



DARWIN ECOLOGY
integrating nature conservation

Unit 6, The Wincombe Centre,
Wincombe Business Park, Shaftesbury,
SP7 9QJ

Email: info@darwin-ecology.co.uk
www.darwin-ecology.co.uk

Preliminary Ecological Appraisal Report

Viney's Farm
Amesbury
Wiltshire

May 2022

QUALITY CONTROL		
The information which we have prepared and provided is true, and has been prepared and provided in accordance with the Chartered Institute of Ecology and Environmental Management's Code of Professional Conduct.		
Prepared by	Ecologist Alex Coggins BSc (Hons) Assistant Ecologist Libby Pinches BSc (Hons)	May 2022
Reviewed by	Senior Ecologist Ellie Frew BSc (Hons) MSc (R) MCIEEM	
This report remains valid for 12 months from date of issue. Survey data are valid for 12-18 months from the date the survey was undertaken.		

Copyright Darwin Ecology Ltd.

This report is intended for the commissioning party only and should not be copied or reproduced in any way without prior written permission from Darwin Ecology Ltd.

This report has been prepared for the sole use of the client. Any third party referring to this report or relying on the information contained herein, does so entirely at their own risk.

Whilst every effort has been made to guarantee the accuracy of this report, it should be noted that living creatures are capable of migration and whilst protected species may not have been located during the survey duration, their presence may be found on site at a later date.

The views and opinions contained within the document are based on a reasonable timeframe between the completion of the survey and the commencement of any works. If there is any delay between the commencement of works that may conflict with timeframes laid out within this document, or have the potential to allow the ingress of protected species, a suitably qualified ecologist should be consulted.

It is the duty of care of the landowner/developer to act responsibly and comply with current environmental legislation if protected species are suspected or found prior to works.

1.	EXECUTIVE SUMMARY	4
2.	INTRODUCTION AND BACKGROUND	5
	Site Overview	5
3.	LEGISLATION & POLICY	7
	General Wildlife Legislation	7
	Relevant Legislation	7
	National Planning Policy	7
	Local Planning Policy	10
	Wiltshire Biodiversity Action Plan	11
4.	METHODOLOGY	13
	Desk Study	13
	Preliminary Ecological Appraisal	13
5.	SURVEY RESULTS	15
	Desk Study	15
	Habitats	16
	Protected Species	17
6.	DISCUSSION AND RECOMMENDATIONS	21
	Designated Sites, Priority Habitats and Ancient Woodland	21
	Habitats	22
	Bats	22
	Great Crested Newts	23
	Reptiles	24
	Dormice	24
	Otters and Water Voles	25
	Other Terrestrial Mammals	25
	Invertebrates	26
	Breeding Birds	26
7.	REFERENCES	28
	APPENDICES	30
	BREEDING BIRD SURVEY	32

1. EXECUTIVE SUMMARY

- 1.1. Darwin Ecology Ltd was commissioned by Sustainable Amesbury to undertake a Preliminary Ecological Appraisal (PEA) at Viney's Farm, Amesbury, Wiltshire. The survey was required to assess potential ecologically sensitive receptors within and in close proximity to the site at Viney's Farm, to provide information for consideration during the allocation process for development in Wiltshire.
- 1.2. The PEA comprised recording the habitat types present within the site (identifiable from aerial images and Public Rights of Way surrounding the site), including features of interest for protected or notable species. A desk study was also conducted to identify protected or notable sites, habitats or species (both within the site or local vicinity), which could potentially be affected by development of the site.
- 1.3. The site is located on the outskirts of the town of Amesbury in a rural area with agricultural fields bordering the site and dominating the wider area. The site itself comprises six agricultural fields with hedgerow boundaries as well as sections of woodland and grassland.
- 1.4. Habitats within the application site provide are likely to provide good quality habitat for bats, reptiles, breeding birds, otters (*Lutra lutra*), water voles (*Arvicola amphibious*), dormice (*Muscardinus avellanarius*), and other terrestrial mammals. The River Avon Special Area of Conservation (SAC) is directly adjacent to the north of the site. Any future development will almost certainly trigger a requirement for Appropriate Assessment and sufficient mitigation to ensure no negative significant impacts on the integrity of the SAC.
- 1.5. Allocation and subsequent development of the site would require significant mitigation, informed by sufficient survey and impact assessment, as any viable development is likely to have a significant impact on ecologically valuable habitats (both within the site and close proximity) in the absence of mitigation.

2. INTRODUCTION AND BACKGROUND

- 2.1. Darwin Ecology Ltd was commissioned by Sustainable Amesbury to undertake a PEA at Viney's Farm, Amesbury, Wiltshire. The survey was required to assess potential ecologically sensitive receptors within and in close proximity to the site at Viney's Farm, to provide information for consideration during the allocation process for development in Wiltshire.
- 2.2. The surveys and report broadly follow the Chartered Institute for Ecological and Environmental Management (CIEEM) Guidelines for Preliminary Ecological Appraisal (2017), which sets out the approach for PEAs to provide a rapid assessment of the ecological features present, or potentially present, within a site and its surrounding area.

Site Overview

- 2.3. The site is located on the southwestern outskirts of the large town of Amesbury in a rural area dominated by agricultural grassland. Other settlements close by include the villages of Normanton (approximately 630 m west of the site) and Wilsford (approximately 950 m to the west). The River Avon runs parallel to the site's northern boundary and there are a number of smaller streams and ponds associated with the river (**Figure 1**).
- 2.4. The wider landscape is also dominated by agricultural grassland, however, Boscombe Down (a military aircraft testing site), is located approximately 1.1 km east of the site (**Figure 2**).
- 2.5. The site itself comprises six agricultural fields with hedgerow boundaries as well as a section of woodland. The site is immediately surrounded by further agricultural fields in all directions.



Figure 1: Approximate site boundary and location within the local landscape (Copyright Google Earth, 2022)



Figure 2: Site location within the wider landscape (Copyright Google Earth, 2022)

3. LEGISLATION & POLICY

General Wildlife Legislation

- 3.1. Wildlife in the United Kingdom (UK) is protected through European and national legislation, supported by national and local policy and guidance. Development can contribute to conservation and enhancement goals outlined by these various legislation and policy by retaining and protecting the most valuable ecological features within a site and incorporating enhancements to provide biodiversity net gain.
- 3.2. This section provides a brief summary of the principle legalisation and policy that triggers the requirement for PEA in the UK. The presence of protected species within a site are a material consideration during the planning process. PEAs (and any necessary further assessments) provide an ecological baseline for a site and evaluation of the potential impact of proposals.
- 3.3. It is the responsibility of those involved with development works to ensure that the relevant legislation is complied with at every stage of a project. Such legislation applies even in the absence of related planning conditions or projects outside the scope of the usual planning process (i.e. permitted development projects or projects requiring Listed Building Consent only).

Relevant Legislation

- 3.4. The principal pieces of legislation relating to wildlife and of relevance to this report are:
 1. *EU Habitats Directive (1992)*;
 2. *EU Birds Directive (1979)*;
 3. *Conservation of Habitats and Species (Amendment) Regulations 2012*;
 4. *The Wildlife and Countryside Act 1981 (as amended)*;
 5. *The Natural Environment and Rural Communities Act 2006*; and
 6. *The Protection of Badgers Act 1992 (extended under The Hunting Act 2004)*.
- 3.5. The above legislation aims to protect sites and species and give detailed descriptions of exactly how these features are protected and what actions would constitute an offence.

National Planning Policy

- 3.1. The *National Planning Policy Framework (2021)* aims to minimise impacts on biodiversity and provide net gains in biodiversity where possible, contributing to the Government's commitment to halt the overall decline in biodiversity.
- 3.2. Chapter 15 'Conserving and enhancing the natural environment' details what local planning policies should seek to consider with regard to planning applications.

3.3. Planning policies and decisions should contribute to and enhance the natural and local environment by:

174 a) Protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan);

174 b) Recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland;

174 d) Minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures;

175) Plans should: distinguish between the hierarchy of international, national and local designated sites; allocate land with the least environmental or amenity value, where consistent with other policies in this Framework; take a strategic approach to maintaining and enhancing networks of habitats and green infrastructure; and plan for the enhancement of natural capital at a catchment or landscape scale across local authority boundaries;

176) Great weight should be given to conserving and enhancing landscape and scenic beauty in National Parks, the Broads and Areas of Outstanding Natural beauty which have the highest status of protection in relation to these issues. The conservation and enhancement of wildlife and cultural heritage are also important considerations in these areas, and should be given great weight in National Parks and Broads. The scale and extent of development within all these designated areas should be limited, while development within their settings should be sensitively located and designed to avoid or minimize adverse impacts on the designated area.

3.4. Specific policies regarding habitats and biodiversity comprise:

179) To protect and enhance biodiversity and geodiversity, plans should:

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

b) promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species and identify and pursue opportunities for securing measurable net gains for biodiversity.

180) When determining planning applications, local planning authorities should apply the following principles:

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

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

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

d) development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to improve biodiversity in and around development should be integrated as part of their design, especially where this can secure measurable net gains for biodiversity or enhance public access to nature where this is appropriate.

3.5. *Circular 06/05: Biodiversity and Geological Conservation* provides guidance on the application of the law relating to planning and nature conservation and complements the *National Planning Policy Framework*.

3.6. *Biodiversity 2020: A strategy for England's wildlife and ecosystem services* provides the *UK Biodiversity Action Plan* and country level biodiversity strategies for England, based on the list of habitats and species listed on *Section 41* of the *Natural Environment and Rural Communities Act 2006*. These are considered the habitats and species of principal importance requiring conservation action.

Local Planning Policy

- 3.7. The local planning policy for the site is the *Wiltshire Core Strategy (2015)*. In particular, Core Policy 69 (Protection of the River Avon) stresses the need for development to incorporate measures to avoid and prevent pollution during construction and operation as well as mitigate potential disturbance effects. Phosphate concentrations in the River Avon are currently above the appropriate targets required in its conservation objectives for the and this is expected to have significant effects on this designated site. There have been significant improvements to sewage treatment works, however this is not enough to reach SAC water quality targets. Appropriate measures may include suitable buffer zones along watercourses, habitat enhancements and river access management measures. All development within 20 m of the river banks should submit a construction management plan to the local planning authority to ensure proposed avoidance measures are satisfactory.
- 3.8. Core Policy 50 (Biodiversity and Geodiversity) provides guidelines for protection and enhancement of the natural environment and refers to the planning guidance for SACs in Wiltshire, designated for the presence of nationally important bat species.
- 3.9. Wiltshire County Council (WCC), Natural England (NE) and local experts and researchers have jointly prepared the *Bat SAC Planning Guidance for Wiltshire (2015)*. It is aimed at applicants, agents, consultants and planners involved producing and assessing development proposals in the landscapes surrounding Wiltshire's most sensitive bat roosting sites, which are protected by European wildlife legislation and applies to all types of developments that are subject to planning control.
- 3.10. The guidance gives details on how to mitigate any potential impacts on Wiltshire Bat SACs and to ensure that any potential issues are identified as early in the planning process as possible to prevent unnecessary delays to development projects. The guidance also outlines the ecological documents and plans, which should be submitted in support of planning applications, so as to ensure that the council has all the information required to undertake a reliable Habitats Regulations Assessment (HRA) should one be required.
- 3.11. In addition to policies relating to the River Avon SAC and various bat SACs within the county, the *Wiltshire Core Strategy (2015)* includes Core Policy 51 (Landscape), which provides guidance for protecting, conserving and where possible, enhancing landscape character, including locally distinctive patterns and species composition of natural features (such as trees, hedgerows, woodland, field boundaries, watercourses and waterbodies). Core Policy 69 (Protection of the River Avon SAC) provides guidelines for the incorporation of measures during construction and operations to avoid and prevent pollution and to minimise disturbance effects.
- 3.12. Core Policy 23 (Spatial Strategy: Southern Wiltshire Community Area) in the *Wiltshire Core Strategy (2015)* requires development proposals in the Southern Wiltshire Community Area to demonstrate how relevant issues will be addressed. Included in these issues is the

ongoing protection and enhancement of habitats used by stone curlews (*Burhinus oedipnemus*), which must be secured through the implementation of an Integrated Business and Environmental Management Strategy, to effectively avoid adverse effects of further development on this species.

- 3.13. In 2021, WCC released a draft *Green & Blue Infrastructure for Wiltshire (2021)* for consultation. This document provides a high-level strategy setting out the visions, goals and principles for green and blue infrastructure across Wiltshire. Within the strategy there are three goals, including “halting the loss and improving biodiversity”, to be delivered by various themes including “Nature Recovery & Landscape Management”, “Woodland & Trees” and “Economic Recovery & Valuing Natural Capital” amongst others.

Wiltshire Biodiversity Action Plan

- 3.14. The *Wiltshire Biodiversity Action Plan* was published in 2002 and reviewed in 2008 by the Wiltshire Wildlife Trust and over 40 delivery partners who make up the Wiltshire Biodiversity Action Plan Partnership. It includes habitat action plans for 11 of the most significant of the UK Priority Habitats in Wiltshire, which include woodland, wood-pasture, parkland and ancient trees, hedgerows, calcareous grassland, neutral grassland, traditional orchards, farmland habitats, built environment, standing open water and rivers, streams and associated habitats. In addition, a bat species action plan has also been included, covering all bat species found in Wiltshire, while other priority species have been included under the appropriate habitat action plans.
- 3.15. The *Wiltshire Biodiversity Action Plan* species list includes species that have national priority and also species having local importance in Wiltshire including county notables. A total of 260 species have been included on the *Wiltshire Biodiversity Action Plan* species list.
- 3.16. The *Wiltshire Biodiversity Action Plan* aims to achieve the following:
- Enable prioritisation and define actions for priority habitats and species in Wiltshire;
 - Create a plan of action that can be delivered through a partnership of statutory, private and third sector organisations;
 - Provide a baseline of current knowledge and a tool to help monitor key habitats and species; and
 - To link objectives, targets and actions to report nationally and enable conservation work carried out in Wiltshire to contribute to national targets and reporting.
- 3.17. In 2012, a landscape scale framework for conservation in Wiltshire was developed, identifying 11 Landscape Biodiversity Areas across Wiltshire and Swindon, made up of a

number of priority habitats, designated sites and other areas of conservation significance. This aims to encourage landscape scale planning for species and habitat conservation across Wiltshire.

4. METHODOLOGY

Desk Study

- 4.1. A desk study was undertaken for designated sites, protected or notable species, and habitat records within 5 km of the site. The following resources were consulted:
- The MagicMap website provided information regarding statutory designated site of nature consideration interest within 5 km of the site, details of European Protected Species (EPS) license issued for bats within 2 km, and details of EPS licences for dormice and great crested newts (*Triturus cristatus*) within 1 km of the site;
 - A search of the Wiltshire Council Planning Portal for relevant planning applications within the last two years was conducted to find any relevant reporting within the local area; and
 - Google Maps and the Ordnance Survey (OS) leisure map were used to view aerial photographs and maps, and to assess the ecological context of the site within the wider landscape.

Preliminary Ecological Appraisal

- 4.2. Ecologist Alex Coggins BSc (Hons) conducted a perimeter survey from Public Rights of Way (PRoW) surrounding Viney's Farm on 12th April 2022.
- 4.3. The survey assessed habitats within the application red line boundary (and visible from the PRoWs) for their potential to support protected species, including:
- Bats;
 - Great crested newts;
 - Common amphibians;
 - Reptiles;
 - Dormice;
 - Otters and water voles;
 - Other terrestrial mammals, including hedgehogs and badgers (*Meles meles*);
 - Brown Hare (*Lepus europaeus*)
 - Breeding birds; and
 - Invertebrates.
- 4.4. As there is no running water within the site, in combination with their nationally sparse distribution, it is considered highly unlikely that white clawed crayfish (*Austropotamobius pallipes*) would be using the site and they are therefore not considered further in this report.

Limitations

- 4.5. The survey was carried out in suitable weather conditions and full access was provided to all areas of the site.
- 4.6. As the survey was carried out from PRowS that follow the boundaries of the site, there may be additional habitats within the site itself with further potential to support protected species or with high intrinsic value.

5. SURVEY RESULTS

Desk Study

Statutory Designated Sites

- 5.1. There are 6 statutory sites designated for biological (rather than geological) interest within 5 km of the site at Viney's Farm comprising one Special Protection Area (SPA), two SACs, and three Sites of Special Scientific Interest (SSSI).
- 5.2. Further details can be found in **Table 3** below.

Table 3: Statutory designated sites within 5km of the site at Viney's Farm

Designated Sites	Name and Designation Type	Reason for Designation	Approximate Distance from Site
Within Site Boundaries	There are no sites designated for biodiversity within the site boundaries		
Within 5km of Site	River Avon SAC	Protected for the water courses of plain to montane levels with the <i>Ranunculus fluitantis</i> and <i>Callitriche-Batrachion</i> vegetation. Also protected due to the presence of the following species: Desmoulin's whorl snail (<i>Vertigo moulinsiana</i>), sea lamprey (<i>Petromyzon marinus</i>), brook lamprey (<i>Lampetra planeri</i>), Atlantic salmon (<i>Salmo salar</i>), bullhead (<i>Cottus gobio</i>).	At its closest point this designation lies adjacent to the site on the northern boundary.
	River Avon System SSSI	Protected for the wildlife communities present. There are diverse fish faunas and a wide range of aquatic invertebrates as well as over 180 species of aquatic plant. Supports a number of breeding birds include the red listed yellow wagtail (<i>Motacilla flava</i>) and amber listed reed bunting (<i>Emberiza schoeniclus</i>). Water vole and water shrews regularly use the river and otters are becoming more occasional. Part of the River Avon SAC.	
	Salisbury Plain SAC	Protected for the <i>Juniperus communis</i> formations on heaths or calcareous grasslands and semi-natural dry grasslands and scrubland facies on calcareous substrates (<i>Festuco-Brometalia</i>) and hosts the priority habitat "orchid rich sites". Also protected due to the presence of marsh fritillary (<i>Euphydryas aurinia</i>) butterfly.	3.35km northeast of the site.
	Salisbury Plain SPA	Protected due to non-breeding populations of hen harrier (<i>Circus cyaneus</i>), and breeding populations of Eurasian hobby (<i>Falco subbuteo</i>), common quail (<i>Coturnix coturnix</i>), and stone-curlew (<i>Burhinus oedecnemus</i>).	
	Salisbury Plain SSSI	Supports the largest known expanse of unimproved chalk downland in northwest Europe and represents 41% of Britain's remaining area of this habitat. 13 plant species and 67 invertebrate species that are nationally rare or scarce have been identified here and the site is of international important for birds. Part of the Salisbury Plain SAC and SPA.	

Designated Sites	Name and Designation Type	Reason for Designation	Approximate Distance from Site
Within 5km of Site	Porton Meadows SSSI	An area of botanically rich unimproved neutral grassland which was previously managed through controlled flooding, due to its location in the River Bourne floodplain, and is now managed through traditional farming methods.	4km southwest of the site.

Priority Habitats and Ancient Woodland

- 5.3. There is priority deciduous woodland within the site itself, along a section of the northern boundary. There are numerous further areas of priority deciduous woodland site within 1 km of the site, the closest of which lies directly adjacent to the site to the north. The site is also immediately bordered by priority lowland calcareous grassland at the southwest corner.
- 5.4. Further priority habitats within 1 km of the site comprise coastal and floodplain grazing marsh, good quality semi-improved grassland, lowland meadows, traditional orchards, wood pasture and parkland.

Habitats

Agricultural Fields

- 5.5. There are six fields within the site, which are used for agricultural purposes. At the time of the survey, two fields had recently been ploughed, three fields were planted with arable crops, and one field was used for silage.

Woodland

- 5.6. The woodland habitat on site comprises an area of broadleaved, deciduous woodland in the northeast corner of the site situated on a steep bank, which leads down to the River Avon.
- 5.7. This woodland primarily consists of hazel (*Corylus avellana*) coppice with mature ash (*Fraxinus excelsior*) trees. Other tree species identified here include oak (*Quercus robur*), beech (*Fagus sylvatica*), silver birch (*Betula pendula*), elder (*Sambucus nigra*), hornbeam (*Carpinus betulus*), and hawthorn (*Crataegus monogyna*). The understory of this woodland comprised plant species including hart's-tongue fern (*Asplenium scolopendrium*), ground elder (*Aegopodium podagraria*), variegated yellow archangel (*Lamiastrum galeobdolon* subsp. *argentatum*), male fern (*Dryopteris filix-mas*), honeysuckle (*Lonicera periclymenum*), currant (*Ribes* sp.), lesser celandine (*Ficaria verna*), dogs mercury (*Mercurialis perennis*), lords and ladies (*Arum maculatum*), dog rose (*Rosa canina*), ivy (*Hedera helix*), nettle (*Urtica dioica*), bramble (*Rubus fruticosus*), cow parsley (*Anthriscus sylvestris*), garlic

mustard (*Alliaria petiolata*), cleavers (*Galium aparine*) and hogweed (*Heracleum sphondylium*).

Planted Thicket

- 5.8. There are two sections of ground prepared for new woodland planting, located in the northwest corner and extending from the centre of the site to the west and south. The northwest corner section comprises dense blackthorn (*Prunus spinosa*), hawthorn and field maple (*Acer campestre*) with some emerging conifer and silver birch trees and rosebay willowherb (*Chamerion angustifolium*) in the undergrowth. The central section features the same species but is more mature.

Semi-improved Calcareous Grassland

- 5.9. There is a section of semi-improved calcareous grassland at the southwest corner of the site, which is currently grazed by sheep. The margins of the fields have also been left to grow long in places.

Field Margins

- 5.10. The margins of the fields have been left to grow long in places and contain species including hogweed, cleavers, nettle, cock's foot (*Dactylis glomerata*), and clematis (*Clematis sp.*).

Hedgerows

- 5.11. The hedgerows on site extend along the site boundaries and between some of the on-site fields. Species identified within the hedgerows include hazel, hawthorn, blackthorn, field maple, ash, beech, elder, conifer, whitebeam (*Sorbus aria*), dogwood (*Cornus sanguinea*), privet (*Ligustrum vulgare*) wayfaring tree (*Viburnum lantana*), and guelder-rose (*Viburnum opulus*).
- 5.12. All hedgerows are regularly maintained to a good condition.

Protected Species

Bats

- 5.13. There are four EPS licences recorded on MagicMap for licensable works impacting bat roosts within 2 km of the application site, comprising:
- EPS licence (2015-13654-EPS-MIT) for the damage to a breeding site and damage and destruction of a resting place for common pipistrelle (*Pipistrellus pipistrellus*), soprano pipistrelle (*Pipistrellus pygmaeus*), brown long-eared bat (*Plecotus auritus*), and Natterer's bat (*Myotis nattereri*), approximately 490 m west of the site;
 - EPS licence (2020-44323-EPS-MIT) for the destruction of a breeding site and resting place for soprano pipistrelle, approximately 570 m north of the site;

- EPS licence (2015-15488-EPS-MIT) for the damage and destruction of a resting place for soprano pipistrelle, brown long-eared bat, Natterer's bat, and serotine (*Eptesicus serotinus*), approximately 570 m north of the site; and
- EPS licence (2015-11335-EPS-MIT) for the damage to a breeding site and the damage and destruction of a resting place for soprano pipistrelle, brown long-eared bat, Natterer's bat, serotine, and greater horseshoe bat (*Rhinolophus ferrumequinum*) approximately 1.77 km southwest of the site.

- 5.14. The woodland to the north of the site features many trees of an age and character to possess potential bat roosting features, such as broken branches, cavities, rot holes and flaking bark.
- 5.15. The hedgerows on site and the woodland edges provide good quality linear commuting features for bats.
- 5.16. Woodland and hedgerows within the site provide good quality foraging habitat for bats, although the field interiors themselves provide sub-optimal foraging habitat due to the homogeneous nature of arable planting and the low value of the habitat for invertebrate prey species. The presence of water in close proximity to the site will attract species which prey on aquatic invertebrates, such as soprano pipistrelle and Daubenton's bat (*Myotis daubentonii*).

Great Crested Newts and Common Amphibians

- 5.17. There are no EPS licences, Great Crested Newt Pond Survey 2017 - 2019 results or licence returns recorded on MagicMap for licensable works impacting great crested newts within 1 km of the application site.
- 5.18. There are no ponds within the site itself, however the River Avon and small streams associated with it run parallel to the northern boundary and extend into the immediate area. There is also one pond within 500 m of the site boundary, approximately 40 m east from the southeastern corner of the site, although the A345 road runs between this pond and the site and so may restrict movement between these locations.
- 5.19. There is suitable habitat for amphibians on site, as field and woodland edges and hedgerows provide good quality habitat for frogs, toads and newts. Whilst the UK's native amphibians do not normally inhabit rivers, the woodland habitat around the River Avon which extends into the site will offer excellent terrestrial habitat and discrete refugia for amphibians. The hedgerows on site will also allow them to move into the wider area where there may be ditches and unmapped small / garden ponds.

Reptiles

- 5.20. Whilst the interior of the fields provides little ecological value for reptiles due to the lack of structurally diverse grassland, bare earth between arable planting may be used for basking.

- 5.21. The hedgerows and woodland on site offer good quality habitat for reptiles, as they are likely to provide discrete refugia (such as deadwood) and will act as corridors allowing reptiles to commute within the area. Grass snakes (*Natrix helvetica*) are likely to be present on site as they are commonly found near rivers and in farmland.

Dormice

- 5.22. There are no EPS licences recorded on MagicMap for licensable works impacting dormice within 1 km of the application site.
- 5.23. There is good quality habitat within the site for this species, comprising mature, native hedgerows at the site boundaries and internally, and the woodland in the northeast corner, which primarily comprises coppiced hazel.
- 5.24. Although the hedgerows appear to be regularly maintained, there is an intact hedgerow canopy. Existing access gateways do fragment hedgerows in some places and may prevent total connectivity through the site.
- 5.25. The hedgerows and woodland can be considered native species-rich and also contain many species that are utilised by dormice including hazel, oak, ash and bramble.

Otters and Water Voles

- 5.26. The River Avon runs immediately parallel to the northern boundary of the site and is known to be well used by water voles and recently by otters.
- 5.27. Whilst water voles won't venture far from the river, otters are likely to use the woodland which borders the river and extends into the site and provides resting or "laying-up" sites for this species along with the field edges.

Other Terrestrial Mammals

- 5.28. During the walkover survey a stoat (*Mustela erminea*) was recorded in the hedgerow of the north western corner of the site, whilst brown hares were recorded throughout the site, with a peak count of 11 individuals recorded during the second breeding bird survey. Brown hares utilise the areas of mixed farmland and woodland that are provided within the site.
- 5.29. No evidence of badgers (latrines, snuffle holes, sett entrances etc.) was recorded during the survey however the site does offer woodland (which is a primary foraging habitat for badgers) and is connected to the wider area through the woodland bordering the River Avon.
- 5.30. Hedgehogs may also be present on site, as the woodland and hedgerow bases offer suitable habitat. The proximity of the site to Amesbury may also increase the likelihood of hedgehogs being present as they take advantage of the heat sources and wind breaks, which rural settlements provide.

Invertebrates

- 5.31. The habitats on site offer some good quality habitat for invertebrates. Whilst the arable planting has little value to invertebrates due to the lack of diversity in the species and structure present, the woodland and hedgerows may provide good egg-laying habitat for some species and contains some nectar-rich plant species.
- 5.32. Garlic mustard present in the woodland is a food plant for orange-tip butterfly caterpillars. There is no standing water on site and little suitable bare earth element.

Breeding Birds

- 5.33. The habitats on site will support a wide assemblage of breeding birds. The arable fields provide suitable nesting habitat for ground nesting, farmland bird species such as skylark (*Alauda arvensis*), corn bunting (*Emberiza calandra*) and yellowhammer (*Emberiza citrinella*).
- 5.34. The woodland is suitable for woodland nesting species such as wren (*Troglodytes troglodytes*), song thrush (*Turdus philomelos*), nuthatch (*Sitta europaea*) and dunnock (*Prunella modularis*).
- 5.35. The open fields and long field margins also provide some suitable hunting habitat for raptor species, as small mammals are likely to use these habitats.

6. DISCUSSION AND RECOMMENDATIONS

Designated Sites, Priority Habitats and Ancient Woodland

Baseline and Potential Impacts

- 6.1. Development of the site at Viney's Farm has the potential to significantly impact the integrity of the River Avon SAC in the absence of sufficient mitigation, due to its immediate proximity.
- 6.2. Surface water run-off from development and future land-use could directly enter the river if alternative drainage strategies are not implemented. This has the potential to cause an increase in phosphates and petrochemicals in the water, which could cause significant harm to the river ecosystem. Natural England have assessed a several stretches of the River Avon as being in unfavourable condition already, due to elevated phosphate levels. As a result, the river is currently failing its condition targets. Amesbury is included in the list of settlements for which additional development could contribute towards likely significant effects through phosphate loading.
- 6.3. Development of this site for residential purposes also has the potential to increase recreational pressures on all publicly accessible designated sites within close proximity, in the absence of a suitable alternative.

Recommendations

- 6.4. All plans and projects that may have a significant effect on sites designated within the National Site Network (previously Natura 2000 sites), either individually or in combination with other plans and projects, are subject to an appropriate assessment of the implications for the designated site, in view of the site's conservation objectives.
- 6.5. Under the *Conservation of Habitats and Species Regulations 2017*, it is the Council's duty as the competent authority to consider the protection afforded to European sites when allocating land for development. Should the land be allocated for development, any future proposals will almost certainly trigger a required for Appropriate Assessment. This will require sufficient baseline information to be gathered to inform this assessment, as well as a potentially significant requirement for mitigation measures to be implemented.
- 6.6. The in-combination effects of substantial uplifts in phosphate levels to the river below Amesbury, as a consequence of intensified use of the garrisons and service family accommodation units required by the Army Basing Plan (the impacts of which have been exacerbated by the need to close Larkhill sewage treatment works), must also be taken into consideration.

Habitats

Baseline and Potential Impacts

- 6.7. Habitats within the application site have high intrinsic ecological value, comprising woodland and mature, native hedgerow. The field interiors possess less ecological value due to the homogeneous nature of arable planting.
- 6.8. Future development of the site (if allocated) has the potential to significantly and permanently impact these habitats, due to inevitable habitat lost beneath the footprint of any proposed development and access requirements.
- 6.9. As well as offering habitat for a range of protected species, the woodland and hedgerows on site are part of a wider network of biological corridors, which if lost will create habitat fragmentation in the wider area. The arable planting, whilst lacking in intrinsic ecological value, is vitally important for breeding birds, which are facing a huge decline in numbers due to loss of and changes to their habitat. The patch of grassland on site and the long field margins offer structural diversity to the site, which is attractive to invertebrates, which are the main food source for many protected species, therefore habitats which support invertebrates will support bats, birds, reptiles and some small mammals.

Recommendations

- 6.10. A full Phase 1 habitat survey, Biodiversity Net Gain (BNG) Assessment and any subsequently required specialist vegetation surveys (such as National Vegetation Classification surveys) will be required to inform any proposals for development at this site.
- 6.11. It is considered likely that a significant portion of the site would need to be retained and enhanced to ensure that a 10% net gain in biodiversity value could be achieved as a result of development, which may result in the a lack of viability for development of the site.

Bats

Baseline and Potential Impacts

- 6.12. The site at Viney's Farm has high suitability for bats due to the the woodland containing numerous mature trees, which are of an age and character to possess potential roosting features for bats. The mature hedgerows and woodland edges at Viney's Farm also make it highly suitable for bats to use the site for commuting and foraging.
- 6.13. There is potential for damage or destruction of bat roosts if areas of the woodland within the site were to be removed to facilitate any future development proposals after allocation. Potential damage to trees, loss of woodland or fragmentation of hedgerows to provide access, is considered highly likely to destroy foraging habitat and commuting routes for bat species using the site.
- 6.14. Greater horseshoe bats (an Annex II bat species) have been recorded within 2 km of the site, which due to the presence of high quality habitat (woodland, species-rich hedgerows

and adjacent river corridor) may provide potentially important foraging habitat for this species, with core foraging areas known to generally occur within 4 km of roosts.

- 6.15. An additional potential impact as result of future development comprises further habitat fragmentation due to large amounts of light spill, which could arise from the proposed development in the absence of sufficient and enforceable mitigation.

Recommendations

- 6.16. To confirm the suitability of the mature trees in the woodland to support roosting bats, each tree of an age and character to have potential roost features (PRFs) should be subject to an aerial tree assessment by a licensed bat ecologist. Tree-climbing is the most effective way to access PRFs and clarify the tree's suitability for bats.
- 6.17. Development of Viney's Farm has the potential to impact habitats suitable for commuting and foraging and therefore any future proposals for developed would need to be informed by activity transect surveys in combination with the deployment of static detectors. For a site with high suitability for bats, the Bat Conservation Trust (BCT) Good Practice Guidelines (2016) recommends completing up to two transect survey visits a month from April to October and deploying static detectors each month in three locations over five consecutive nights.

Great Crested Newts

Baseline and Potential Impacts

- 6.18. There is potential for great crested newts and other amphibians to be present on site as there is one mapped waterbody within 500 m of the site and likely more unmapped garden ponds and small ponds associated with the River Avon, which could support amphibians. The habitats on site are suitable for great crested newts and other amphibian species due to the presence of woodland, hedgerows and some longer grassland on site.
- 6.19. Development of the site at Viney's Farm has the potential to damage or destroy habitats that are of value to great crested newts and other amphibian species, as well as the potential to injure or kill individuals.

Recommendations

- 6.20. The amount of suitable habitat to be affected including temporary impacts from access paths and material storage is likely to be over 0.01 ha. In accordance with Natural England's Rapid Risk Assessment tool (used to assess whether an action is licensable), loss of suitable terrestrial habitat has the potential to result in an offence, should great crested newts be present within the site.
- 6.21. Further surveys, comprising eDNA testing for any ponds scoring "average" and above after Habitat Suitability Index (HSI) assessments of waterbodies within 500 m the site boundary, would be required to inform any future development proposals. The results of these surveys

would support the need for any further survey effort (comprising a suite of presence / absence following standard guidance), mitigation or precautionary methodology.

Reptiles

Baseline and Potential Impacts

- 6.22. It is likely that reptiles (particularly grass snakes) will be present within the site at Viney's Farm, due to the presence of optimal habitats for these species on site, including woodland, hedgerows, field margins and some grassland, as well as the close proximity of the site to water.
- 6.23. Future development at Viney's Farm has the potential to damage or destroy habitats that are of value to reptile species, as well as potential to injury or kill individuals.

Recommendations

- 6.24. A suite of presence / absence surveys for reptiles would be required to inform any future development proposals, to establish presence / absence and inform any assessment of population size. Reptile surveys comprise installation of reptile refugia in suitable habitat within the site, and near suitable features for reptiles. Refugia are left *in situ* for two weeks prior to the first survey visit. A total of seven survey visits are required during suitable weather conditions (9-18°C, no wind, sunny and overcast with no rain).

Dormice

Baseline and Potential Impacts

- 6.25. There is good quality habitat within the site to support dormice, particularly within the woodland and hedgerows. The woodland is primarily hazel coppice and comprises a number of plant species (e.g. bramble, oak and ash), which are utilised by dormice. The site also has good connectivity to the wider landscape, which would facilitate natural dispersal of this species, if present.
- 6.26. Future development of the site at Viney's Farm has the potential to damage or destroy habitats of value to dormice, as well as potential to injure or kill individuals. Loss of hedgerows to provide access could also restrict movement in the wider area and fragment commuting and foraging habitats.

Recommendations

- 6.27. Presence / absence surveys for dormice would be required to inform any future proposals for development at Viney's Farm. Absence of dormice is hard to prove but various survey techniques can be employed to determine presence or likely absence.

- 6.28. A search for gnawed hazel nuts is often the most efficient method of confirming dormouse presence, although installation of nest tubes in suitable hedgerows and woodland is considered to be best practice to inform development proposals. Nest tubes are checked monthly for several months from March onwards, to check for the presence of dormice themselves or their nests.

Otters and Water Voles

Baseline and Potential Impacts

- 6.29. Water voles are known to be present at the River Avon, however, this species is unlikely to be present within the site at Viney's Farm itself, given the absence of riparian habitat within the site boundary itself. There is potential for otters to use the woodland on site, as it offers suitable habitat for this species.
- 6.30. Future proposals for development at Viney's Farm have the potential to damage or destroy habitats that could support otters. Furthermore, in the absence of mitigation, run-off from any development entering the river has the potential to upset delicate ecosystems, potentially making it unsuitable for otters and water voles.

Recommendations

- 6.31. Otter and water vole surveys at the section river corridor immediately adjacent to the site would be required to inform any future development proposals.
- 6.32. Surveys for these species comprise thoroughly searching suitable habitat for field signs, or sightings of individuals. Field signs for otters include evidence of sleeping and resting places, spraints, trails, hairs, footprints and food remains. Surveys to ascertain the presence of water voles primarily consist of searching for droppings, as well as for feeding remains, burrows and footprints.

Other Terrestrial Mammals

Baseline and Potential Impacts

- 6.33. The site is likely to support a substantial population of brown hares, due to the observation of 11 individuals during site visits. The site is also likely to support many species of small mammal, including hedgehogs, in the hedgerows, field margins and woodland. There is also potential for badgers to use the site, as woodland is a primary foraging habitat for this species, and hedgerows allows them to access the wider area from the site.
- 6.34. Future proposals for development at Viney's Farm have the potential to damage or destroy all habitats that support terrestrial mammals, as well as the potential to injure or kill individuals.

Recommendations

- 6.35. Presence / likely absence of hedgehogs and badgers can be confirmed through a thorough search of field signs (including searching for sett entrances) of these species in the woodland and hedgerows.
- 6.36. Camera traps can also facilitate surveys to confirm presence / absence of various terrestrial mammals and should be installed at suitable locations within woodland and at hedgerows.

Invertebrates

Baseline and Potential Impacts

- 6.37. Whilst the arable planting offers little value for invertebrates, the field margins, woodland and hedgerows offers varied habitats, which have the potential to support a range of invertebrate species. The herb species in the woodland understory provide good quality nectar and pollen resources.
- 6.38. Future development of the site at Viney's Farm has the potential to damage or destroy good quality invertebrate habitats and impact populations of invertebrates in the area. This could have a cumulative effect on additional protected species, which use invertebrates as a primary food resource (such as bats and birds).

Recommendations

- 6.39. Any proposals for development at Viney's Farm should be informed by a data search provided by the local records centre, to establish what species are in the area. A scoping visit by an experienced invertebrate specialist to assess the habitat features on site would also inform any further surveys required.

Breeding Birds

Baseline and Potential Impacts

- 6.40. The site provides excellent and diverse habitat for a range of breeding bird species, with the extensive hedgerows and fields offering breeding habitat for farmland bird species, the steep bank of mixed woodland to the north offering extensive breeding habitat for woodland birds, and the River Avon that forms the northern boundary offering good breeding habitat for birds such as Cetti's Warbler (*Cettia cetti*) and Kingfisher (*Alcedo atthis*).
- 6.41. It is understood that the fields adjacent to the south of the site support stone curlews, which are one of Britain's rarest birds, listed on the amber list and protected by Schedule 1 of the *Wildlife and Countryside Act 1981*. Stone curlews have a very limited distribution in the UK, with the Salisbury Plains being one of two strongholds for the species.
- 6.42. Any future development of the site at Viney's Farm has the potential to void these nesting sites, as the distribution of this species greatly decreases when close to developed land. It is also possible that stone curlews will utilise the site at Viney's Farm from the neighbouring fields, as the site at Viney's Farm itself also contains habitat which is suitable for this species.

- 6.43. A number of revisits to the PRoWs surrounding the site were made during spring on 2022 (see **Appendix 3, Breeding Bird Survey Methodology and Results**), with a total of seven confirmed skylark breeding territories confirmed within the site itself, and many further skylark territories on fields adjacent to the western and southern boundaries of the site.
- 6.44. The presence of six yellowhammer territories, two linnet (*Linaria cannabina*) territories and one corn bunting territory demonstrates that the site has an important farmland breeding bird assemblage.
- 6.45. Over the last half a century, 63% of UK farmland bird species have shown a decline in numbers due to various factors, including increased use of pesticides, changes in crops grown, field drainage, and removal of non-cropped features such as hedgerows (DEFRA, 2021). This decline increases to 75% with focus on specialist farmland species (which include yellowhammer, skylark, corn bunting and linnet). These species are highly dependent on, or restricted to, farmland habitat.
- 6.46. In the past 30 years, Amesbury has seen major housing developments, which have primarily been located on farmland, with little to no mitigation for breeding birds on these sites. Further development of 550 new homes has begun on the farmland approximately 50 m east of the site at Viney's Farm, with few details of mitigation measures available. Furthermore, *Amesbury Community Strategic Plan 2006-2016* states that 1,200 homes are planned in the area east of Viney's Farm in the longer-term.
- 6.47. Stone curlew nests are found at significantly lower densities within 1,500 m of settlements than beyond this distance. Therefore, future development at the site at Viney's Farm has the potential not only to destroy habitats for stone curlews within the site itself, but to reduce the extent of suitable habitat for stone curlews within the wider landscape.

Recommendations

- 6.48. To confirm which species are breeding at the site at Viney's Farm and sufficient mitigation strategies, breeding bird surveys would be required within the site itself to inform any proposed future development. Six visits between late February and early August inclusive are considered sufficiently robust to identify the majority of bird species using a habitat, although specific survey methodologies for rarer species are likely to be required.
- 6.49. The extent of the development of Amesbury's surrounding farmland makes the site at Viney's Farm likely to be an important site for breeding birds. Rather than allocation and future development, the site could be considered as a means to offset the likely negative cumulative impacts that alternative nearby developments may have on the breeding bird populations of Amesbury.

7. REFERENCES

Buglife (2019) *Managing farmland habitats for invertebrates: Grassland* [online] cdn.buglife.org.uk/2019/08/Grassland_web.pdf [May 2022]

CIEEM (2012) Guidelines for Preliminary Ecological Appraisal. *Technical Guidance Series*.

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

Mitchell-Jones, A.J., (2002). *Bat Mitigation Guidelines*. English Nature, Peterborough.

Mitchell-Jones, A. J. & McLeish, A. P. (2004). *Bat Workers' Manual (3rd Edition)*. JNCC, Peterborough.

Ordnance Survey Maps [online] www.osmaps.ordnancesurvey.co.uk [May 2022]

UK Government's Countryside Geographic Information Website [online] www.magic.gov.uk [May 2022]

Legislation and Policy

Council of the European Communities (1992) *Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora (EN)*. Official Journal of the European Communities [online] www.eur-lex.europa.eu/legal-content/EN/TXT/?uri=OJ:L:1992:206:TOC [May 2022]

Council of the European Communities (2009) *Council Directive 2009/147/EC of 30 November 2009 on the conservation of wild birds (EN)*. Official Journal of the European Union [online] eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2010:020:0007:0025:EN:PDF [May 2022]

Department for Environment, Food and Rural Affairs (2011) *Biodiversity 2020: A Strategy for England's Wildlife and Ecosystem Services* [online] www.gov.uk/government/uploads/system/uploads/attachment_data/file/69446/pb13583-biodiversity-strategy-2020-111111.pdf [May 2022]

Department for Environment, Food and Rural Affairs (2021) *Wild Bird Populations in the UK, 1970-2019 - Updated for Wintering Waterbirds* [online] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1039187/UK_Wild_birds_1970-2020_FINAL.pdf [May 2022]

Ministry of Housing, Communities & Local Governments (2019) National Planning Policy [online] www.assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/810197/NPPF_Feb_2019_revised.pdf [May 2022]

Natural Environment and Rural Communities Act 2006 (UK Parliament). *The National Archives* [online] www.legislation.gov.uk/ukpga/2006/16/contents [May 2022]

Office of the Deputy Prime Minister Circular (2005) *Government Circular: Biodiversity and Geological Conservation – Statutory Obligations and their Impact within the Planning System* [online] www.gov.uk/government/uploads/system/uploads/attachment_data/file/7692/147570.pdf [May 2022]

Protection of Badgers Act 1992 (UK Parliament). *The National Archives* [online] www.legislation.gov.uk/ukpga/1992/51/contents *The Hunting Act, 2004* [May 2022]

The Conservation of Habitats and Species (Amendment) Regulations 2012 (UK Parliament). *The National Archives* [online] www.legislation.gov.uk/uksi/2012/1927/contents/made [May 2022]

The Hunting Act (2004) *The National Archives* [online] www.legislation.gov.uk/uksi/2012/1927/contents/made [May 2022]

The Wildlife and Countryside Act 1981 (England and Wales) (Amendment) Regulations 2004 (UK Parliament). *The National Archives* [online] www.legislation.gov.uk/ukpga/1991/39/contents *Countryside and Rights of Way Act, 2000* [May 2022]

Wiltshire Council (2015) *Bat Special Areas of Conservation (SAC); Planning Guidance for Wiltshire* [online] <https://cms.wiltshire.gov.uk/documents/s149190/BIO21BatSpecialAreasofConservationSACPlanningGuidanceforWiltshire.pdf> [May 2022]

Wiltshire Council (2015) *Wiltshire Core Strategy* [online] <https://www.wiltshire.gov.uk/media/372/Wiltshire-Core-Strategy-adopted-2015/pdf/Wcs.pdf?m=637099399373530000> [May 2022]

APPENDICES

APPENDIX 1 - PROTECTED SPECIES LEGISLATION

Bats

In England and Wales, all bat species and their roosts are legally protected under the Wildlife and Countryside Act (1981) (as amended); the Countryside and Rights of Way Act, 2000; the Natural Environment and Rural Communities Act (NERC, 2006); and by the Conservation of Habitats and Species Regulations (2010). You will be committing a criminal offence if you:

- Deliberately capture, injure or kill a bat
- Intentionally or recklessly disturb a bat in its roost or deliberately disturb a group of bats
- Damage or destroy a bat roosting place (even if bats are not occupying the roost at the time)
- Possess or advertise/sell/exchange a bat (dead or alive) or any part of a bat
- Intentionally or recklessly obstruct access to a bat roost

Barbastelle, Bechstein's, greater horseshoe, lesser horseshoe, brown long-eared, soprano pipistrelle, and noctule bats are all priority species under the UK Biodiversity Action Plan (UK BAP) and have also been adopted as species of principal importance in England under Section 41 of the NERC Act 2006.

Badgers

Badgers and their setts are afforded strict protection under the Protection of Badgers Act 1992. This Act consolidates past badger legislation and, in addition to protecting the badger itself, makes it an offence to damage, destroy or obstruct badger setts. Badgers are also protected under Schedule 6 of the Wildlife and Countryside Act 1981 (as amended), and listed under Appendix III of the Bern Convention, as a species that is in need of protection but may be hunted in exceptional instances. Only badger setts that are currently in use are covered by wildlife legislation.

Birds

All wild birds in the UK are protected under Section 1 of the Wildlife and Countryside Act 1981 (as amended) which makes it an offence to intentionally kill, injure or take any wild bird or to take, damage or destroy the nest or its eggs.

Some bird species, such as the barn owl *Tyto alba*, are listed in Schedule 1 of the 1981 Act and receive further protection, making it an offence to intentionally or recklessly disturb these birds whilst building a nest or in, on or near a nest containing eggs or young; or to disturb dependent young of such a bird.

The NERC Act (2006) inserts a new schedule into the Wildlife and Countryside Act (1981) to protect the nests of some bird species that regularly re-use their nests, even when the nests are not in use. This protection currently applies to golden eagle, white-tailed eagle and osprey.

Reptiles

All British reptiles are listed under schedule 5 of the Wildlife and Countryside Act 1981 (as amended) and are therefore protected from intentional killing or injury. This is largely as a consequence of a national decline in numbers associated with habitat loss.

Two scarcer native British reptiles (smooth snake *Coronella austriaca* and sand lizard *Lacerta agilis*), are afforded 'full' protection. This legislation makes it an offence to intentionally or recklessly kill, injure, disturb, take, possess or sell these species (in all life stages). It is also illegal to damage, destroy or obstruct access to places they use for breeding, resting, shelter and protection.

All species of reptile are priority species in the UKBAP and have been adopted as Species of Principal Importance under Section 41 of the NERC Act (2006) in England (Section 42 in Wales).

Amphibians

Great crested newts (GCN's) *Triturus cristatus* and their habitats are fully protected by the Conservation of Habitats and Species Regulations (2010) and partially protected under the Wildlife and Countryside Act 1981 (as amended). This legislation makes it an offence to kill, injure or capture GCN's, their young or eggs, or destroy / damage their ponds or places of shelter used for breeding or protection. The great crested newt is also a Priority species in the UK Biodiversity Action Plan (UKBAP), and had been adopted as a Species of Principle Importance in England under Section 41 of the NERC Act 2006.

The natterjack toad *Epidalea calamita* is fully protected under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) and Schedule 2 of The Conservation of Habitats and Species Regulations 2010 making it a European Protected Species. The natterjack toad is also a priority species under the UK Biodiversity Action Plan.

The pool frog *Rana lessonae* is protected under the Conservation (Natural Habitats &C.) Regulations 1994 (as amended). As a European protected species the deliberate capturing, disturbing, injuring or killing of this species is prohibited, as is damage or destruction of its breeding sites or resting places. The pool frog is also a priority species under the UK Biodiversity Action Plan due to a 100% decline over 25 years (1980-2005).

Common toads *Bufo bufo* are also designated UKBAP species due to a serious decline of populations across large areas of southern, eastern and central England, thought to be mainly due to changes in habitat management, mortalities on the roads, and climate change.

Dormice

Common dormice *Muscardinus avellanarius* and their habitats are fully protected by both the Wildlife and Countryside Act 1981 (as amended) and the Conservation of Habitats and Species Regulations (2010). This legislation makes it an offence to kill, injure, disturb or capture dormice, or destroy or obstruct their resting or breeding places.

The dormouse is also a priority species under the UK Biodiversity Action Plan and has been adopted as a species of Principal Importance in England under Section 41 of the NERC Act 2006 (section 42 in Wales) and so is protected from any adverse effects as a result of development.

Otters

Otters *Lutra lutra* are protected by both the Wildlife and Countryside Act 1981 (as amended) and The Conservation of Habitats and Species Regulations 2010. This legislation makes it is illegal to; deliberately or recklessly kill, injure or capture an otter, deliberately or recklessly disturb or harass an otter, damage, destroy or obstruct access to a breeding site or resting place of an otter.

The otter is also a UK BAP Priority Species and has been adopted as a Species of Principal Importance in England under Section 41 of the NERC Act 2006 (Section 42 in Wales) and the Conservation (Scotland) Act in Scotland.

Water Voles

Water voles *Arvicola terrestris* are fully protected under the Wildlife and Countryside Act 1981 (as amended). This legislation makes it an offence to kill or injure water voles, and to damage, destroy or obstruct access to places used for protection or shelter, and to disturb water voles whilst they occupy such a place.

The water vole is also a Priority species in the UK Biodiversity Action Plan, and had been adopted as a Species of Principle Importance in England under Section 41 of the NERC Act 2006.

White-clawed Crayfish

The white-clawed crayfish *Austropotamobius pallipes* is protected under the Wildlife and Countryside Act 1981 (as amended), making it a criminal offence to; intentionally or recklessly kill or injure a white-clawed crayfish, or sell or

attempt to sell any part of this species. The Habitats Regulations (2010) provide further protection through the declaration of Special Areas of Conservation (SAC). This protection aims to prevent commercial harvesting of white-clawed crayfish and prohibits their capture without a licence.

The white-clawed crayfish is also a Priority species in the UK Biodiversity Action Plan (BAP), and has been adopted as a Species of Principal Importance in England under Section 41 of the NERC Act 2006.

Hedgehogs

Hedgehogs are UK Biodiversity Action Plan (BAP) species, and therefore must be taken into consideration as part of development planning. A recent report (Wembridge, 2011) shows that hedgehog numbers have declined by 25% in the last ten years.

APPENDIX 2 - SURVEY AND REPORTING LIMITATIONS AND EXCEPTIONS

This report and its survey results should be considered in conjunction with the terms and conditions proposed and scope of works agreed between Darwin Ecology Ltd and the client.

This report has been produced in the context of the proposals stated in the Introduction & Background section of this report (Section 2) and should not be used in any other context.

Darwin Ecology Ltd have endeavoured to identify the likely presence / absence of protected species wherever possible on site, where this falls within the agreed scope of works. Current standard methodologies have been used, which are accepted by Natural England and other statutory conservation bodies. No responsibility can be accepted where these methodologies fail to identify all species or significant species on site.

Extended Phase 1 and Preliminary Ecological survey techniques provide a preliminary assessment of the likelihood of protected species occurring on the development site, based on the suitability of the habitats and any field signs found during the site visit. A Phase 1 survey should not be taken as providing a full and definitive survey of any protected species group.

Extended Phase 1 and Preliminary Ecological Appraisals represent a snapshot of conditions at the time of survey and are limited by factors which affect the presence of plants and animals such as the time of year, migration patterns and behaviour. Surveys should therefore not be considered a comprehensive list of all plant species or as conclusive proof that certain protected species are not present or will not be present in the future.

Where the presence/absence of a certain species is in question our ecologists must apply a precautionary approach until further survey data can be sought to better inform the decision.

Darwin Ecology Ltd will advise on the optimum survey season for a particular habitat or protected species prior to undertaking the survey work. Darwin Ecology Ltd cannot accept responsibility for the accuracy of surveys undertaken outside this period.

The potential impacts, mitigation and enhancement sections of the report provide an overview and is for guidance only. This section should not be solely relied upon, but should be considered in the context of the whole report.

Interpretations of survey results and recommendations outlined in the report represent our professional opinions, expressed in accordance with recognised industry practices and current legislation at the time of reporting. The results of survey work undertaken by Darwin Ecology Ltd are representative at the time of surveying.

Where the client had supplied us with data from previous reports, it has been assumed that this information is valid. No responsibility can be accepted by Darwin Ecology Ltd for inaccuracies within any previous data supplied.

The copyright in this report, plans and other associated documents prepared by Darwin Ecology Ltd is owned by them and no such report, plans and other associated documents may be reproduced without their written consent.

Amendments to this report after its submission may be necessary in light of new, relevant information and / or legislation. This report should be referred to us for re-assessment if any such amendments are necessary or after the expiry of one year from the date of the report.

APPENDIX 3 - BREEDING BIRD SURVEY METHODOLOGY AND RESULTS

BREEDING BIRD SURVEY

Methodology

- 7.1. The standard Common Bird Census (CBC) methodology, as developed by Marchant (1983) for the British Trust for Ornithology (BTO), was adopted.
- 7.2. A set route was followed on two occasions in early and late April 2022, by experienced ornithologist Alex Coggins. The route followed Public Rights of Way (PRoW) around the site at Viney's Farm. All birds encountered were identified either visually or from their vocalisations. Birds were noted with standard BTO codes and their behaviour was mapped. Territory mapping was conducted following the methodology set out in Bibby *et al.* (1992).
- 7.3. Territories were determined using the criteria set out in **Table 1** below and weather conditions are provided in **Table 2**.

Table 1: Criteria for determining breeding bird territories

Breeding status	Approximate Distance from Site
Confirmed breeding territory	Two registrations of a particular species displaying breeding behaviour within a territory range over the total survey period
	A single record of a nest containing eggs or young
	Two registrations of a difficult species (e.g. a nocturnal species such as owl species) within a territory range over the total survey period
Probably breeding territory	Present in suitable habitat in the same location (within normal territory range) on two occasions
	Displaying breeding behaviour (singing, territorial activity, agitated or defensive behaviour, pair of adults together) on one occasion only
Possible breeding territory	Present in suitable habitat on one occasion only
Non-breeding	Present in habitat not suitable for breeding
	Immature birds (e.g. herring gull first breeds at 4 years of age)

Table 2: Weather conditions during the breeding bird survey at Viney's Farm

Date	Visit number	Weather conditions
12/4/22	1	11°C, cloud cover 8/8, wind 1/12, light rain early on but soon cleared.
26/4/22	2	5°C, cloud cover 4/8, wind 2/12, bright crisp morning.

7.4. The breeding bird assemblage on the site was assessed using the criteria set out by Fuller (1980). The adapted scale outline in the IEEM guidelines (2006) was used, which reflects the decline in arable species since Fullers guidelines were originally published.

- Up to 24 breeding species = Local Importance;
- 25 - 49 breeding species = District Importance;
- 50 - 69 breeding species = County Importance;
- 70 - 84 breeding species = Regional Importance; and
- 85 + breeding species = National Importance.

Results

7.5. During the two breeding bird surveys, 27 confirmed breeding species were identified within the site, making it important at **District** level. Of these species six are on the Birds of Conservation Concern (BCC) red list, eight are on the BCC amber list, and three are protected by Schedule 1 of the *Wildlife and Countryside Act 1981*.

Table 4: Results from the breeding bird surveys.

Confirmed Farmland Breeding Bird Species	Confirmed Other Breeding Bird Species	Bird Species Present but Breeding not Confirmed
<ul style="list-style-type: none"> • *Skylark • *Yellowhammer • *Linnet • *Corn Bunting • Red-legged Partridge (<i>Alectoris rufa</i>) • Pheasant (<i>Phasianus colchicus</i>) • *Whitethroat (<i>Sylvia communis</i>) 	<ul style="list-style-type: none"> • Long-tailed tit (<i>Aegithalos caudatus</i>) • *Cetti's warbler (<i>Cettia cetti</i>) • *Wren (<i>Troglodytes troglodytes</i>) • *Greenfinch (<i>Chloris chloris</i>) • Chaffinch (<i>Fringilla coelebs</i>) • Blue tit (<i>Cyanistes caeruleus</i>) • Great tit (<i>Parus major</i>) • Coal tit (<i>Periparus ater</i>) • Carrion crow (<i>Corvus corone</i>) • *Wood pigeon (<i>Columba palumbus</i>) • Blackcap (<i>Sylvia atricapilla</i>) • Goldcrest (<i>Regulus regulus</i>) • Treecreeper (<i>Certhia familiaris</i>) • *Dunnock (<i>Prunella modularis</i>) • Blackbird (<i>Turdus merula</i>) • Robin (<i>Erithacus rubecula</i>) • Chiffchaff (<i>Phylloscopus collybita</i>) • Nuthatch (<i>Sitta europaea</i>) • *Song thrush (<i>Turdus philomelos</i>) • Goldfinch (<i>Carduelis carduelis</i>) 	<ul style="list-style-type: none"> • *Willow warbler (<i>Phylloscopus trochilus</i>) • *Red kite (<i>Milvus milvus</i>) • Buzzard (<i>Buteo buteo</i>) • *Moorhen (<i>Gallinula chloropus</i>) • Coot (<i>Fulica atra</i>) • *Kingfisher (<i>Alcedo atthis</i>) • *Mallard (<i>Anas platyrhynchos</i>) • *Lapwing (<i>Vanellus vanellus</i>) - (possible breeding as call heard from field)
<p>* BCC red list; * BCC amber list; * Schedule 1 of the <i>Wildlife and Countryside Act 1981</i>.</p>		

7.6. A summary of these species can be found in **Table 3** below.

7.7. Additional data recorded during these surveys include:

- A total of seven confirmed skylark territories were recorded in the arable fields within the site at Viney's Farm;
- A total of six yellowhammer breeding territories were recorded using the hedgerows around the site at Viney's Farm;
- A total of two linnet breeding territories were recorded using the hedgerows on and around the site at Viney's Farm;
- A total of one corn bunting breeding territory was recorded in the north west of the site at Viney's Farm;
- A cetti's warbler breeding territory was confirmed in the north east of the site at Viney's Farm, along the River Avon corridor;
- A kingfisher was observed flying along the River Avon during the first breeding bird survey, and this area of the river is likely to be part of its territory; and
- Species recorded breeding in the woodland in the north of the site include nuthatch (*Sitta europaea*), treecreeper (*Certhia familiaris*), blackcap (*Sylvia atricapilla*) and goldcrest (*Regulus regulus*).