

Reptiles

- 5.3.44. **Legislation.** All six British reptile species receive a degree of legislative protection that varies depending on their conservation importance.
- 5.3.45. Rare, endangered or declining species receive 'full protection' under the Wildlife and Countryside Act 1981 (as amended) as well as protection under the Conservation of Habitats and Species Regulations 2017 (as amended). Species that are fully protected are Smooth Snake *Coronella austriaca* and Sand Lizard *Lacerta agilis*. These receive the following protection from:
- Killing, injuring and taking;

- Possession or control (of live or dead animals, their parts or derivatives);
 - Damage to, destruction of and obstruction of access to any structure or place used for shelter or protection;
 - Disturbance of any animal occupying such a structure or place; and
 - Selling, offering for sale, possession or transport for purposes of sale (live or dead animal, part or derivative).
- 5.3.46. Owing to their abundance in Britain, Common Lizard, Slow Worm, Grass Snake and Adder *Vipera berus* are only 'partially protected' under the Wildlife and Countryside Act 1981 (as amended) and as such only receive protection from:
- Deliberate killing and injuring; and
 - Being sold or other forms of trading.
- 5.3.47. Therefore, if reptiles are present within a site, a scheme of translocation can be implemented to avoid the offence of killing / injury.
- 5.3.48. **Site Usage.** Presence / absence reptile surveys conducted within the Application Site recorded a single common lizard. It is also possible that other common species (slow-worm and grass snake) are present although they weren't recorded during the surveys.
- 5.3.49. **Mitigation / Recommendations.** Given the results of the reptile surveys, it is considered that implementation of a directional staged cut methodology of any areas of suitable habitat would be sufficient to avoid killing and injuring any reptiles present within the Application Site during construction works.
- 5.3.50. The directional staged cut methodology will comprise an initial cut no lower than 150mm, with a follow-up cut completed at least 24 hours later, as close to ground level as possible. The cuts will be completed towards retained suitable habitat to ensure that any reptiles present can move freely into suitable habitats and are not injured / killed. Clearance to suitable reptile habitat will be completed during the suitable weather conditions for reptiles (generally March – October inclusive).
- 5.3.51. There is scope for the Development Proposals to provide increased opportunities for reptile through creation of rough grassland, native scrub and additional hedgerows planting.
- 5.3.52. It is recommended that several log piles (e.g., 4) are provided as part of the Development Proposals within areas of open space, these would provide suitable refuge and foraging opportunities.

Amphibians (Great Crested Newts)

- 5.3.53. **Legislation.** Great Crested Newts (GCN) are subject to the same legislative protection and licensing provisions as bats (see above).

- 5.3.54. Other species of amphibian including the common toad *Bufo bufo*, common frog *Rana temporaria*, palmate newt *Lissotriton helveticus* and smooth newt *Lissotriton vulgaris* are all afforded protection against sale only under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). Common Toad are further protected under Section 41 of the NERC Act 2006 (as amended). Where significantly large populations of Common Toad are identified at a site, their presence could be deemed as a 'material consideration' by planning authorities in accordance with National Planning Policy Framework (NPPF) and their listing on the UKBAP and measures to protect them are recommended.
- 5.3.55. **Site Usage.** Although the Application Site does not support any waterbodies 5 waterbodies are present within 250m. An eDNA survey was conducted on these ponds and a positive result was returned confirming the presence of GCN. Furthermore, an individual great crested newt was found during a reptile survey in October 2023.
- 5.3.56. **Mitigation / Recommendations.** In order to appropriately mitigate for impacts on GCN a District Level Licence (DLL) application has been submitted to Natural England. As such no further surveys to determine the population size are required.

Invertebrates

- 5.3.57. **Site Usage.** It is expected that an assemblage of common invertebrate species utilise the on-site habitats, although there is no reason to suspect the likely presence of any scarce or notable invertebrate species.
- 5.3.58. **Mitigation / Recommendations.** There is scope for the Development Proposals to include habitats of increased value for invertebrate including new native hedgerows, native fruit bearing trees, species-rich grassland and native scrub planting. Native species are known to support a greater assemblage of invertebrates and will in turn support other wildlife, for example foraging bats.
- 5.3.59. It is recommended that several log piles (e.g., 4) are provided as part of the Development Proposals within areas of open space, these would provide suitable refuge and foraging opportunities for a range of invertebrate species.

6. Planning Policy Context

- 6.1. The planning policy framework that relates to nature conservation at the Application Site, is issued at two main administrative levels: nationally through the NPPF and locally through the Wiltshire Core Strategy. The Proposed Development will be judged in relation to the policies contained within these documents that concern nature conservation.

6.2. National Policy

National Planning Policy Framework, December 2024 (amended February 2025)

- 6.2.1. Guidance on national policy for biodiversity and geological conservation is provided by the NPPF, published in March 2012, revised on 24 July 2018 and updated on 19th February 2019, 20th July 2021, 5th September 2023, 20th December 2023 and 12th December 2024. It is noted that the NPPF continues to refer to further guidance in respect of statutory obligations for biodiversity and geological conservation and their impact within the planning system provided by Circular 06/05 (DEFRA / ODPM, 2005) accompanying the now-defunct Planning Policy Statement 9 (PPS9).
- 6.2.2. The key element of the NPPF is that there should be "a presumption in favour of sustainable development" (paragraph 11). It is important to note that this presumption "does not apply where the plan or project is likely to have a significant effect on a habitats site (either alone or in combination with other plans or projects), unless an appropriate assessment has concluded that the plan or project will not adversely affect the integrity of the habitats site" (paragraph 195). 'Habitats site' has the same meaning as the term 'European site' as used in the Habitats Regulations 2017.
- 6.2.3. Hence the direction of Government policy is clear; that is, the presumption in favour of sustainable development is to apply in circumstances where there is potential for an effect on a European site, if it has been shown that there will be no adverse effect on that designated site as a result of the development in prospect.
- 6.2.4. A number of policies in the NPPF are comparable to those in PPS9, including reference to minimisation of impacts to biodiversity and provision of net gains to biodiversity where possible (paragraph 187).
- 6.2.5. The NPPF also considers the strategic approach that Local Authorities should adopt with regard to the protection, maintenance and enhancement of green infrastructure, priority habitats and ecological networks, and the recovery of priority species.
- 6.2.6. Paragraph 193 of the NPPF comprise a number of principles that Local Authorities should apply, including encouraging opportunities to incorporate biodiversity in and around developments; provision for refusal of planning applications if significant harm cannot be avoided, mitigated or compensated for; applying the protection given to European sites to potential SPAs, possible SACs, listed or proposed Ramsar sites and sites identified (or required) as compensatory measures for adverse effects on European sites;

and the provision for the refusal for developments resulting in the loss or deterioration of 'irreplaceable' habitats – unless there are 'wholly exceptional reasons' (for instance, infrastructure projects where the public benefit would clearly outweigh the loss or deterioration of habitat) and a suitable compensation strategy exists.

- 6.2.7. National policy therefore implicitly recognises the importance of biodiversity and that with sensitive planning and design, development and conservation of the natural heritage can co-exist and benefits can, in certain circumstances, be obtained.

6.3. Local Policy

Wiltshire Core Strategy

- 6.3.1. The Wiltshire Core Strategy was adopted in January 2015 and is the Development Plan against which planning applications are assessed on planning applications in the county. Relevant policies to ecology and nature conservation with regard to the Application Site are discussed below:
- 6.3.2. **Policy CP50** – Biodiversity and Geodiversity: This policy relates to consideration towards biodiversity as a whole but also specifically with regard to the protection of designated sites including Natura 2000 sites. Going on to state that "Any development that would have an adverse effect on the integrity of a European nature conservation site will not be in accordance with the Core Strategy".
- 6.3.3. **Policy CP52** – Green Infrastructure: This policy relates to provision for the retention and enhancement of Wiltshire's green infrastructure network. It states that development will be required to consider the green infrastructure in the local area including, retaining and enhancing existing green infrastructure, making provision for open spaces within development sites, managing open space appropriately throughout the lifespan of the development and providing appropriate contributions towards the delivery of the Wiltshire Green Infrastructure Strategy.

Draft Wiltshire Local Plan 2020 – 2038

- 6.3.4. The Draft Wiltshire Local Plan 2020 – 2038 is an emerging document yet to be adopted by Wiltshire council and as such carries little weight at this stage. This document has been described by the council as a Local Plan Review produced to ensure consistency and alignment with National Planning Policy Framework. Relevant policies are discussed below:
- 6.3.5. **Policy 88** – Biodiversity and geodiversity: This policy is incorporates elements of Policy CP50 (see above) and focuses on protection of features of nature conservation value including protected species, priority habitat, habitats of principal importance and protected sites. Where possible, enhancements to onsite habitats should be targeted.
- 6.3.6. The policy also requires the provision of integral bird nesting features, integrated bat boxes, hedgehog highways throughout the development site

and provision of specific nesting opportunities for house martins. The policy also requires provision of habitat of value to wildlife including wildflower / meadow grassland, native hedgerow and tree planting and wetland areas, alongside species specific enhancements such as log piles, insect hotels and hibernacula.

- 6.3.7. **Policy 89 – Biodiversity net gain:** This policy requires a minimum 20% biodiversity net gain. Gains should be delivered in a hierarchical manner with onsite delivery favoured. All planning application subject to biodiversity net gain must submit a Biodiversity Gain Plan.
- 6.3.8. **Policy 90 – Woodland, hedgerows and trees:** This policy requires major development to retain and enhance Wiltshire's woodlands, hedgerows and trees.

North Meadow and Clattinger Farm SAC Interim Recreation Mitigation Strategy

- 6.3.9. North Meadow and Clattinger Farm SAC has an interim mitigation strategy¹⁵ in place for recreational impacts and relates to an increase in housing and tourism development in the designated zone of influence. The strategy revolves around Strategic Access Management and Maintenance (SAMM) payments and provision of Suitable Alternative Natural Greenspace (SANG), with the mitigation package based on the size of the development and the distance from the SAC. The mitigation outlined for the Application Site is discussed in more detail in section 5.2 of this report and within the sHRA produced by Ecology Solutions (10742.sHRA.vf, dated March 2026).

6.4. Discussion

- 6.4.1. The development of the Application Site is not likely to have a significant adverse effect on designated sites in the locality. The Development Proposals have been designed to deliver the appropriate ecological mitigation and enhancements to support local wildlife and biodiversity. Following the recommendations and enhancements within this report, it is considered that the Development Proposals at the Application Site would be in accordance with relevant planning policy at the national and local level.

¹⁵ M; Hobson, D; Jones, R; Price, S; Squirrell, N (2023) 'North Meadow and Clattinger Farm Special Area of Conservation Interim Recreation Mitigation Strategy 2023 – 2028'. Cotswold District Council, Natural England, Swindon Borough Council, Wiltshire Council

7. Summary and Conclusions

- 7.1. Ecology Solutions was initially commissioned by Mac Mic Strategic Land Limited in January 2022 to undertake a suite of ecological survey and assessment work of Land at Malmesbury Road, Cricklade.
- 7.2. Outline planning permission is sought for up to 315 dwellings with associated access and infrastructure including Suitable Alternative Natural Greenspace (SANG). All matters are reserved except for access.
- 7.3. The Application Site was initially surveyed in August 2023 with updates completed in July 2025 (F1 and F2) and October 2025 (F3 and F4) based on UK Habitat Classification (UKHab) methodology as recommended by Natural England and appraised for protected and notable species suitability.
- 7.4. **Habitats.** The Application Site comprises a range of common and widespread habitats. The vast majority of the Application Site comprises modified grassland indicative of high nutrient input and levels of disturbance.
- 7.5. There is scope for the majority of native hedgerows at the boundaries to mostly be retained as part of the Development Proposals and extended with further native hedgerow planting. Individual trees planting, native scrub and species-rich grassland creation will aid in increasing the floral diversity of the Application Site.
- 7.6. **Statutory Sites.** The closest statutory site to the Application Site is North Meadow and Clattinger Farm SAC / North Meadw, Cricklade SSSI located 0.3km to the north. The Development Proposal would have a significant impact on the SAC in the absence of mitigation measures via recreational and drainage / hydrological pathways. However, appropriate mitigation has been provided in this report and the separate SHRA following the published mitigation strategy and best practice guidelines for construction activities to ensure no significant impact occurs.
- 7.7. **Non-statutory Sites.** There are no non-statutory designated sites within or immediately adjacent to the Application Site itself. The closest site is the River Thames or Isis LWS located approximately 0.3km to the north of the Application Site. The measures recommended to mitigate for impacts on the North Meadow and Clattinger Farm would also result in no significant impact on this or any other non-statutory site.
- 7.8. **Badger.** No confirmed evidence of badger activity and no setts have been recorded within the Application Site during any of the survey work completed since 2023. It is however noted, that a badger sett is located to the east of the Application Site underneath offsite farm buildings.
- 7.9. It is recommended that a Badger sett check is carried out prior to the commencement of any future development as a precaution to ensure that no new setts have been excavated since the surveys.
- 7.10. Relevant construction stage mitigation measures have been recommended including ensuring that any trenches or excavations are covered or fitted with escape ramps at the end of each working day to prevent badgers from becoming trapped and avoiding

leaving piles of subsoil unattended for long periods, as badgers may attempt to create new setts.

- 7.11. **Bats.** The Application Site is noted to be used by a range of mainly common and widespread species. All trees on and directly adjacent to the Application Site were appraised for their suitability to support roosting bats during surveys in July and October 2025. A single tree has been recorded as PRF-M. This will be retained in full. Several PRF-I trees are also present however none of the trees are to be lost to the development.
- 7.12. A suite of enhancement measures including bat box provision and habitat creation have been recommended to increase foraging and roosting opportunities for bats.
- 7.13. **Hedgehog.** No evidence of hedgehog was recorded on-site during the surveys. While no evidence was recorded, it is considered that the habitats on site such as grassland, hedgerows, and treeline, are suitable for the foraging and dispersal of hedgehog. It is known that the species is present in the local area and as such the occasional use by this species cannot be eliminated.
- 7.14. Any clearance of suitable habitat for hedgehog such as the hedgerows, will be subject to inspection to ensure that the species is absent, while any vegetation clearance should be carried out in a systematic and controlled manner to allow hedgehogs to disperse. Trenches or deep pits associated with construction that are to be left open overnight should also be provided with a means of escape in case a hedgehog enters.
- 7.15. The retention of native hedgerows combined with the creation of new species-rich native hedgerow would ensure that the Application Site continues to offer suitability to support hedgehogs. The inclusion of hedgehog gateways within installed fences will also ensure that the Application Site remains permeable for this species post-development.
- 7.16. **Other Mammals.** Due to the habitats present, it is considered that small common mammal species could be present, but none of these are likely to be notable species given the habitats present.
- 7.17. **Birds.** The existing native hedgerows with trees, woodland, and individual trees provide opportunities for the foraging and nesting of common bird species.
- 7.18. The Development Proposals will retain most of these native hedgerows with trees, therefore retaining nesting opportunities for birds. Provision of new native hedgerow planting and native fruit tree planting would ensure opportunities for foraging and nesting birds are increased post-development.
- 7.19. Any clearance of suitable bird nesting habitat should take place outside the nesting bird season (March to August inclusive), or only during this period following a nesting bird check to confirm no active nests are present in order to avoid a potential offence under the legislation.
- 7.20. The inclusion of a number of new bird boxes to be integrated within the newly constructed buildings and deployed on mature retained tree would elevate nesting potential post-development.
- 7.21. **Reptiles.** Targeted surveys for common reptile species within suitable grassland and ruderal vegetation habitats were undertaken in 2022 and 2023. These surveys confirmed the presence of low population of common lizard.

- 7.22. A mitigation strategy involving sensitive removal of suitable habitat under a directional staged cut methodology has been recommended. This will be sufficient to avoid significant impacts to the local reptile population.
- 7.23. **Amphibians.** No waterbodies considered to be suitable for Great Crested Newts are present on or adjacent to the Application Site. 5 ponds are located with 250m of the Application Site, an eDNA survey of P1, to the south of the Application Site returned a positive result for presence of GCN. As such an application to join the Natural England DLL scheme has been submitted to ensure appropriate mitigation will be brought forward.
- 7.24. **Invertebrates.** It is expected that an assemblage of common invertebrate species utilise the on-site habitats and there is no reason to suspect the likely presence of any scarce or notable invertebrate species.