



ECOLOGYSOLUTIONS

Part of the ES Group

LAND OFF THE FORTY
AND CHELWORTH ROAD,
CRICKLADE,
WILTSHIRE

Ecological Assessment

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1. INTRODUCTION

1.1. Background & Proposals

1.1.1. Ecology Solutions Limited was originally commissioned by Hannick Homes & Developments Ltd in March 2021 to undertake an ecological assessment of Land off The Forty and Chelworth Road, Cricklade, Wiltshire (see Plan ECO1), hereafter referred to as the application site.

1.1.2. The application site comprises two separate parcels of land (annotated as Parcel A and Parcel B on Plan ECO1). The development proposals are as follows:

“Outline planning application (with all matters except access reserved) for up to 49 dwellings and associated works and provision of a cemetery together with access and associated works”.

1.1.3. An Illustrative Layout Plan (Cricklade _40_001) for the proposals (Parcel A) has been produced, with a copy included at Appendix 1 of this assessment.

1.2. Application Site Characteristics

1.2.1. Parcel A is 2.998 hectares in size and is located to the south of The Forty, Cricklade. This parcel primarily comprises two semi-improved grassland fields separated by and bounded by treelines and hedgerows. Existing residential development is located to the north, north-east and west of Parcel A, with agricultural land located to the south and south-west.

1.2.2. Parcel B is 0.769 hectares in size and is located to the north of Chelworth Road (to the west of Parcel A). This parcel comprises semi-improved grassland bounded by hedgerows to the north, west and south. Existing residential development and gardens are located to the east, with agricultural land located to the north and west.

1.3. Ecological Assessment

1.3.1. This document assesses the ecological interest of the application site. The importance of the habitats present is evaluated with regard to current guidance published by the Chartered Institute of Ecology and Environmental Management (CIEEM)¹.

1.3.2. This report outlines the existing baseline conditions for the application site, setting these in the correct planning policy and legal framework and assessing any potential impacts which may occur from the proposed development. Appropriate mitigation where necessary is identified such that it will offset any negative impacts

¹ CIEEM (2018) *Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine*. Version 1.2 Updated April 2022. Chartered Institute of Ecology and Environmental Management, Winchester.

and where possible provide for the ecological enhancement of the application site, in accordance with relevant planning policy.

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 its immediate surroundings, Ecology Solutions contacted Wiltshire & Swindon Biological Records Centre (WSBRC) in July 2023.

2.2.2. Information has been provided by WSBRC and is referenced within this report where appropriate. Due to publication conditions, the raw data received as part of the desk study exercise cannot be included as an appendix to this document; however, pertinent information regarding non-statutory designated sites is illustrated on Plan ECO1.

2.2.3. Further information on designated sites from a wider search area was also obtained from the online Multi-Agency Geographic Information for the Countryside (MAGIC)² database. This information is reproduced at Appendix 2 and where appropriate on Plan ECO1.

2.3. Habitat Survey

2.3.1. Habitat survey work was undertaken in May 2021 (Parcel A only) and August 2023 (Parcels A and B) to ascertain the general ecological value of the application site and to identify the main habitats and associated plant species.

2.3.2. The application site was surveyed based around the extended Phase 1 survey methodology³ and UK Habitat Classification (UKHab) methodology⁴, as recommended by Natural England and DEFRA, whereby the habitat types present are identified and mapped, together with an assessment of the species composition of each habitat. This technique provides an inventory of the basic habitat types present and allows identification of areas of greater potential which require further survey. Any such areas identified can then be examined in more detail.

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.

2.3.4. 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 MAGIC website. Available at: <http://magic.defra.gov.uk>

³ Joint Nature Conservation Committee (2010). *Handbook for Phase 1 Habitat Survey – a Technique for Environmental Audit*. England Field Unit, Nature Conservancy Council, reprinted JNCC, Peterborough.

⁴ UKHab Ltd (2023). *UK Habitat Classification Version 2.0* Available at <https://www.ukhab.org>

However, given that the August 2023 survey was undertaken at an optimal time of year for the assessment of grassland habitats, it is considered that an accurate and robust assessment has been made.

2.4. Faunal Survey

2.4.1. General faunal activity observed during the course of the extended Phase 1 survey was recorded, whether visually or by call. Specific attention was paid to the presence or potential presence of any protected, rare, notable or Priority Species, and the extent to which the application site provides any potential opportunities for these species / groups. In addition, specific surveys were undertaken in respect of bats, Badgers *Meles meles*, amphibians and reptiles.

2.4.1. **Bats.** A ground level appraisal survey was undertaken in May 2021 (Parcel A only) and August 2023 (Parcels A and B) to assess the potential of existing trees, buildings and structures within and immediately adjacent to the application site to support roosting bats. This work was undertaken by experienced bat workers and aimed to establish the likelihood of presence / absence of bats.

2.4.2. Field surveys were undertaken with regard to best practice guidelines issued by Natural England (2004⁵), the Joint Nature Conservation Committee (2004⁶) and the Bat Conservation Trust (2016⁷).

2.4.3. All trees present within and immediately adjacent to the application site were assessed for their potential to support roosting bats. For a tree to be classed as having some potential for roosting bats it must usually have one or more of the following characteristics:

- obvious holes, e.g., rot holes and old woodpecker holes;
- dark staining on the tree below the hole;
- tiny scratch marks around a hole from bats' claws;
- cavities, splits and/or loose bark from broken or fallen branches, lightning strikes etc.;
- very dense covering of mature Ivy *Hedera helix* over trunk.

2.4.4. Consideration was also afforded to the habitats present within and adjacent to the application site in terms of the potential opportunities that they provide for foraging and commuting bats in the local area.

2.4.5. Bat activity surveys were undertaken in order to establish whether any features of potential significance for foraging and commuting bats are present within or adjacent to the application site (Parcel A). Monthly activity surveys were completed between June and October 2021 inclusive.

⁵ Mitchell-Jones, A. J. (2004). *Bat Mitigation Guidelines*. English Nature, Peterborough.

⁶ Mitchell-Jones, A.J. & McLeish, A.P. (Eds.) (2004). *Bat Workers' Manual*. 3rd edition. Joint Nature Conservation Committee, Peterborough.

⁷ Collins, J. (Eds.) (2016). *Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd edition)*. Bat Conservation Trust, London.

- 2.4.6. For the walked transects, routes were identified to ensure comprehensive coverage of all habitats present within the application site. Surveyors utilised Echo Meter 2 (EMT2) bat detectors to aid identification of bats and record data. All bat activity observed or recorded on the detector was noted by the surveyor. Transect surveys were conducted from 15 minutes before sunset to approximately 2 hours after sunset. Walked transect survey work was completed during optimal conditions for bat surveys.
- 2.4.7. In addition, a number of automated bat detectors (SM4 and SM Mini) were deployed each month for a minimum of five consecutive nights in strategic locations within the application site. All data recorded was subsequently analysed using bat sound analysis software, providing long-term data regarding the use of the application site by foraging and commuting bats. Detectors were set to record each night from 20 minutes prior to sunset until 20 minutes after sunrise.
- 2.4.8. All data recorded during the walked transects and static detector surveys were subsequently analysed using Kaleidoscope bat sound analysis software.
- 2.4.9. **Badgers.** Survey work to search for evidence of Badgers was also undertaken in May 2021 (Parcel A only) and August 2023 (Parcels A and B), which comprised two main elements. The first of these was a thorough search for evidence of Badger setts. For any setts encountered each sett entrance would be recorded and plotted, even if the entrance appeared disused. The following information was recorded if appropriate:
- (i) The number and location of well used or very active entrances; 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 and the remains of the spoil heap.
- 2.4.10. Secondly, Badger activity such as well-worn paths and run-throughs, snagged hair, footprints, latrines and foraging signs were also searched for in order to build up a picture of the use of the application site by Badgers.
- 2.4.11. **Amphibians.** Specific survey work was undertaken in June 2021 to ascertain any evidence to indicate the presence or absence of amphibians (including Great Crested Newts *Triturus cristatus*) within the application site and local area.

- 2.4.12. Survey work was undertaken of all wet ditches and depressions recorded within and immediately adjacent to the application site boundary, in addition to off-site waterbodies present in the local area where permission was granted to undertake survey work by the relevant landowner (with ponds identified from OS mapping and aerial photography).
- 2.4.13. The survey methodology entailed the completion of environmental DNA (eDNA) surveys of all relevant waterbodies. This survey methodology entails collecting twenty 40ml samples of water at equally spaced locations around the perimeter of each waterbody, where access is available. The 20 samples are then mixed in a plastic sample bag to form a single amalgamated sample of the water from the pond. The amalgamated sample is then mixed thoroughly to ensure that any DNA present is distributed evenly throughout the sample bag.
- 2.4.14. A total of 15ml of water is then taken from the amalgamated sample and added to 35ml of ethanol within a separate sample tube, to preserve any DNA present. The sample tubes are then shaken vigorously to mix the water sample and ethanol thoroughly and to prevent the degradation of any DNA. This technique is then repeated six times, using water from the amalgamated sample, such that a total of six sample tubes are filled for the waterbody.
- 2.4.15. The six sample tubes are subsequently sent to be analysed by a laboratory using Polymerase Chain Reaction (PCR) amplification techniques. The analysis involves producing DNA sequences that verify the taxonomic assignment of amplified DNA signals.
- 2.4.16. Each sample is run in 12 replicates. The results are then reported as the proportion of these 12 replicates that have successfully amplified, indicating whether Great Crested Newt DNA is present (e.g., 1/12 up to 12/12). A negative result is given if all of the replicates are negative; a positive result is given if one or more of the replicates are positive.
- 2.4.17. **Reptiles.** Specific surveys to identify the presence or absence of common reptiles within the application site were undertaken at the application site (Parcels A and B) between August and October 2023 inclusive.
- 2.4.18. Survey work was undertaken with regard to the methodology outlined in the *Herpetofauna Workers' Manual*⁸ and involved the deployment of 180 artificial refugia or 'tins' (0.5m x 0.5m squares of roofing felt) distributed throughout all suitable reptile habitats within the application site. These tins will be left in place for a suitable period of time to 'bed in'.
- 2.4.19. The tins provide shelter and heat up quicker than the surroundings in the morning and can remain warmer than the surroundings in the

⁸ Gent, T. & Gibson, S. (2003). *Herpetofauna Workers' Manual*. JNCC, Peterborough.

late afternoon. Being ectothermic (cold blooded), reptiles use them to bask and raise their body temperature which allows them to forage earlier and later in the day.

- 2.4.20. Subsequently, the artificial refugia (and any natural refugia such as logs or brash within the site) were inspected during suitable weather conditions, with details recorded of any reptiles encountered. Any reptiles observed within the site in general (e.g., whilst walking quietly and carefully between refugia) were also noted. A total of seven check surveys were completed in suitable weather conditions.
- 2.4.21. Suitable weather conditions for carrying out the surveys are when the air temperature is between 9 and 18°C. Heavy rain and windy conditions were avoided.

3. ECOLOGICAL FEATURES

3.1. As outlined above, the application site was subject to survey work in May 2021 (Parcel A only) and August 2023 (Parcels A and B). The vegetation present enabled the habitat types to be satisfactorily identified and an accurate assessment of the ecological interest of the habitats to be undertaken.

3.2. The following main habitat / vegetation types were identified within the application site:

- Species-poor Semi-improved Grassland;
- Semi-improved Grassland;
- Hedgerows and Treelines;
- Dense Scrub and Ruderal Vegetation; and
- Existing Structures.

3.3. The location of these habitats is shown on Plan ECO2. Each habitat present is described below with an account of their representative plant species.

3.4. Species-poor Semi-improved Grassland

3.4.1. Field F1 is located in the north of Parcel A and comprises species-poor semi-improved grassland that has been divided into smaller paddocks with electric wire fencing. Parts of this field were recorded to be subject to intensive grazing by Horses in August 2023, with other areas not currently subject to grazing supporting a longer sward.

3.4.2. Species associated with this habitat include Yorkshire-fog *Holcus lanatus*, Perennial Rye-grass *Lolium perenne*, Cock's-foot *Dactylis glomerata*, Common Sorrel *Rumex acetosa*, Common Mouse-ear *Cerastium fontanum*, Lords-and-ladies *Arum maculatum*, Sedge *Carex sp*, Creeping Buttercup *Ranunculus repens*, Cut-leaved Crane's-bill *Geranium dissectum* and Ribwort Plantain *Plantago lanceolata*.

3.5. Semi-improved grassland

3.5.1. Field F2 comprises a large semi-improved grassland field which comprises the majority of Parcel A. Whilst this field was originally recorded to be subject to intensive grazing by Cattle in May 2021, it was recorded to support a longer more unmanaged, rank sward during updated survey work undertaken in August 2023.

3.5.2. Species recorded in F2 include Perennial Rye, Yorkshire-fog *Holcus lanatus*, Cock's-foot, Sweet Vernal-grass *Anthoxanthum odoratum*, Cow Parsley *Anthriscus sylvestris*, Red Clover *Trifolium pratense*, Common Sorrel, Creeping Buttercup and Broad-leaved Dock *Rumex obtusifolius*. This field supports various dips and depressions including damper areas dominated by Soft Rush *Juncus effusus* and Hard rush *Juncus inflexus*.

- 3.5.3. Parcel B primarily comprises of a large semi-improved grassland field (F3) which at the time of survey in August 2023 was recorded to support a long, rank grassland sward. Species recorded in this habitat include Perennial Rye-grass, Cock's-foot, False Oat-grass *Arrhenathrum elatius*, Yorkshire-fog, Marsh Foxtail *Alopecurus geniculatus*, Creeping Bent *Agrostis stolonifera*, Crested Dog's-tail *Cynosurus cristatus*, White Clover *Trifolium repens*, Common Mouse-ear, Creeping Thistle *Cirsium arvense* and Common Sorrel.

3.6. Hedgerows and treelines

- 3.6.1. Treeline T1 is located along the northern boundary of Parcel A adjacent to The Forty. This feature comprises a line of unmanaged scrub and young trees, dominated by Blackthorn *Prunus spinosa*, with other species present including Pedunculate Oak *Quercus robur*, Ash *Fraxinus excelsior* and Hawthorn *Crataegus monogyna*.
- 3.6.2. Treeline T2 represents the boundary between Fields F1 and F2 in the northern part of Parcel A. This feature primarily comprises unmanaged Willow *Salix spp.* trees in addition to Ash, Blackthorn *Prunus spinosa* and Hawthorn.
- 3.6.3. Hedgerow H1 is located on the western boundary of F2 and comprises a managed Hornbeam *Carpinus betulus* hedgerow associated with the adjoining residential property and a fence.
- 3.6.4. Hedgerow H2 is situated on the south-western boundary of F2. This hedgerow is dominated by Blackthorn, with other species present including Field Maple *Acer campestre*, Hawthorn, Elder *Sambucus nigra*, Ash, Dog Rose *Rosa canina* and Bramble.
- 3.6.5. Hedgerow H3 forms the south-eastern boundary of Parcel A and supports a similar complement of species to H2.
- 3.6.6. Hedgerow H4 represents a dense band of dense Bramble scrub with ruderal vegetation, associated with the fence line adjoining existing residential development to the north-east of Parcel A.
- 3.6.7. Hedgerows H5, H6 and H7 form part of the northern, southern and eastern boundaries of Field F3 respectively (which incorporates Parcel B). The eastern part of H5 and H7 are located within the application site boundary. These features represent unmanaged hedgerows approximately 6 metres in height, which are dominated by Blackthorn with other species present including Elm *Ulmus procera*, Hawthorn, Field Maple, Ash, Elder, Bramble and Dog-Rose.
- 3.6.8. Species present in the ground layer of hedgerows and treelines within the application site include Bramble *Rubus fruticosus* agg., Cleavers *Galium aparine*, Cow Parsley *Anthriscus sylvestris*, Lords-and-ladies *Arum maculatum*, Ivy, Sedges *Carex spp.* and Lesser Celandine *Ranunculus ficaria*.

3.7. Dense Scrub and Ruderal Vegetation

- 3.7.1. An area of dense scrub with ruderal vegetation is located along part of the south-western boundary of F2 (Parcel A), adjoining hedgerow H2. This area of dense scrub primarily comprises Blackthorn and Hawthorn in addition to Bramble, Elder and Dog Rose.
- 3.7.2. This area also supported tall ruderal vegetation with species present including Cow Parsley *Anthriscus sylvestris*, Cleavers *Galium aparine*, Lords and Ladies *Arum maculatum*, Red Dead-nettle *Lamium purpureum*, Common Nettle *Urtica dioica*, Spear Thistle *Cirsium vulgare* and Broadleaved Dock *Rumex obtusifolius*.

3.8. Existing Structures

- 3.8.1. A wooden shed / Horse shelter was recorded to be present within field F1 during the survey undertaken in August 2023, with a slanted corrugated metal sheet roof.

3.9. Background Information.

- 3.9.1. The desk study undertaken with WSBRC did not return any records from within or immediately adjacent to the application site boundary. Furthermore, no records of invasive non-native botanical species were returned from within or immediately adjacent to the application site boundary.
- 3.9.2. The nearest record of notable plant species returned pertains to Snake's-head Fritillary *Fritillaria meleagris*, recorded at a location approximately 0.6km to the east of the application site in 2015.
- 3.9.3. Other records of protected and notable botanical species recorded within the search area included Great Yellow Cress *Rorippa amphibia*, Tubular Water-dropwort *Oenanthe fistulosa*, River Water-dropwort *Oenanthe fluviatilis*, Yellow-juiced Poppy *Papaver lecoqii*, Good King Henry *Blitum bonus-henricus*, Orange Foxtail *Alopecurus aequalis*, Pink Water Speedwell *Veronica catenate*, Knotted Hedge Parsley *Torilis nodosa*, Slender Spike-rush *Eleocharis uniglumis*, Great Burnet *Sanguisorba officinalis*, Sweet-brier *Rosa rubiginosa*, Pale Toadflax *Linaria repens*, Downy-fruited Sedge *Carex filiformis*, Strawberry Clover *Trifolium fragiferum*, Louisewort *Pedicularis sylvatica*, Pasqueflower *Pulsatilla grandis*, Rat's-tail Fescue *Vulpia myuros* and Thread-leaved Water-crowfoot *Ranunculus trichophyllus*.
- 3.9.4. None of these species were recorded within the application site during the survey work undertaken and given the habitats present it is considered unlikely that they would be present.

4. WILDLIFE USE OF THE APPLICATION SITE

- 4.1. During surveys that have been undertaken within the application site, general observations have been made of any faunal use, with specific attention paid to the potential presence of protected or notable species. Specific surveys were also undertaken for bats, Badgers, amphibians and reptiles.

4.2. Bats

Preliminary Roost Assessments

- 4.2.1. **Existing Buildings / Structures.** The wooden shed / Horse shelter present in the northern part of Field F1 does not provide any potential opportunities for roosting bats, primarily on account of its structure as it comprises wooden walls and a slanted corrugated metal sheet roof. The structure does not possess any voids or other crevices which could be utilised by this group.
- 4.2.2. There are no other buildings or structures present within or located immediately adjacent to the application site which provide potential opportunities for roosting bats.
- 4.2.3. **Trees.** The vast majority of existing trees present within and adjacent to the application site do not have any potential to support roosting bats, lacking features such as cracks, splits, holes or a dense covering of Ivy.
- 4.2.4. A number of Willow trees associated with treeline T2 were identified to support cracks and splits from the initial ground level assessment which could be of some value for bats. However, following the completion of further detailed inspection of each of these features utilising endoscopes undertaken in June 2021 identified that crevices associated with these features were either open to the elements, light and/or damp. As such, adopting a precautionary approach, these trees were assessed to have low potential to support roosting bats.
- 4.2.5. The updated ground-level assessment undertaken in August 2023 did not identify any material changes in terms of the opportunities that these (or indeed other) trees present within and adjacent to the application site provide for roosting bats.
- 4.2.6. There are no trees present within or adjacent to Parcel B that possess potential features of value for roosting bats.

Activity Surveys – Walked Transects

- 4.2.7. As outlined in Section 2 above, bat activity surveys were undertaken at the application site (Parcel A) between June and October 2021 inclusive, to ascertain the value of habitats present within the application site for foraging and commuting bats in the local area. This included walked transect surveys in addition to static detector surveys.

- 4.2.8. Table 1 below outlines the dates and weather conditions for the walked transect survey work which was undertaken.

Month	Survey Type	Date	Weather Conditions
June	Dusk	14/06/2021	19°C, 50% cloud cover, light breeze, dry
July	Dusk	12/07/2021	18°C, 20% cloud cover, light breeze, dry
August	Dusk	17/08/2021	16°C, 100% cloud cover, light breeze, dry
September	Dusk	14/09/2021	16°C, 100% cloud cover, light breeze, light drizzle
September	Dawn	15/09/2021	13°C, 100% cloud cover, light breeze, dry
October	Dusk	18/10/2021	16°C, 100% cloud cover, light breeze, light drizzle

Table 1: Summary of dates and weather conditions of walked transect surveys

- 4.2.9. Tables 2 to 6 inclusive below summarise the overall findings of the walked transect surveys undertaken at the application site, with the total number of registrations of each species identified during each survey.

June	
Species	Total Number of Registrations
Common Pipistrelle <i>Pipistrellus pipistrellus</i>	35
Soprano Pipistrelle <i>Pipistrellus pygmaeus</i>	33
Noctule <i>Nyctalus noctula</i>	9
<i>Myotis</i> sp.	1

Table 2: Bat registrations during June dusk activity survey

July	
Species	Total Number of Registrations
Common Pipistrelle	32
Soprano Pipistrelle	84
<i>Myotis</i>	1
Noctule	53

Table 3: Bat registrations during July dusk activity survey

August	
Species	Number of Registrations
Common Pipistrelle	8
Soprano Pipistrelle	7
Noctule	9

Table 4: Bat registrations during August dusk activity survey

September	
Species	Number of Registrations
Common Pipistrelle	11
Soprano Pipistrelle	19
<i>Myotis</i> sp.	2
Noctule	99

Table 5: Bat registrations during September dusk and dawn activity survey (combined)

October	
Species	Number of Registrations
Common Pipistrelle	24
Soprano Pipistrelle	4
Noctule	1
Nathusius Pipistrelle <i>Pipistrellus nathusii</i>	2

Table 6: Bat registrations during October dusk activity survey

- 4.2.10. The activity surveys completed at the application site identified that the application site is utilised by a range of bats for foraging and commuting. Surveys identified that the majority of activity pertains to Common Pipistrelle, Soprano Pipistrelle, and Noctule bats, with occasional *Myotis* sp. and Nathusius' Pipistrelle registrations recorded.
- 4.2.11. Bat activity was recorded throughout Parcel A. However, analysis of the data recorded identified that more activity was recorded in the north of the application site (field F1) primarily treelines T1 and T2. Activity was generally evenly distributed along the eastern, western and southern boundaries of field F2.

Activity Surveys – Static Detectors

- 4.2.12. As outlined in Section 2, static detector surveys were also undertaken on a monthly basis between May and October 2021. The dates of each survey period are outlined in Table 7 below.

Survey	Dates	Number of Static Monitoring Nights
May 2021	20/05/2021 – 25/05/2021	5
June 2021	14/06/2021 – 21/06/2021	8
July 2021	13/07/2021 – 19/07/2021	8
August 2021	17/08/2021 – 23/08/2021	7
September 2021	14/09/2021 – 19/09/2021	6
October 2021	18/10/2021 – 25/10/2021	8

Table 7: Dates of static detector monitoring periods

- 4.2.13. Detectors were deployed at two strategic locations within the application site (Parcel A) each month (labelled 1 and 2 on Plan ECO3). The findings of each period of survey are summarised in Tables 8 to 11 inclusive below.
- 4.2.14. The results are presented as the average number of registrations of each species per night at each location, which were recorded during the survey period (i.e. within any given month).

June		
Species	Static Detector Locations	
	1	2
Common Pipistrelle	0.2	0.6
Soprano pipistrelle	8.4	0.8
Nathusius' pipistrelle	-	0.2
Noctule	0.2	0.2
Myotis sp.	0.2	5.0

Table 8: Results of June static detector survey (average number of registrations across the survey period per species)

July		
Species	Static Detector Locations	
	1	2
Common Pipistrelle	48.8	1
Soprano pipistrelle	49.8	0.9
Nathusius' pipistrelle	1.1	-
Noctule	15.8	1.1
Myotis sp.	1.8	-
Brown Long-eared <i>Plecotus auritus</i>	0.1	-
Serotine <i>Eptesicus serotinus</i>	0.5	-
Leisler's bat <i>Nyctalus leisleri</i>	1.0	-

Table 9: Results of July static detector survey (average number of registrations across the survey period per species)

August		
Species	Static Detector Locations	
	1	2
Common Pipistrelle	12.9	11.4
Soprano pipistrelle	15.6	7.8
Noctule	1.4	13.9
Myotis sp.	2.1	2.4
Leisler's bat	0.1	1.6
Serotine	0.1	1.5
Brown Long-eared	0.1	-

Table 10: Results of August static detector survey (average number of registrations across the survey period per species)

September		
Species	Static Detector Locations	
	1	2
Common Pipistrelle	3.5	17.7
Soprano pipistrelle	2.8	0.8
Nathusius' pipistrelle	-	0.3
Noctule	14.5	-
Leisler's bat	0.1	-
Brown Long-eared	-	0.3
Myotis sp.	2.0	4.0
Barbastelle	-	0.1
Serotine	-	0.1

Table 11: Results of September static detector survey (average number of registrations across the survey period per species)

October		
Species	Static Detector Locations	
	1	2
Common Pipistrelle	38.4	3.1
Soprano pipistrelle	4.4	1.5
Noctule	0.4	0.8
Leisler's bat	0.2	-
Myotis sp.	0.3	1.9
Barbastelle	-	0.1

Table 11: Results of October static detector survey (average number of registrations across the survey period per species)

- 4.2.15. As with the walked transect survey, the majority of bat activity recorded during the static detector surveys pertained to registrations of Common Pipistrelle, Soprano Pipistrelle and Noctule bats. Detectors also recorded the presence of other species during selected months, including *Myotis* spp., Nathusius' Pipistrelle, Brown Long-eared, Serotine, Leisler's and Barbastelle bats.
- 4.2.16. Activity of these additional species was limited both in terms of the months during which it was recorded and also in terms of the average number of registrations. For instance, surveys did not record more than 5.0 registrations of *Myotis* bats on average per night during any given survey period, and no more than 1.6 registrations of Leisler's bats on average per night during a survey period. Indeed, the findings for the other species were lower still.
- 4.2.17. Static surveys identified relatively little difference between activity levels at Locations 1 and 2 during most months, either in terms of the number of registrations recorded or the species present.
- 4.2.18. Specifically regard to more light sensitive bat species, including Barbastelle and Brown Long-eared bats, activity levels recorded were low (maximum of 0.3 registrations on average per night per survey period for Brown Long-eared and 0.1 for Barbastelle respectively), and recorded in selected months only (Brown Long-eared in July, August and September and Barbastelle at Location 2 in September and October only).
- 4.2.19. **Background Information.** The desk study undertaken with WSBRC did not return any records of bat species within or directly adjacent to the application site. The closest record returned pertains to an unidentified bat species, returned from a location approximately 0.2km to the northeast of the application site from 2019.
- 4.2.20. Other bat species recorded within the locality include Brown Long-eared Bat, Noctule, Serotine, Common Pipistrelle and Soprano Pipistrelle.

4.3. Badgers

- 4.3.1. Survey work undertaken in May 2021 (Parcel A) and August 2023 (Parcels A and B) did not identify the presence of any Badger setts within or in close proximity to the application site. Furthermore, no other evidence indicating the presence of Badgers (such as latrines, footprints, hairs, or foraging signs) was recorded within the application site during the survey work undertaken.
- 4.3.2. The woodland, scrub and grassland habitats present within the application site offer suitable sett-building and foraging opportunities for this species.
- 4.3.3. **Background Information.** The desk study undertaken with WSBRC did not return any records of Badgers from within or adjacent to the application site. The closest record returned was from a location approximately 0.7km to the south of the application site from 2016.

4.4. Hazel Dormice

- 4.4.1. The existing hedgerows and treelines present within the application site offer superficially suitable opportunities for foraging and nesting Hazel Dormice *Muscardinus avellanarius*. However, it is noted that these features are poorly connected to suitable Dormouse habitat within the wider area, with the application site separated from areas of extensive woodland and scrub and adjoining existing residential development to the north, north-east and west.
- 4.4.2. Moreover, treelines and hedgerows within the application site have limited botanical and structural diversity, such that they would provide sub-optimal opportunities for this species in any event.
- 4.4.3. A visual search of treelines and hedgerows for the presence of any nests undertaken during August 2023 did not record any evidence to indicate the presence of Dormice.
- 4.4.4. Given the limited connectivity between the application site and superficially suitable habitat for Dormice in the local area, the sub-optimal nature of the habitats on-site, the lack of any evidence to indicate presence and the absence of any records from the local area, it is considered highly unlikely that Dormice would be present within the application site.
- 4.4.5. On this basis, no further consideration has been afforded to this species within this Ecological Assessment.
- 4.4.6. **Background Information.** The desk study undertaken with WSBRC did not return any records of Hazel Dormice within the application site boundary or local area.

4.5. Other Mammals

- 4.5.1. The application site does not support any suitable riparian or aquatic habitat that would provide opportunities for Water Vole *Arvicola amphibius* or Otter *Lutra lutra*. On this basis, no further consideration has been afforded to these species within this Ecological Assessment.
- 4.5.2. The habitats present within the application site could provide suitable foraging, dispersal and sheltering opportunities for Hedgehogs *Erinaceus europaeus* in the local area, primarily associated with the hedgerows, scrub and ruderal vegetation along the field boundaries.
- 4.5.3. **Background Information.** The desk study undertaken with WSBRC did not identify any species of Water Vole or Otter from within or adjacent to the application site. The nearest records of Otter was returned from a location approximately 0.9km to the north-east from 2020, with the nearest record of Water Vole returned from a location approximately 0.2km to the south-east from 2020.
- 4.5.4. The desk study identified several records of Hedgehogs from the local area, the nearest of which was from a location approximately 0.1km to the north of the application site from 2021.

4.6. Amphibians

- 4.6.1. A small number of ditches and depressions are present within Parcel A of the application site, associated with boundary hedgerows and undulations within field F2. There are no waterbodies present within or adjacent to Parcel B. In addition, a number of off-site waterbodies are also present in the local area, with locations illustrated at Plan ECO4.
- 4.6.2. In light of the potential opportunities that waterbodies present within the application site and local area could provide for breeding amphibians (including Great Crested Newts), specific survey and assessment work was undertaken in June 2021.
- 4.6.3. Although it is known that Great Crested Newts can disperse up to 500 metres through suitable terrestrial habitat from their breeding pond, it is widely accepted that they tend to utilise suitable terrestrial habitat within a much closer distance. Activity is usually concentrated within 100 metres of breeding ponds, with key habitat is located within 50 metres (typically described by Natural England as 'core habitat').
- 4.6.4. As such, permission was requested from the relevant landowners in May 2021 to undertake survey work of all off-site waterbodies present within 250 metres of the application site boundary (specifically Parcel A). The intention was to undertake eDNA survey of waterbodies both present within the application site and local area, in accordance with the methodology set out at Section 2 above.

- 4.6.5. At the time of the survey visit in June 2021, the waterbodies which had been recorded to be present within and immediately adjacent to the application site during the initial Phase 1 survey in May 2021 had fully dried up, preventing the ability to undertake eDNA survey work. These features were again recorded to be completely dry during the updated August 2023 survey.
- 4.6.6. Whilst permission was sought to survey off-site waterbodies in May 2021, consent was not obtained from any relevant landowners to undertake survey work on their land. As such, it was not possible to complete eDNA survey work of any off-site waterbodies in 2021.
- 4.6.7. The habitats present within the application site boundary provide superficially suitable terrestrial opportunities for amphibians, primarily in the form of longer grassland, hedgerows, trees and scrub. However, areas of intensively grazed grassland present within Parcel A (F1) provide sub-optimal opportunities at best for this species.
- 4.6.8. During the course of reptile survey work undertaken in 2023, a total of four adult Great Crested Newts were recorded under artificial refugia along the western boundary of field F3. Whilst these were recorded outside of the application site boundary (i.e. not within Parcel B), they were recorded in contiguous habitat and could therefore potentially utilise habitat within this part of the application site.
- 4.6.9. No Great Crested Newts were recorded to be present within Parcel A during the reptile surveys in 2023.
- 4.6.10. **Background Information.** The desk study undertaken with WSBRC did not return any records of amphibian species from within or immediately adjacent to the application site.
- 4.6.11. A total of 26 records of Great Crested Newts were returned from within 2km of the application site. The nearest record was returned from a location approximately 0.2km to the east of the application site, recorded in 2014.
- 4.6.12. Other records of amphibian species returned within the data search pertained to Common Frog *Rana temporaria* and Common Toad *Bufo bufo*.

4.7. Reptiles

- 4.7.1. Survey work undertaken in August 2023 identified that the application site supported superficially suitable reptile habitat, primarily in the form of longer grassland and tall ruderal vegetation. To ascertain the presence or absence of this group specific survey work was therefore undertaken, in accordance with the methodology set out in Section 2 above.

4.7.2. A total of 134 tins were utilised for the reptile survey. Given that the total size of the application site (Parcels A and B combined) is approximately 4.2 hectares, the density of the tins therefore significantly exceeded the standard density of 10 per hectare.

4.7.3. The results of these surveys are summarised in Table 13 below.

Date	Survey Number	Weather Conditions	Reptiles Recorded
18/09/23	1	100% cloud cover, 17°C	No Reptiles Recorded
22/09/23	2	15% cloud cover, 12°C	No Reptiles Recorded
26/09/23	3	30% cloud cover, 17°C	No Reptiles Recorded
03/10/23	4	15% cloud cover, 16°C	No Reptiles Recorded
06/10/23	5	30% cloud cover, 16°C	No Reptiles Recorded
09/10/23	6	100% cloud cover, 18°C	No Reptiles Recorded. 4 x GCN
11/10/23	7	100% cloud cover, 18°C	No Reptiles Recorded.

Table 13: Reptile Survey Results

4.7.4. No reptiles were recorded within either Parcel A or Parcel B during the survey work undertaken in September and October 2023.

4.7.5. As such, it is considered highly unlikely that common reptiles are present within the site. No further consideration has been afforded to this group within this Ecological Assessment.

4.7.6. **Background Information.** The desk study undertaken with WSBRC did not return any records of common reptiles from within or immediately adjacent to the application site. The nearest record pertained to Grass snake *Natrix helvetica*, recorded at a location approximately 0.2km to the east of the application site from 2020.

4.7.7. Other records of reptile species returned from the locality include Common lizard *Zootoca vivipara*, Adder *Vipera berus* and Slow-worm *Anguis fragilis*.

4.8. Birds

4.8.1. The hedgerows, treelines and scrub habitats within the application site provide potential opportunities for nesting birds. However, the semi-improved grassland that comprises the majority of the application site offers fairly limited opportunities for this group.

There is no evidence to suggest that any particularly rare, protected, or notable bird species or assemblages are likely to be reliant upon the application site.

- 4.8.2. **Background records.** The desk study undertaken with WSBRC did not return any records of protected bird species within or directly adjacent to the site. The closest record was of Swift *Apus apus* from a location approximately 0.1km to the southwest of the application site from 2007.
- 4.8.3. Other protected and notable bird species records noted within the local area include Tree Sparrow *Passer montanus*, House Sparrow *Passer domesticus*, Starling *Sturnus vulgaris*, Greylag Goose *Anser anser*, Whooper Swan *Cygnus cygnus*, Little Ringed Plover *Charadrius dubius*, Golden Plover *Pluvialis apricaria*, Lapwing *Vanellus vanellus*, Black Tern *Chlidonias niger*, Little Gull *Hydrocoloeus minutus*, Curlew *Numenius arquata*, Eurasian Whimbrel *Numenius phaeopus*, Turtle Dove *Streptopelia turtur*, Kingfisher *Alcedo atthis*, Cuckoo *Cuculus canorus*, Sparrowhawk *Accipiter nisus*, Buzzard *Buteo buteo*, Marsh Harrier *Circus aeruginosus*, Red Kite *Milvus milvus*, Western Osprey *Pandion haliaetus*, Peregrine *Falco peregrinus*, Hobby *Falco subbuteo*, Skylark *Alauda arvensis*, Woodlark *Lullula arborea*, Reed Bunting *Emberiza schoeniclus*, Brambling *Fringilla montifringilla*, Red Crossbill *Loxia curvirostra*, Tree Pipit *Anthus trivialis*, Spotted Flycatcher *Muscicapa striata*, Black Redstart *Phoenicurus ochruros*, Common Firecrest *Regulus ignicapilla*, Redwing *Turdus iliacus*, Fieldfare *Turdus pilaris*, Little Egret *Egretta garzetta*, Mistle thrush *Turdus viscivorus* and Barn Owl *Tyto alba*.

5. ECOLOGICAL EVALUATION

5.1. The Principles of Site Evaluation

- 5.1.1. The latest 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 Ratcliffe⁹. These are broadly used across the United Kingdom to rank sites, so priorities for nature conservation can be attained. For example, current Site 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 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. In addition, habitats of local importance are often highlighted within a local Biodiversity Action Plan (BAP).
- 5.1.7. Levels of importance can be determined within a defined geographical context from the immediate site or locality through to the international level.
- 5.1.8. The legislative and planning policy context are also important considerations and have been given due regard throughout this assessment.

⁹ Ratcliffe, D A (1977). *A Nature Conservation Review: the Selection of sites of Biological National Importance to Nature Conservation in Britain*. Two Volumes. Cambridge University Press, Cambridge.

5.2. Habitat Evaluation

Designated sites

Statutory sites

- 5.2.1. There are no statutory designated sites of nature conservation interest located within or immediately adjacent to the application site boundary.
- 5.2.2. The nearest statutory designated site is North Meadow Site of Scientific Interest (SSSI) and North Meadow & Clattinger Farm Special Area of Conservation (SAC), located approximately 1km to the north of the application site at its closest point (straight line distance; see Plan ECO1).
- 5.2.3. The SSSI and SAC is designated on account of the grassland habitat that it supports, and notably the presence of a significant population of the UK population of Snake's-head Fritillary *Fritillaria meleagris*.
- 5.2.4. North Meadow & Clattinger Farm SAC is a European / international designated site of nature conservation interest. The site qualifies under article 4(4) of the Directive (92/43/EEC), as it hosts the following habitats listed in Annex I:
 - Lowland hay meadows (*Alopecurus pratensis*, *Sanguisorba officinalis*)(2005)
- 5.2.5. The citations for the SAC and component SSSI are included at Appendices 3 and 4 respectively of this document.
- 5.2.6. As illustrated at Plan ECO1, the application site is separated from the closest part of the SAC / SSSI by areas of existing development and infrastructure within the town of Cricklade. Given the distances concerned and the intervening land use, combined with the nature and scale of the development proposals (small scale residential development), it is considered that the development proposals would not be likely to lead to any direct effects upon the European designated site via pathways such as direct loss of habitats, lighting or air quality.
- 5.2.7. The habitats present within the application site primarily comprise semi-improved grassland. As a result, the application site does not provide any suitable habitat which could support the Annex I species which are associated with the SAC. As a result, the application site does not represent land which could potentially be considered as 'functionally linked land' associated with the European designated site.
- 5.2.8. The development proposals will however result in an increase in local residents (albeit one that is relatively small). Recreational pressure arising due to an increase in visitors has been identified as a factor affecting the SAC /SSSI, with a Zone of Influence (Zol)

of 0 – 4.2km (inner zone) and 4.2 – 9.4km (outer zone) identified for the North Meadow part of the designated site¹⁰.

- 5.2.9. Further consideration has therefore been afforded to the potential for adverse effects to arise to the SAC / SSSI via an increase in recreational pressure, both when the proposals are considered alone and in combination with other plans and projects.
- 5.2.10. To address the potential for effects to arise, a package of avoidance and mitigation measures are proposed. The measures which are proposed fully accord with the North Meadow SAC Interim Mitigation Strategy 2023 – 2028, which was published in May 2023 by the affected local planning authorities (specifically, Wiltshire Council, Swindon Borough Council and Cotswold District Council) in conjunction with Natural England.
- 5.2.11. As the site falls within the inner part of the Zol, in line with the strategic approach the development proposals will provide avoidance and mitigation via two pathways.
- 5.2.12. The first entails the provision of an appropriate financial contribution towards Strategic Access Management and Monitoring (SAMM) measures, which are enacted at the designated site itself. These measures will avoid and mitigate for adverse effects arising from recreational activity at the designated site, and include elements such as wardening, infrastructure, education and awareness and monitoring. In line with the Interim Mitigation Strategy, a financial contribution of £323 per dwelling will be made towards SAMM.
- 5.2.13. The second element entails a further appropriate financial contribution towards off-site measures which provide alternative recreational opportunities for residents in the local area, referred to as Infrastructure Mitigation Projects (IMPs) and/or Suitable Alternative Natural Greenspace (SANG) in the Interim Mitigation Strategy. In line with the Interim Mitigation Strategy, a financial dwelling of £480 per dwelling will be made towards IMP / SANG.
- 5.2.14. Whilst consideration was initially afforded to the provision of on-site measures as part of the new development, the small size of the application site (3.4 hectares in total) means that it is not possible or realistic for these to be delivered within the new development itself, mindful in particular of the guidelines associated with the provision of SANG which are set out at Appendix 4 of the Interim Mitigation Strategy.
- 5.2.15. Subject to the delivery of these two elements, which accord fully with the agreed strategic avoidance and mitigation strategy (Appendix 5), and which would be secured via legal agreement, it is considered that the development proposals would not lead to an adverse effect upon the integrity of any statutory designated sites,

¹⁰ Gallagher, M; Hobson, D; Jones, R; Price, S; Squirrel, 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

either considered alone or in combination with other plans or projects.

Non-statutory sites

- 5.2.16. There are no non-statutory designated sites of nature conservation interest located within or immediately adjacent to the application site.
- 5.2.17. The nearest non-statutory designated site is Dance Common Local Wildlife Site (LWS), located approximately 0.2km to the south-east of the application site at its closest point (see Plan ECO1). This non-statutory site is designated on account of the semi-natural grassland with high species diversity habitat that it supports.
- 5.2.18. A number of other non-statutory designated sites are also present within the local area. These are illustrated on Plan ECO1 and include:
- Blakehill Farm Wiltshire Wildlife Trust (WWT) Reserve LWS, located approximately 1km southwest of the application site;
 - Thames or Isis LWS, located approximately 2.2km to the east and 1.1km to the north of the application site; and
 - South Lane Meadows LWS, located approximately 1.8km to the south of the application site.
- 5.2.19. The application site is separated from all non-statutory designated sites in the local area by areas of existing development, infrastructure, and open space. Furthermore, there are no known existing hydrological links between the application site and these designations.
- 5.2.20. Standard engineering protocols and best practice shall be adopted throughout the construction phase, in order to minimise the potential for adverse effects to occur through pathways such as dust deposition and other air quality pathways, and via contaminated run-off. The full detail of such measures may be secured as part of a Construction Environmental Management Plan (CEMP), prior to the commencement of site works.
- 5.2.21. Subject to the incorporation of measures as outlined above, which can be secured as required by suitably worded planning conditions, it is considered that the development proposals would not lead to any significant adverse effects upon non-statutory designated sites.

Ancient Woodland

- 5.2.22. There are no areas of Ancient Woodland situated within or immediately adjacent to the application site, although there are some areas of Ancient Woodland present in the local area. As such, the development proposals will not lead to any adverse effects upon this habitat.

Habitats

- 5.2.23. As illustrated on Plan ECO2 and described above, the application site primarily comprises semi-improved grassland fields. Whilst the fields support a range of botanical species as well as provide opportunities for faunal groups (see below), they are of relatively limited diversity, comprising species which are common and widespread in both a national and local context.
- 5.2.24. The habitats of relatively greater ecological value in the context of the application site are existing hedgerows, treelines and dense scrub associated with the boundaries. Although these too support relatively limited diversity at present, they comprise a range of native species and provide potential opportunities for faunal groups such as bats and birds (see below).
- 5.2.25. Under the development proposals for Parcel A, areas of existing grassland habitat will be lost to facilitate the new development. Some minor losses are also required to treelines and hedgerows in order to facilitate access. However, the majority of boundary vegetation will be retained.
- 5.2.26. The proposals for Parcel B involve the loss of small area of existing vegetation on the southern boundary to facilitate access. The remainder of Parcel B will remain as grassland, albeit with a change of use to cemetery.
- 5.2.27. In respect of retained habitats, it is recommended that measures are adopted throughout the construction phase to prevent potential damage, such as the use of temporary protective fencing (Heras or equivalent), installed in line with the relevant British Standard, to prevent encroachment of machinery and personnel, and the storage of materials such as fuels and oils away from such features.
- 5.2.28. As outlined above in respect of non-statutory designated sites, standard engineering protocols and best practice shall be adopted throughout the construction phase, in order to minimise the potential for adverse effects to occur through pathways such as dust deposition and other air quality pathways, and via contaminated run-off. Full detail of ecological mitigation measures, including measures to protect retained habitats, can be provided in the form of a CEMP.
- 5.2.29. As illustrated on the Illustrative Layout Plan (Appendix 1), the development proposals entail the provision of open space in the northern part of the application site, in addition to open space to east and south-east. Through the provision of new native and species-rich habitats such as wildflower grassland, trees, scrub, hedgerows and wetland features, there are opportunities to provide new diverse habitats.
- 5.2.30. In addition, new wetland habitats are proposed as part of the Sustainable Urban Drainage System (SuDS). Whilst the design of

these features will focus on their primary function (drainage), there will be opportunities to introduce marginal, aquatic and wet wildflower grassland planting to maximise opportunities for wildlife.

- 5.2.31. Through the use of native seed mixtures, in addition to the implementation of an appropriate management regime which seeks to maximise the ecological value of retained and new habitats, it is considered that biodiversity benefits can be achieved.
- 5.2.32. It is envisaged that detailed prescriptions for the creation and enhancement of new and retained habitats and subsequent long-term management can be outlined within a Landscape and Ecological Management Plan (LEMP), which may be secured via a suitably worded planning condition. Management of open space will be undertaken with due regard to the presence of protected species, including bats and nesting birds (see below).
- 5.2.33. The retention of existing habitats and provision of new species-rich planting will also provide improved opportunities for faunal groups including bats, reptiles, invertebrates and foraging birds. The use of native, nectar-rich and berry-bearing species of local provenance as part of the planting mixture would further enhance the biodiversity value of the site post-development.
- 5.2.34. In conclusion, whilst the development proposals will necessarily result in losses to some of the existing habitats, it is considered that the retention and enhancement of the existing hedgerows, treelines and scrub, and the provision of new species-rich habitats within the site, together with long-term management, can mitigate for habitat losses and deliver enhancements.

5.3. Faunal Evaluation

Bats

- 5.3.1. **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"), as amended. These include provisions making it an offence:
- Deliberately to kill, injure or take (capture) bats;
 - Deliberately to disturb bats in such a way as to: -
 - I. be likely to impair their ability to survive, to breed or reproduce, or to rear or nurture their young, or to hibernate or migrate; or
 - II. 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; or
 - To intentionally or recklessly to obstruct access to any place used by bats for shelter or protection.
- 5.3.2. While the legislation is deemed to apply even when bats are not in residence, Natural England guidance suggests that certain activities

such as re-roofing can be completed outside sensitive periods when bats are not in residence provided these do not damage or destroy the roost.

- 5.3.3. 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.
- 5.3.4. The offence of damaging or destroying a breeding site or resting place (which can be interpreted as making it worse for the bat) is an absolute offence. Such actions do not have to be deliberate for an offence to be committed.
- 5.3.5. European Protected Species licences are available from Natural England in certain circumstances, and permit activities that would otherwise be considered an offence.
- 5.3.6. Licences can usually only be granted if the development is in receipt of full planning permission, and it is considered that:
 - (i) The activity to be licensed must be for imperative reasons of overriding public interest or for public health and safety;
 - (ii) There is no satisfactory alternative; and
 - (iii) The action authorised will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in their natural range.
- 5.3.7. **Application Site Evaluation.** As outlined above, there are no buildings or structures present within or immediately adjacent to the application site which provide opportunities for roosting bats. A small number of trees associated with treeline T2 were assessed to have low bat roosting potential.
- 5.3.8. Bat activity surveys completed at the application site (Parcel A) have confirmed that it is used by a range of common and widespread bat species for foraging and commuting. The majority of activity recorded pertains to Common Pipistrelle, Soprano Pipistrelle and Noctule bats, which are the most common and widespread species both in a national, regional and local context.
- 5.3.9. Survey work also recorded that the application site is utilised by other bat species, albeit on a more occasional basis with lower levels of activity recorded. Whilst surveys identified the presence of more light sensitive species, such as Brown Long-eared bats and Barbastelle, the level of activity recorded was very limited indeed (far less than 1 registration per night across the survey period for each of these species). The evidence from the surveys therefore indicates that the application site is utilised on an occasional basis by these species for commuting, and therefore is unlikely to

represent a site of particular significance or importance for these more notable species either in terms of commuting or foraging.

- 5.3.10. Whilst detailed bat activity surveys were not undertaken of Parcel B of the application site, given its proximity to Parcel A, similar levels of connectivity in terms of bat foraging and commuting habitats between this parcel and the adjoining land to the north and west, and the fact that the habitats present within Parcel B are very similar to those within Parcel A, it is reasonable to expect that the use of this area by bats in the local area for foraging and commuting would be very similar.
- 5.3.11. **Avoidance, Mitigation and Enhancements.** Under the proposed development, the majority of trees which have low potential to support roosting bats would be retained (with treeline T2 to be located within an area of open space). However, losses to facilitate road access into the site are likely to result in the loss of a small number of trees with low bat roosting potential.
- 5.3.12. In line with best practice guidance, no further survey work or specific mitigation would be required in respect of the loss of trees with low bat roosting potential. However, a precautionary approach will be adopted to works affecting trees with bat roosting potential (including both removal of any trees to facilitate the access road as well as arboricultural works). A 'soft' methodology shall be utilised for any limbs to be removed, with works to be undertaken in a systematic and stepwise manner by a suitably qualified and experienced professional. In the unlikely event that bats are encountered, works shall cease, advice shall be sought from a suitably qualified ecologist and a licence would be required from Natural England before proceeding.
- 5.3.13. Under the development proposals, as outlined above existing boundary vegetation within Parcel A will be retained with the exception of minor losses to facilitate access. The retention and enhancement of habitats in the northern part of the development (F1) and boundary hedgerows and treelines, combined with the provision of new native and species-rich habitats as part of the planting scheme, will ensure that connectivity and opportunities for foraging and commuting bats are retained post-development.
- 5.3.14. As survey work has identified occasional use of the application site by more light-sensitive bat species, it is recommended that a detailed lighting strategy is developed prior to commencement of development by a suitably qualified and experienced lighting engineer, in conjunction with an ecologist. Where possible, this strategy should adopt the following principles, particularly where lighting is required in close proximity to any new or retained semi-natural habitats and green corridors:
- Minimising the installation of new lighting to ensure that it only pertains to areas where it is required, and that dark corridors are identified and maintained;

- Providing early consideration to specialist bollard or low-level downward directional luminaires to retain darkness (based on specialist advice from the suitably qualified lighting consultant), where lighting is required in close proximity to boundary features;
 - The use of LED luminaires, which have a sharp cut-off, lower intensity, good colour rendition and dimming capability, mounted on the horizontal to avoid any upward tilt;
 - Restricting lighting columns to the lowest acceptable height and the use of measures such as hoods, cowls, and louvres, to minimise light spill and to direct lighting only to where it is required, and limiting the number of lighting columns to the minimum required to achieve the requisite safe lighting level; and
 - Only utilising luminaires with an upward light ratio of 0%.
- 5.3.15. Subject to the adoption of measures such as those noted above, the detail of which can be secured via a suitably worded planning condition (noting that this relates to detailed design of the proposals), it is considered that dark corridors and navigational routes for foraging and commuting bats at the application site can be retained post-development.
- 5.3.16. As an enhancement for roosting bats in the local area, new bat boxes will be provided on suitably mature retained trees and/or new dwellings at the application site. It is recommended that Schwegler 1FF or 3FF (or similar equivalent) boxes are provided on the basis of their suitability for the species recorded during survey work and that they do not require regular maintenance.
- 5.3.17. Boxes should be installed at a suitable height (at least 4 metres above ground where safe installation is possible) to prevent potential disturbance from cats and vandals, and in locations away from any artificial light sources.
- 5.3.18. With regard to Parcel B, the proposals entail the provision of new road access, to permit the balance of this land to be utilised as a cemetery. If lighting is required it is anticipated that the detailed design would be subject to a suitability worded planning condition which incorporates measures as outlined above in relation Parcel A. Given the limited level of change both in terms of habitats and the adoption of a sensitive lighting approach (if lighting is required), it is considered unlikely that the proposals for this parcel of land would result in significant effects for foraging and commuting bats in the local area.

Badgers

- 5.3.19. **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, as the species is in fact common over most of Britain, with particularly high populations in the south-west.

- 5.3.20. 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 usually defined as any use within the preceding 12 months, although there is a degree of professional judgement.
- 5.3.21. 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.
- 5.3.22. Previous guidelines issued by Natural England on the types of activity that it considers should be licensed within certain distances of sett entrances. They stated that works that may require a licence include using heavy machinery within 30m of any entrance to an active sett, using lighter machinery within 20m, and light work such as hand digging within 10m. However, interim guidance issued in September 2007 specifically states that:
- “It is not illegal, and therefore a licence is not required, to carry out disturbing activities in the vicinity of a sett if no Badger is disturbed and the sett is not damaged or obstructed.”*
- 5.3.23. More recent guidance produced in 2009 states that Badgers are relatively tolerant of moderate levels of disturbance and that low levels of disturbance at or near to Badger setts do not necessarily disturb the Badgers occupying those setts¹¹. However, the guidance continues by stating that any activity that will, or is likely to, cause one of the interferences defined in Section 3 (such as damaging a sett tunnel or chamber or obstructing access to a sett entrance) will continue to be licensed.
- 5.3.24. In addition, this latest guidance no longer refers to any 30m/20m/10m radius as a threshold for whether a licence would be required. Nonetheless, it is stated that tunnels may extend for 20m, so care needs to be taken when implementing excavating operations within the vicinity of a sett and to take appropriate precautions with vibrations and noise, etc. Fires / chemicals within 20m of a sett should specifically be avoided.
- 5.3.25. This guidance allows greater professional judgement as to whether an offence is likely to be committed by a particular development activity and therefore whether a licence is required or not. For example, if a sett clearly orientates southwards into an embankment, it may be somewhat redundant to have a 30m-exclusion zone to the north.

¹¹ Natural England (2009). *Protection of Badgers Act 1992 (as amended). Interpretation of Disturbance in relation to Badgers occupying a sett*. Natural England, Peterborough.

- 5.3.26. **Application Site Evaluation, Avoidance and Mitigation.** As outlined above, no evidence of Badgers was found within the application site, however it is considered that the habitats present offer some suitable sett-building and foraging opportunities for this species, and it is possible that setts could be present in the local area.
- 5.3.27. Given the dynamic nature of this species, it would be prudent to undertake an updated check survey in respect of Badgers prior to commencement of any works at the site, in order to confirm that there has been no material change to the existing baseline. In the unlikely event that a sett is encountered, advice will be sought from a suitably qualified and experienced ecologist with regard to mitigation and whether a licence would be required from Natural England.
- 5.3.28. In any event, the development proposals will provide areas of suitable foraging and sett-building habitat for this species in the form of open space and are anticipated to deliver benefits in terms of new habitats suitable for foraging. As such, opportunities for Badgers within the application site will be retained post-development, notwithstanding the absence of any evidence to indicate the use of the application site by this species at the present time.

Hedgehogs

- 5.3.29. **Legislation.** Hedgehog is not a specially protected species, with the exception of the prevention of killing or trapping by certain methods under Schedule 6 of the Wildlife and Countryside Act 1981, as amended.
- 5.3.30. However, Hedgehog is a priority species under Section 42 of the Natural Environment and Rural Communities Act 2006. 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”*
- 5.3.31. **Avoidance, Mitigation and Enhancements.** Areas supporting superficially suitable vegetation for Hedgehogs (specifically areas of dense scrub, ruderal vegetation, hedgerows and trees) will be cleared outside the hibernation period (October to April) wherever possible or alternatively will be checked by an ecologist prior to removal, to ensure no hibernating Hedgehogs are present. However, the majority of existing boundary vegetation present within the application site boundary will be retained under the proposals.
- 5.3.32. Any trenches or deep pits associated with construction that are to be left open overnight will be provided with a means of escape in case a Hedgehog enters. This is particularly important if the trench

fills with water and will take the form of a roughened plank of wood placed in the trench as a ramp to the surface.

- 5.3.33. 'Hedgehog Highways' will also be provided to enable small mammals such as Hedgehogs to move through and across the new development. This will take the form of small holes under boundary fencing, no smaller than 13cm by 13cm.
- 5.3.34. The provision of new native and species-rich planting within the application site such as wildflower grassland, scrub and trees will also provide improved foraging, sheltering and dispersal opportunities for small mammals including Hedgehogs.

Great Crested Newts

- 5.3.35. **Legislation.** Great Crested Newts are also 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"), as amended. These include provisions making it an offence:
- Deliberately to kill, injure or take (capture) Great Crested Newts;
 - Deliberately to disturb Great Crested Newts in such a way as to:-
 - (i) be likely to impair their ability to survive, to breed or reproduce, or to rear or nurture their young, or to hibernate or migrate; or
 - (ii) 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 Great Crested Newts;
 - Intentionally or recklessly to obstruct access to any place used by Great Crested Newts for shelter or protection.
- 5.3.36. European Protected Species licenses are available from Natural England in certain circumstances, and permit activities which would otherwise be considered an offence.
- 5.3.37. Whilst it is recognised that GCN can theoretically disperse up to 500m through suitable terrestrial habitat from their breeding pond, it is widely accepted that they most commonly utilise suitable terrestrial habitat within a much closer distance, and activity is usually concentrated within 100m of breeding ponds with key habitat being located within 50m.
- 5.3.38. Furthermore, research produced by Natural England concludes that *"Captures on fences (and by other methods) at distances between 100m and 200-250m from breeding ponds tended to be so low as to raise serious doubts about the efficacy of this as an approach"*.
- 5.3.39. **Application Site Evaluation.** As outlined above, whilst initial survey work undertaken in May 2021 identified the presence of wet ditches and depressions within and adjacent to Parcel A (including

waterbody P1), subsequent work undertaken in June 2021 found these to have dried up. Updated survey completed in August 2023 also recorded these features to be completely dry. The survey work undertaken did not record any waterbodies present within or immediately adjacent to Parcel B.

- 5.3.40. Mindful that wetland features would have to support standing water for a reasonable period in late Spring / early Summer to facilitate breeding amphibians, it is therefore considered that the application site does not provide opportunities for breeding amphibian species.
- 5.3.41. Unfortunately, due to access not being granted by relevant landowners, it was not possible to undertake eDNA survey work of off-site waterbodies in the local area.
- 5.3.42. Waterbodies P2 and P3 appear to be recently constructed features associated with new residential development located to the east of Parcel A and are therefore considered highly unlikely to support Great Crested Newts. Mindful that waterbody P1 was recorded to be dry during survey work in 2021 and 2023, the closest waterbodies to Parcel A which could potentially support breeding amphibians are therefore P4 and P5. As illustrated on Plan ECO4, both of these waterbodies are located over 200 metres away at their closest points to this part of the application site.
- 5.3.43. Moreover, these waterbodies are separated from the application site by grassland fields with hedgerows, such that any amphibians associated with these features would have to traverse apparently suitable terrestrial habitat in order to access similar opportunities within the application site itself.
- 5.3.44. No Great Crested Newts were also recorded within Parcel A during the course of the reptile surveys which were completed in 2023.
- 5.3.45. It is therefore considered unlikely that Great Crested Newts would be present within Parcel A of the application site during their terrestrial phase.
- 5.3.46. Nonetheless, consideration has been afforded to the 'Rapid Risk Assessment' tool which forms part of Natural England's Great Crested Newt Method Statement to further inform the potential for the development proposals for Parcel A to lead to harm to newts, should they be present within these off-site waterbodies.
- 5.3.47. As outlined in Table 14 below, assuming the presence of Great Crested Newts within both of these waterbodies, the Rapid Risk Assessment tool indicates that even if one was to assume total loss of all habitats present within Parcel A to facilitate the proposed development (which is not proposed), the development proposals would be unlikely to lead to an offence under the legislation given the distances and areas of land involved.

Component	Likely effect	Notional offence probability score
Great crested newt breeding pond(s)	No effect	0
Land within 100m of any breeding pond(s)	No effect	0
Land 100-250m from any breeding pond(s)	0.1 - 0.5 ha lost or damaged	0.1
Land >250m from any breeding pond(s)	1 - 5 ha lost or damaged	0.04
Individual great crested newts	No effect	0
Maximum:		0.1
Rapid risk assessment result:	GREEN: OFFENCE HIGHLY UNLIKELY	

Table 14: Rapid Risk Assessment result assuming GCN presence (Parcel A)

- 5.3.48. It is therefore considered that the development proposals for Parcel A would not be likely to lead to harm to Great Crested Newts, in the event that they are present. Nonetheless, on a precautionary basis an appropriate methodology will be adopted during site clearance works to avoid any potential for harm to arise (see below).
- 5.3.49. As outlined above in Section 4, a total of four Great Crested Newts were recorded under artificial hibernacula along the western boundary of field F3. Whilst these were recorded outside of the application site boundary (i.e. not within Parcel B), they are situated in contiguous and connected habitat, such that they could utilise habitat within this part of the application site during their terrestrial phase.
- 5.3.50. From analysis of OS mapping and aerial photography, it is considered most likely that the newts recorded within field F3 are associated with off-site waterbodies situated towards the south-west (P10) or west (P11 to P18).
- 5.3.51. Consideration was also afforded to the Rapid Risk Assessment tool in respect of the proposals for Parcel B, again assuming the presence of Great Crested Newts in the closest waterbodies to this part of the application site (P10 and P11) and assuming the loss of all existing habitats within the redline boundary. The latter assumption clearly represents a clear overestimate with regard to potential effects, noting that the proposals are for the provision of access to facilitate the use of the site as a cemetery.
- 5.3.52. The results of the Rapid Risk Assessment tool are present in Table 15 below. As with Parcel A, the results also indicate that the development proposals would be unlikely to lead to an offence under the legislation given the distances and areas of land involved.

Component	Likely effect	Notional offence probability score
Great crested newt breeding pond(s)	No effect	0
Land within 100m of any breeding pond(s)	No effect	0
Land 100-250m from any breeding pond(s)	0.1 - 0.5 ha lost or damaged	0.1
Land >250m from any breeding pond(s)	0.1 - 0.5 ha lost or damaged	0.005
Individual great crested newts	No effect	0
Maximum:		0.1
Rapid risk assessment result:	GREEN: OFFENCE HIGHLY UNLIKELY	

Table 15: Rapid Risk Assessment result assuming GCN presence (Parcel B)

- 5.3.53. It is therefore considered that the development proposals for Parcel B would not be likely to lead to harm to Great Crested Newts, such that a licence would be required from Natural England to permit such works. However, as outlined below a suitable methodology will be employed to ensure that the small-scale clearance required to facilitate the works for Parcel B (access to permit change of use).
- 5.3.54. **Avoidance, Mitigation and Enhancements.** For the reasons outlined above, it is considered that a licence from Natural England would not be required in order to facilitate the proposed development, either in respect of Parcel A or Parcel B. However, given the presence of Great Crested Newts within contiguous habitat to Parcel B, and mindful of adopting a precautionary approach in respect of Parcel A, the following non-licensed avoidance methodology will be adopted for site clearance works at this site.
- 5.3.55. Works will be undertaken in a stepwise and systematic manner, with vegetation initially cut down to a height of no less than 15cm before being removed to ground level. The exercise would be undertaken under the direct supervision of a suitably qualified ecologist, during suitable weather conditions (mild and dry, with temperatures no less than 10C) and during the active period for amphibians (April to September / October inclusive).
- 5.3.56. In the unlikely event that a newt is encountered, works will cease, and advice will be sought from a suitably qualified ecologist before proceeding. If necessary, works may be undertaken in line with a District Level Licence. However, based on the outcome of the Rapid Risk Assessment methodology (as presented above), it is not considered that a licence would be required in order to facilitate the proposals at this site.
- 5.3.57. The proposals for Parcel B result in minor losses to superficially suitable terrestrial habitats for Great Crested Newts. However, with the exception of the road access, the change of use from agricultural land to cemetery use is not anticipated to lead to loss of existing terrestrial opportunities for this species, mindful that the land will remain essentially undeveloped. As a result, the proposals would not lead to a loss of habitat which would adversely affect the favourable conservation status of local populations of this species, should they be present within the application site boundary.

Birds

- 5.3.58. **Legislation.** Section 1 of the Wildlife and Countryside Act 1981 is concerned with the protection of wild birds, whilst Schedule 1 lists species which are protected by special penalties.
- 5.3.59. **Application Site Evaluation.** The application site offers some limited opportunities for nesting and foraging birds in form of scrub,

hedgerows and treelines. However, the intensively managed grassland which comprises the majority of the application site offers few opportunities for this group.

- 5.3.60. **Avoidance, Mitigation and Enhancements.** As all species of birds receive general protection whilst nesting, clearance of any suitable nesting habitats should be undertaken outside of the main development of the main bird breeding season (typically considered to March to July inclusive).
- 5.3.61. Should this not be possible, potential nesting habitat will be subject to a nesting bird check by an experienced ecologist, immediately prior to its removal. Should any nesting birds be identified, then the nest should be fully safeguarded *in situ* and subject to an appropriate disturbance buffer (as advised by the ecologist), and only removed once it has been confirmed all fledglings have left the nest and it is no longer active.
- 5.3.62. It is recommended that new planting within the application site utilises seed and berry-bearing species wherever possible, in order to provide enhanced foraging opportunities for birds (once established). The provision of new habitats within the application site boundary will represent a benefit to birds compared to the existing situation at the application site.
- 5.3.63. In order to provide new nesting opportunities, new bird nesting boxes will be provided within the application site. A range of box types shall be installed, including hole-fronted and open-fronted boxes, which will serve to provide opportunities for a range of species. All nest boxes should be situated out of direct sunlight and out of reach of predators, particularly cats.

6. PLANNING POLICY CONTEXT

- 6.1. The planning policy framework that relates to nature conservation in Wiltshire is issued at two main administrative levels: nationally through the National Planning Policy framework (NPPF); and locally through the Wiltshire Council Core Strategy (adopted January 2015).
- 6.2. The proposed development will be judged in relation to the policies contained within these documents.

6.3. National Policy

National Planning Policy Framework

- 6.3.1. The National Planning Policy Framework (NPPF) sets out the Government's requirements for the planning system and was adopted on 27th March 2012 and subsequently revised on the 24 July 2018, 19 February 2019, 20 July 2021 and September 2023.
- 6.3.2. The key element of the NPPF is that there should be "*a presumption in favour of sustainable development*" (paragraphs 10 to 11).
- 6.3.3. The revised NPPF is comparable to previous versions (which it replaces), including reference to minimising impacts on biodiversity and provision of net gains to biodiversity where possible (paragraph 179) and ensuring that Local Authorities place appropriate weight to statutory and non-statutory nature conservation designations, protected species, and biodiversity.
- 6.3.4. 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.
- 6.3.5. Paragraph 180 of the NPPF comprises a number of principles which 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, as a last resort, compensated for; and
 - the provision for the refusal for developments resulting in the loss or deterioration of 'irreplaceable' habitats unless the need for, and benefits of, the development in that location clearly outweigh the loss.
- 6.3.6. 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.

6.4. Local Policy

Wiltshire Council Core Strategy 2015 – 2026

- 6.4.1. The Core Strategy (adopted January 2015) and will provide the planning framework guiding local planning decisions up until 2026. Core Objectives of the Wiltshire Core Strategy include the conservation and enhancement of the district's natural environment. The Plan's core objectives are further informed through a specific planning policy.
- 6.4.2. *Core Policy 50: Biodiversity and geodiversity* states that all development proposals must demonstrate how they will protect features of nature conservation. Such features must be retained where possible and if not a plan of managing and maintaining their ecological value in the long term will be made. The protection and biodiversity enhancement of sites by delivering measures of biodiversity gains. Developments will avoid direct and indirect impacts upon local sites, and if unavoidable will demonstrate that a reasonable contribution to favourable management in the long term is made.

6.5. Discussion

- 6.5.1. Recommendations have been put forward in this report that would safeguard the existing ecological interest of the application site. Based on the survey and assessment work undertaken, the presence and potential presence of protected and notable species has been given due regard and measures have been put forward as part of the proposed development to avoid and mitigate for adverse effects and moreover deliver enhancements.
- 6.5.2. In conclusion, implementation of the measures set out in this report ensure that the development proposals fully accord with planning policy and guidance for ecology and nature conservation at all administrative levels.

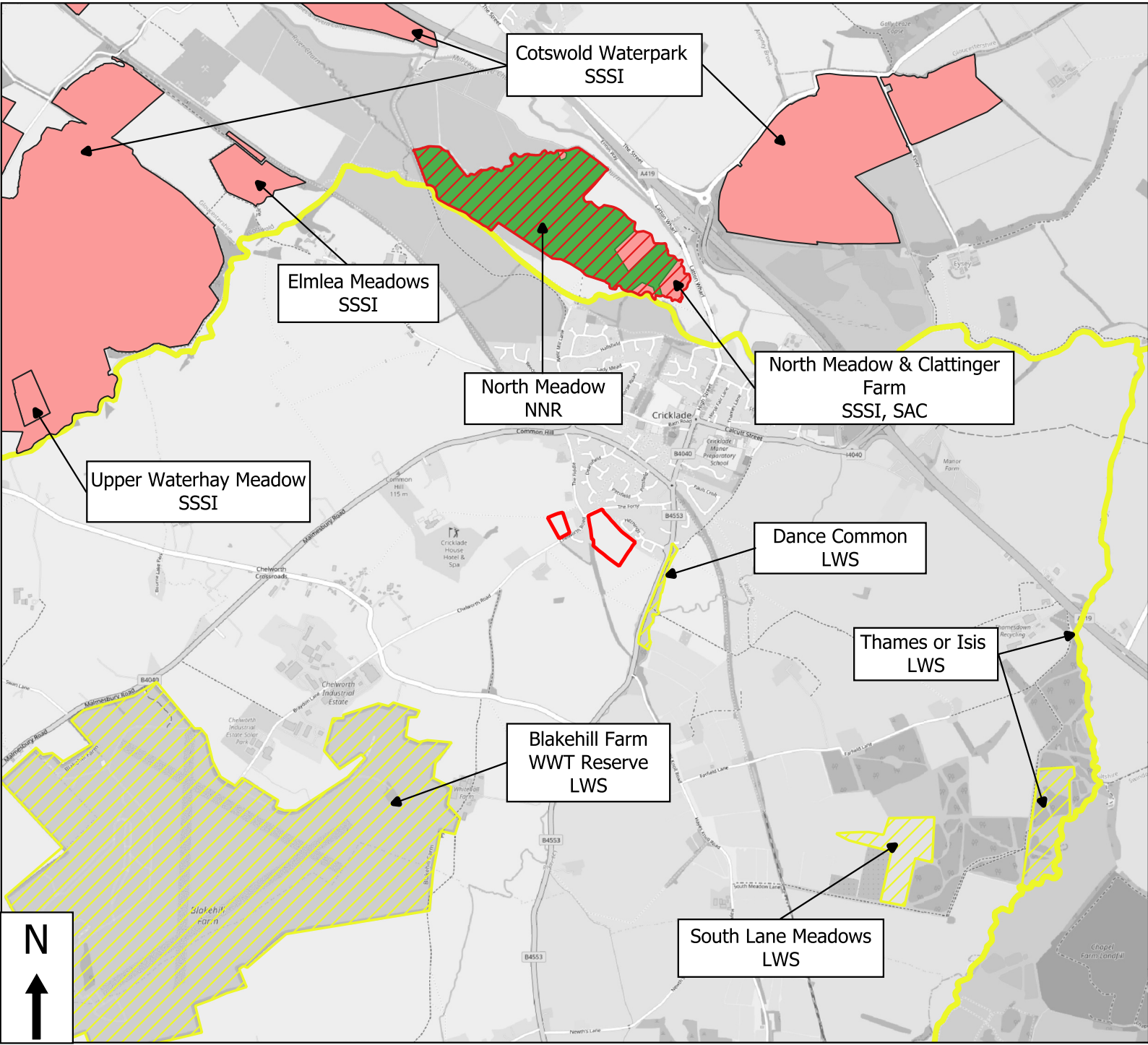
7. SUMMARY AND CONCLUSIONS

- 7.1. Ecology Solutions Limited was originally commissioned by Hannick Homes and Developments Ltd in March 2021 to undertake an ecological assessment of Land off The Forty and Chelworth Road, Cricklade.
- 7.2. There are no statutory or non-statutory designated sites of nature conservation interest located within or immediately adjacent to the application site.
- 7.3. Detailed consideration has been afforded to the potential for effects to arise to North Meadows and Clattinger Farm SAC / SSSI as a result of the proposed development. The avoidance and mitigation strategy proposed (an appropriate financial contribution) fully accords with the agreed strategic approach. Subject to securing the measures outlined within this report via an appropriate mechanism (legal agreement), it can be concluded that the development proposals would not lead to an adverse effect on the integrity of any European designated sites, either when the proposals are considered alone or in combination with any other plans or projects.
- 7.4. Subject to the implementation of standard engineering protocols and best practice throughout the construction period, it is considered that the proposed development is unlikely to have any significant impacts on any designated sites within the local area, during either the construction or operational phase.
- 7.5. The application site primarily supports semi-improved grassland fields which are bounded by hedgerows, dense scrub, ruderal vegetation and treelines. Where losses are required, these will be offset through the retention and enhancement of existing habitats, and the provision of new species-rich habitats within areas of open space. With the adoption of long-term management with a focus on biodiversity, there is an opportunity for the proposals to deliver enhancements compared to the existing situation.
- 7.6. A range of protected species surveys have been undertaken, including surveys in respect of bats, Badgers, reptiles and Great Crested Newts. Appropriate mitigation measures have been proposed, including measures to safeguard bats, nesting birds and Great Crested Newts (on a precautionary basis). Subject to the implementation of the avoidance, mitigation and enhancement measures as outlined in this report, adverse effects to protected species will be avoided and opportunities for key faunal groups will be retained and moreover enhanced post-development.
- 7.7. In conclusion, the development proposals for the site will not only avoid potential adverse ecological effects but moreover deliver enhancements compared to the existing situation. On this basis, the development proposals accord with all legislation and planning policy of relevance to ecology and nature conservation.

PLANS

PLAN ECO1

Application Site Location and Ecological
Designations



Key:

Application Site Location

- Sites of Special Scientific Interest (SSSI)
- Special Areas of Conservation (SAC)
- National Nature Reserves (NNR)
- Local Wildlife Sites (LWS)



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9673: LAND OFF THE FORTY AND
CHELWORTH ROAD, CRICKLADE

PLAN ECO1: APPLICATION SITE
LOCATION AND ECOLOGICAL
DESIGNATIONS

Rev: A
NOV 2023

PLAN ECO2

Ecological Features



Key:

- Application Site Boundary
- Semi-Improved Grassland
- Species-Poor Semi-Improved Grassland
- Scrub
- Hedgerow
- Treeline
- Fence



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PLAN ECO2: ECOLOGICAL
FEATURES

Rev:A
NOV 2023

PLAN ECO3

Protected Species



Key:

- Application Site Boundary
- Static Detector Locations



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PLAN ECO3: PROTECTED
SPECIES

Rev:A
NOV 2023

PLAN ECO4

Location of Off-site Waterbodies