Preliminary Ecological Appraisal Report

Land South West of Ashdown Farm, New Road, Codford, Wiltshire, BA12 0NS

Client	Mr Piper
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Document History

Version	Date Issued	Revision
1	20/11/2020	Issued to the client.

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The summary of wildlife legislation provided is for general guidance only and does not in any way provide legal opinion or a definitive statement of the law. For detailed information, the legislation itself should be reviewed and a legal professional consulted.

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The evidence in this document is based upon the field survey(s) detailed. Due to the changing nature of ecology the list of species present cannot be considered comprehensive and Smart Ecology cannot guarantee that other protected/notable species and habitats are not present.

The ecology of a site is constantly changing and therefore the information provided in this document is only relevant at the time of survey. If it has been over 12 months since this survey was undertaken advice should be sought on whether an updated survey is necessary.

The evidence 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. We confirm that the opinions expressed are our true and professional bona fide opinions.

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Non-Technical Summary

Purpose of Report	Smart Ecology was commissioned by Mr Piper to undertake a Preliminary Ecological Appraisal of Land South West of Ashdown Farm, New Road, Codford, Wiltshire, BA12 0NS. It is proposed to construct a residential dwelling on the site, which would require the removal, of less than 0.05 ha of semi-improved grassland, tall ruderals, and shrubs.
Methodology	A desk study and an Extended Phase 1 habitat survey were undertaken.

Ecological Feature	**Potential Impacts without Mitigation** (refer to Section 5)	**Potentially Required Surveys & Necessary Mitigation** (refer to Sections 6.1 and 6.2)
Statutory designated sites (River Avon SAC and River Avon System SSSI)	No significant effects from the development are considered likely in isolation, but cumulative impacts of development within the SAC catchment area on phosphate load are likely.	Implement water efficiency measures.
Broadleaved semi-natural woodland	Degradation of the woodland would negatively impact the county's biodiversity resource.	Protect trees during works. Prepare a planting scheme and management plan to ensure no net loss of biodiversity.
Bats (roosting)	Damage to trees which could contain roosts during works. Artificial light spill onto trees could disturb roosting bats (if present) and result in roost abandonment.	Protect trees during works. Avoid installing external lighting, or if lighting is essential then minimise the impacts of artificial lighting.
Bats (foraging & commuting)	Loss of small area of suitable habitat. Artificial light spill could disturb foraging and commuting bats.	Where practicable, compensate for loss of shrubs and ground flora by planting native trees and shrubs on the site. Avoid installing external lighting, or if lighting is essential then minimise the impacts of artificial lighting. **If artificial lighting impacts cannot be avoided then undertake seasonal bat activity surveys (April – October).**
Birds	Damage/destruction of active nests (if present) if shrubs and structures B3 and B4 are removed during the nesting season (which is generally March to August inclusive).	Remove shrubs and structures 3 and 4 outside of the nesting season. If this is not possible then these must be checked for the presence of active nests by an ecologist no more than 48 hours before removal/demolition.
Badger & other mammals	Injury/death if badgers are trapped in any open excavations or pipework during works.	Implement Reasonable Avoidance Measures.
Amphibians & reptiles	Injury/death during site clearance and if amphibians or reptiles become trapped in any open excavations or pipework during construction.	Implement Reasonable Avoidance Measures.
Invertebrates	Loss of small area of suitable habitat, including log and brash piles.	Retain or relocate brash and log piles.

Conclusions	No significant impacts on protected or notable species are considered likely if the mitigation measures provided in this report are implemented. However, if artificial light impacts cannot be avoided then it is recommended that bat activity surveys are undertaken to permit an impact assessment for foraging and commuting bats to be made.

Contents

Non-Technical Summary ii

1 Introduction 1

1.1 Background 1

1.2 Site Context 1

1.3 Aims 1

2 Legislation and Planning Policy 2

2.1 Legislation 2

2.2 Planning Policy 4

3 Methodology 6

3.1 Desk Study 6

3.2 Field Survey 6

3.3 Evaluation of Ecological Features 8

3.4 Limitations 8

4 Baseline Ecological Conditions 10

4.1 Desk Study 10

4.2 Field Survey - Habitats 11

4.3 Field Survey - Species 13

5 Ecological Constraints 19

5.2 Great Crested Newt Rapid Risk Assessment 19

5.3 Evaluation of Potential Impacts 19

6 Surveys, Mitigation and Enhancements 22

6.1 Surveys 22

6.2 Mitigation 22

6.3 Enhancements 24

7 Conclusions 25

8 References 27

9 Figures 28

Figure 1 - Site Location Map

Figure 2 - Phase 1 Habitat Map

Figure 3 - Waterbodies Location Map

Appendix 1 – Proposed Site Plan 29

Appendix 2 – Target Notes (TN) 30

Appendix 3 – Reasonable Avoidance Measures (RAMs) 32

1 Introduction

1.1 Background

1.1.1 Smart Ecology was commissioned by Mr Piper to undertake a Preliminary Ecological Appraisal of land south west of Ashdown Farm, New Road, Codford, Wiltshire, BA12 0NS (central national grid reference ST 96068 40200). Refer to Figure 1, Section 9 for a site location map site which shows the red line site boundary (hereafter referred to as the "site").

1.1.2 The purpose of the survey was to inform a planning application to Wiltshire Council for construction of a residential dwelling on the site. See Appendix 1 for the proposed site plan.

1.1.3 A Preliminary Ecological Appraisal report was previously produced for the site to inform a planning application for the creation of a campsite (19/04477/FUL) (Smart Ecology, 2018).

1.1.4 This report has been prepared by Robert Dunn, director at Smart Ecology and an associate member of the Chartered Institute of Ecology and Environmental Management (CIEEM), with reference to CIEEM's Guidelines for Preliminary Ecological Appraisal (CIEEM, 2017a), Guidelines for Ecological Report Writing (CIEEM, 2017b), and BS42020 Biodiversity – a code of practice for planners and developers (BSI, 2013).

1.2 Site Context

1.2.1 The 0.3 ha site is located immediately adjacent to the A36 on the western outskirts of the village of Codford St Peter. The site comprised broadleaved woodland, with an area of semi-improved grassland in the approximate centre of the site and tall ruderals located on a bund that runs along the southern site boundary. Several structures, vehicles, and piles of refuse were present on the site. The site was bounded by stone walls along the northern and western boundaries, and by wire fencing along the eastern boundary. A grassy road embankment and the A36 are located adjacent to the southern boundary. The landscape surrounding the site predominantly comprises arable and pasture fields with small areas of woodland.

1.3 Aims

1.3.1 The purpose of the survey and report was to:

- Identify statutory[1] and non-statutory[2] designated sites on or close to the site.
- Provide an ecological baseline for the site including habitats[3] and the presence of, and potential for, legally protected[4] and notable[5] species.
- Identify any potential impacts on designated sites, habitats, and species.
- Provide recommendations for further required surveys, mitigation, and enhancements.

[1] Statutory designated sites are those protected by legislation and include Ramsar, Special Protection Areas (SPA), Special Areas of Conservation (SAC), Sites of Special Scientific Interest (SSSI), National Nature Reserves (NNR), and Local Nature Reserves (LNR).
[2] Non-statutory designated sites are not afforded any legal (statutory) protection and are often designated by local authorities e.g. Local Wildlife Sites (LWS), County Wildlife Sites (CWS), and Key Wildlife Sites (KWS).
[3] Including priority habitats listed under Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006.
[4] Legally protected species include species afforded protection by the Conservation of Habitats and Species Regulations 2017 (as amended) and the Wildlife and Countryside Act 1981 (as amended).
[5] Notable species include priority species listed under Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006, UK red data book species, and Birds of Conservation Concern (BoCC).

2 Legislation and Planning Policy

2.1 Legislation

2.1.1 Certain species and habitats are legally protected in the UK by legislation. The key pieces of legislation are:

- The Conservation of Habitats and Species Regulations 2017 (as amended).
- Wildlife and Countryside Act 1981 (as amended).
- Natural Environment and Rural Communities (NERC) Act 2006.
- Protection of Badgers Act 1992.
- Wild Mammals (Protection) Act 1996.
- The Hedgerows Regulations 1997.

2.1.2 The implications of legislation with regard to species are provided in Table 2-1.

2.1.3 Only a brief summary of wildlife legislation is provided here for general guidance and should not be considered a definitive statement of the law. For detailed information the legislation itself should be consulted.

The Conservation of Habitats and Species Regulations 2017 (as amended)

2.1.4 These Regulations transpose the EU Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora (EC Habitats Directive) into national law. The Regulations require the designation and protection of European Sites (Special Areas of Conservation (SAC) and Special Protection Areas (SPA) and the protection of European Protected Species (EPS).

It will be necessary to determine whether any European Sites or EPS may be impacted, either directly or indirectly, by the proposed development.

Wildlife and Countryside Act 1981 (as amended)

2.1.5 This Act implements the Convention on the Conservation of European Wildlife and Natural Habitats (Bern Directive) and the EU Directive 79/409/EEC on the conservation of wild birds (Birds Directive)[1].

2.1.6 The Act provides protection to a range of animal and plant species. It also requires sites with special wildlife or geological interest to be designated nationally as Sites of Special Scientific Interest (SSSI).

It will be necessary to consider whether the proposed development would have any direct or indirect impacts on any SSSI or species listed in relevant schedules of the Act.

[1] Now replaced by Directive 2009/147/EC of the European Parliament and of the Council of 30th November 2009 on the conservation of wild birds.

Natural Environment and Rural Communities (NERC) Act 2006

2.1.7 Section 40 of this Act places a duty on public authorities to '*have regard*' to conserving biodiversity when determining planning applications. Section 41 of the Act requires the Secretary of State to publish a list of species and habitats of principal importance to biodiversity (priority species and habitats). The local planning authority must '*have regard*' to conserving these species and habitats when determining a planning application. The development would need to mitigate for any impacts on priority habitats and species.

The proposed development would need to mitigate for impacts on priority habitats and species.

Protection of Badgers Act 1992

2.1.8 This Act provides specific protection for badgers and their setts from harm and disturbance.

The proposed development would need to mitigate impacts on badgers and setts.

Wild Mammals (Protection) Act 1996

2.1.9 This Act makes it an offence to intentionally inflict unnecessary suffering on a wild mammal through mutilation, kicking, beating, nails, impaling, stabbing, burning, stoning, crushing, drowning, dragging, or asphyxiation.

Care would have to be taken during the construction phase of the proposed development to ensure that unnecessary suffering is not inflicted.

The Hedgerows Regulations 1997

2.1.10 These Regulations protect most hedgerows from removal unless permissioned by a local planning authority. They also provide historic and ecological criteria for defining important hedgerows. A local planning authority can only refuse permission to remove a hedgerow under the Hedgerows Regulations 1997 if a hedgerow is assessed to be important.

The proposed development should aim to retain and protect hedgerows and mitigate for impacts.

Table 2-1: Implications of legislation with regard to species

Legislation	Species	Legal Implications
The Conservation of Habitats and Species Regulations 2017 (as amended)	• Bats • Hazel dormouse • Otter • Great crested newt	It is illegal to: • Deliberately capture, injure or kill these species. • Deliberately disturb[1] these species. • Damage or destroy a breeding site or resting place used by these species.
Wildlife and Countryside Act 1981 (as amended) – sub-sections 9(4) b and c and 9(5) only	• Bats • Hazel dormouse • Otter • Great crested newt	It is illegal to: • Intentionally or recklessly disturb these species while they are occupying a structure or place of shelter or protection. • Intentionally or recklessly obstruct access to a structure or place of shelter or protection.

Legislation	Species	Legal Implications
Wildlife and Countryside Act 1981 (as amended)	• Birds	It is illegal to intentionally: • Kill, injure or take any wild bird. • Take, damage or destroy a wild bird's nest while it is in use or being built. • Take or destroy the eggs of any wild bird. There is additional protection for birds listed on Schedule 1 (S1) of the Act, which includes barn owls, whereby it is an offence to intentionally or recklessly disturb a S1 bird while building a nest or in or near a nest containing eggs or young, and disturb dependent young of a S1 bird.
Wildlife and Countryside Act 1981 (as amended)	• Water vole	It is illegal to: • Intentionally kill, take, or injure water voles. • Intentionally or recklessly damage or destroy a place of shelter or protection. • Intentionally or recklessly disturb water voles while they are occupying a structure or place of shelter or protection. • Intentionally or recklessly obstruct access to a structure or place of shelter or protection.
Protection of Badgers Act 1992	• Badger	It is illegal to: • Wilfully capture, kill or injure a badger. • Damage, destroy or obstruct access to setts. • Disturb badgers in setts.
Wildlife and Countryside Act 1981 (as amended) – sub-sections 9(1) (partial) and 9(5) only	• Common reptile species	It is illegal to: • Intentionally or recklessly kill or injure common lizard, slow worm, grass snake, and adder.

[1] Disturbance under the Conservation of Habitats and Species Regulations 2017 (as amended) is defined as impairing the ability of an animal to survive, breed, reproduce, rear or nurture their young, hibernate or migrate, or to significantly affect the local distribution or abundance of the species.

2.1.11 Additionally, several species which could occur on or close to the site are listed as species of principal importance (priority species) under Section 41 of the NERC Act, which places a requirement on local planning authorities to '*have regard*' to conserving these species. Priority species which could potentially occur on or close to the site include hedgehogs, common toad, and bird, bat, and common reptile species.

2.2 Planning Policy

National Planning Policy Framework (NPPF) 2019

2.2.1 Paragraph 170 states that planning decisions should protect sites of biodiversity value, minimise biodiversity impacts, and contribute to net biodiversity gains.

2.2.2 Paragraph 175 states that planning permission should be refused if significant harm to biodiversity resulting from a development cannot be avoided, adequately mitigated, or, as a last resort, compensated for.

2.2.3 The NPPF emphasises the need to consider biodiversity at a landscape scale, conserving, restoring and enhancing priority habitats and ecological networks, and protecting priority species. The NPPF also specifies the need to protect designated sites from adverse harm and to protect irreplaceable habitats (e.g. ancient woodland and veteran trees).

The proposed development would need to mitigate for impacts on biodiversity and provide net biodiversity gains where possible.

Wiltshire Council Core Strategy 2015

2.2.4 The Core Strategy sets out policies for development and land use in Wiltshire. Two policies are relevant to ecology and biodiversity at this site; refer to Table 2-2 for details. Refer to the original document for full wording of these policies.

Table 2-2: Wiltshire Core Strategy policies with relevance to ecology and biodiversity

Policy	Details
Core Policy 50: Biodiversity and Geodiversity	**Protection:** Development proposals must demonstrate how they protect features of nature conservation. There is an expectation that such features shall be retained, buffered, and managed favourably in order to maintain their ecological value, connectivity and functionality in the long-term. Where it has been demonstrated that such features cannot be retained, removal or damage shall only be acceptable in circumstances where the anticipated ecological impacts have been mitigated as far as possible and appropriate compensatory measures can be secured to ensure no net loss of the local biodiversity resource, and secure the integrity of local ecological networks and provision of ecosystem services. All development proposals shall incorporate appropriate measures to avoid and reduce disturbance of sensitive wildlife species and habitats throughout the lifetime of the development. **Biodiversity enhancement:** All development should seek opportunities to enhance biodiversity. **Local Sites:** Sustainable development will avoid direct and indirect impacts upon local sites.
Core Policy 52: Green Infrastructure	Development shall make provision for the retention and enhancement of Wiltshire's green infrastructure network, and shall ensure that suitable links to the network are provided and maintained. Where development is permitted developers will be required to retain and enhance existing on site green infrastructure.

3 Methodology

3.1 Desk Study

3.1.1 A search was conducted for existing information on:

- Protected and notable species within 1 km of the site.
- Granted EPS mitigation licences within 1 km of the site.
- Statutory and non-statutory designated sites within 1 km of the site.
- Bat Special Area of Conservation (SAC) Consultation Zones[1].
- Priority habitats and ancient woodlands within 1 km of the site.
- Waterbodies mapped within 500 m of the site.

3.1.2 The following organisation and website were consulted:

- Wiltshire & Swindon Biological Records Centre (WSBRC)[2].
- The Multi-Agency Geographic Information Centre (MAGIC) website[3].

3.2 Field Survey

3.2.1 The field survey was undertaken on the 5th of November 2020 by Robert Dunn. Robert is an experienced ecologist from Smart Ecology and holds Natural England level 1 class survey licences for bats (2016-23966), great crested newt (2016-23661), and hazel dormouse (2016-26867).

3.2.2 The weather during the survey was sunny (40 - 50 % cloud), the temperature was approximately 9ºC, there was a light breeze (Beaufort wind scale 2), and no precipitation.

Extended Phase 1 Habitat Survey

3.2.3 A Phase 1 habitat survey was undertaken following the methodology outlined in the 'Handbook for Phase 1 Habitat Survey' (JNCC, 2010). This involved a walkover of the site to map habitats present against Phase 1 categories.

3.2.4 As an extension to the Phase 1 habitat survey, any priority habitats on the site were identified and habitats assessed for evidence of, and potential to support, legally protected, notable and non-native invasive species. Any evidence of, and potential for, such species was recorded. Target Notes (TN) were made for any evidence of, or features with particular suitability for, legally protected, notable, non-native invasive species and other species of concern; these are provided in Appendix 2 and plotted on the Phase 1 Habitat Map (Figure 2, Section 9).

[1] Bat Consultation Zones are 'Core Areas' around known 'Core Roosts' linked to Bath and Bradford-on-Avon SAC, Chilmark Quarries SAC and Mottisfont SAC.
[2] Data supplied in November 2020.
[3] http://magic.defra.gov.uk (accessed November 2020).

3.2.5 Specifically, the site was surveyed for evidence of, and potential for, the following species/groups:

- Bats
- Birds
- Badger
- Hazel dormouse
- Otter
- Water vole
- Other mammals (e.g. brown hare, hedgehog, polecat, harvest mouse)
- Amphibians
- Reptiles
- Invertebrates
- Fish
- Plants
- Invasive and non-native species

3.2.6 The survey included preliminary bat roost assessments of on-site structures, as follows:

Preliminary Bat Roost Assessment (PRA)

3.2.7 On-site structures were surveyed for potential roost features and assessed for their suitability for roosting bats following the methodology outlined in the Bat Conservation Trust (BCT) good practice guidelines (Collins, 2016).

3.2.8 The survey comprised a detailed external and internal inspection of the structures using a high-powered torch (Clulite 1 million candle power), close focusing (8.5 x 21) binoculars, and an endoscope where necessary. Possible entry/exit locations for bats, potential roost sites, and the presence of, or evidence for, bats (e.g. carcasses, droppings, urine, grease marks, feeding remains, squeaking etc.) were noted.

3.2.9 An assessment was then made of the suitability of the structures for roosting bats with reference to the BCT good practice guidelines (Collins, 2016); see Table 3-1.

Table 3-1: Bat roost suitability assessment criteria

Suitability	Description
Negligible	Negligible suitability for roosting bats.
Low	1 + potential roost sites that may be used by individual bats opportunistically. However, these potential roost sites do not provide suitable conditions[1] or have suitable surrounding habitat to be used on a regular basis or by larger numbers of bats.
Moderate	1 + potential roost sites with suitable conditions[1] and surrounding habitat but unlikely to support high conservation status roosts.
High	1 + potential roost sites with good conditions[1] and surrounding habitat, that are obviously suitable for use by large number of bats regularly.
Confirmed bat roost	1 + roost sites.

[1] Conditions include size, protection, shelter, temperature, humidity, height above ground, light levels and disturbance levels.

3.3 Evaluation of Ecological Features

3.3.1 Valuation of ecological features (designated sites, species, and habitats) was undertaken in accordance with CIEEM guidance (CIEEM, 2018). Valuation is determined using the geographic framework provided in Table 3-2.

3.3.2 The value of an ecological feature is based on a professional ecologist's judgement and takes into consideration various characteristics including any site designations, priority species and habitats, species rarity, the quality of the resources (e.g. habitat diversity, species population size), and location within the landscape context.

3.3.3 Important ecological features, which may pose a constraint to the proposed development, are those with an ecological value which could be impacted by the development. These are the features which may require further survey work and mitigation.

Table 3-2: Framework for assessing the value of ecological features

Geographic Scale	Example of Ecological Feature
International **(most important)**	An internationally designated site e.g. Special Areas of Conservation (SAC), Special Protection Area (SPA), Ramsar sites. Regularly occurring populations of internationally important species.
National	Site of national importance e.g. Site of Special Scientific Interest (SSSI), National Nature Reserve (NNR). Regularly occurring populations of nationally important species.
Regional	Non-statutory site e.g. Local Wildlife Site (LWS), Key Wildlife Site (KWS), Country Wildlife Site (CWS) supporting a regionally significant area of priority habitat or regionally significant population of legally protected/priority species.
County	Non-statutory site e.g. Local Wildlife Site (LWS), Key Wildlife Site (KWS), Country Wildlife Site (CWS), ancient woodland, site supporting priority habitats, priority species, and/or legally protected species of significance for the county.
Local	Habitats which enhance the local habitat resource e.g. old species-rich hedgerow, deciduous woodland, pond, small areas of priority habitat or areas supporting small populations of legally protected/priority species which are not rare within the region, county, or nationally.
Site	Habitats of limited ecological importance e.g. scattered trees, hedgerows, woodland plantations, small areas of non-priority habitats that are of value for wildlife. Species of limited ecological importance.
Negligible **(least important)**	Hardstanding, bare ground, built environment, and other areas with negligible biodiversity value, including for priority and legally protected species.

3.4 Limitations

3.4.1 The survey was undertaken during the autumn when many plant species may not be apparent. However, it was still possible to identify the broad habitat types present and therefore the timing of the survey is not considered to be a significant limitation to the Phase 1 habitat survey.

3.4.2 Due to the timing of the survey non-native invasive plant species may not have been apparent. Therefore the absence of non-native invasive species should not be assumed even if these species were not recorded during the Phase 1 survey.

3.4.3 Many of the species records provided by WSBRC were at low spatial resolution and therefore the accurate location of these records could not be determined, however they still provide background information on species present in the local area. Additionally, it must be noted that the accuracy of these records (e.g. correct species identification) has not been independently verified, and that an absence of records does not necessarily mean that a species is not present within the search area.

4 Baseline Ecological Conditions

4.1 Desk Study

Species Records

4.1.1 Species records provided by WSBRC are detailed in the species accounts in Section 4.3 as appropriate. To ensure the relevancy of data, records older than 20 years were screened out of the data search.

Granted EPS Mitigation Licences

4.1.2 No EPS mitigation licences have been granted within 1 km of the site.

Statutory Designated Sites

4.1.3 The River Wylye, which is part of the River Avon SAC and River Avon System SSSI, is located approximately 0.70 km to the south of the site; see Table 4-1 for details.

4.1.4 No other statutory designated sites are located within 1 km of the site.

Table 4-1: Statutory designated sites within 1 km

Site	Approximate Distance from Site	Designation	Description
River Avon	0.70 km south	SAC	A large, lowland river system that includes sections running through chalk and clay, with transitions between the two. The SAC has been designated because it contains populations of European importance of water crowfoot and starwort, Atlantic salmon, bullhead, brook lamprey, sea lamprey, and Desmoulin's whorl snail.
River Avon System	0.70 km south	SSSI	An extremely high-quality chalk stream fed largely from chalk springs, with various associated habitats including swamp, wet woodland and flood pasture.

Non-Statutory Designated Sites

4.1.5 Three Local Wildlife Sites (LWS) are located within 1 km of the site; see Table 4-2 for details.

Table 4-2: Non-statutory designated sites within 1 km

Site	Approximate Distance from Site	Designation	Description
Well Bottom Down Middle	0.49 km north-west	LWS	A small (2.18 ha) scrubby, south facing calcareous grassland. Contiguous with Well Bottom Down South.
Well Bottom Down South	0.76 km north-west	LWS	A small (1.62 ha) west-facing calcareous grassland. Contiguous with Well Bottom Down Middle.
Mill Meadow, Boyton	0.86 km south-west	LWS	A very small area (0.83 ha) of wetland vegetation at the end of a much larger complex of former water-meadows. Neutral grassland.

Bat SAC Consultation Zones.

4.1.6 The site is not located in a bat SAC consultation zone.

Priority Habitats and Ancient Woodlands

4.1.7 The site is identified as forming part of a small area (approximately 0.9 ha) of lowland mixed deciduous woodland priority habitat. There are 12 further discrete areas of lowland mixed deciduous woodland priority habitat located within 1 km of the site; the closest areas are a small woodland (approximately 0.5 ha) located 15 m to the south and separated from the site by the A36 and a small woodland (approximately 0.9 ha) approximately 270 m to the south-west.

4.1.8 There are no records of ancient woodlands within 1 km of the site.

Mapped Waterbodies

4.1.9 One waterbody containing standing water is mapped within 500 m of the site, located approximately 245 m to the south-west and on the other side of the A36. See Figure 3, Section 9 for a map showing the location of this waterbody.

4.2 Field Survey - Habitats

4.2.1 The location and extent of habitats on the site are shown on the Phase 1 habitat map; see Figure 2, Section 9.

Broadleaved Semi-Natural Woodland



Photo 1

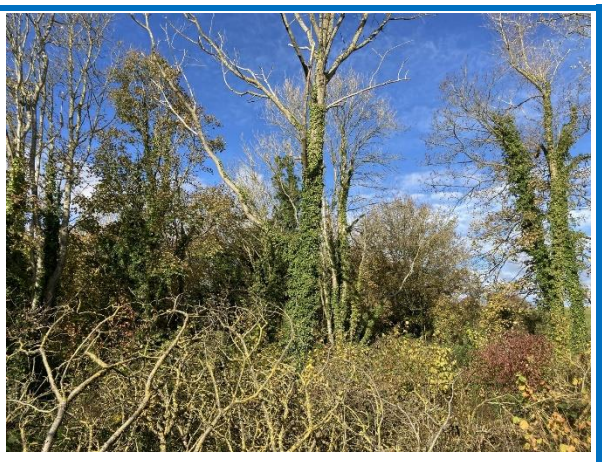


Photo 2

4.2.2 The majority of the site comprised broadleaved woodland; see Photos 1 and 2. The canopy was very open and was dominated by mature hybrid black poplar, with a frequent distribution of semi-mature sycamore and an occasional distribution of semi-mature field maple also present. There were abundant shrubs, particularly in the western part of the site where trees had been previously felled, and adjacent to the eastern site boundary. Shrub species present included occasional wild privet and hawthorn and a rare distribution of hazel, holly, dog rose, ash, elder, dogwood, spindle, and willow species. There was a low diversity and abundance of ground flora species present, with ivy dominant throughout much of the site, with an occasional distribution of bramble and a rare distribution of black bryony, dog's mercury, herb Robert, wood avens, cleavers, lungwort, primrose and pendulous sedge.

Dense Scrub



Photo 3

4.2.3 A small area of dense bramble dominated scrub was present alongside the southern site boundary; see Photo 3.

Neutral Semi-Improved grassland



Photo 4



Photo 5

4.2.4 A small area (approximately 700 m^2) of short mown/cut neutral semi-improved grassland was present in the central part of the site; see Photos 4 and 5. It is understood that this area was previously horse grazed. Species present included cock's foot, false brome, white clover, ribwort plantain, Yorkshire fog, ground ivy, spear thistle, and false oat-grass. There were several vehicles, a boat, caravans, and piles of aggregate and refuse present in this area.

Tall Ruderals



Photo 6



Photo 7

4.2.5 A small area of tall ruderals was present along a section of the southern boundary, adjacent to the area of semi-improved grassland; see Photos 6 and 7. Species present included Canadian goldenrod, willowherb species, common ragwort, and mugwort. Traveller's joy, buddleia, and false brome were also present in this area.

Structures

4.2.6 Five storage containers/prefabricated structures were present on the site, which were assessed primarily for their potential as habitat for roosting bats and nesting birds; see Section 4.3.

4.3 Field Survey - Species

4.3.1 Target Notes (TN) are provided in Appendix 2 and their locations plotted on the Phase 1 Habitat Map; see Figure 2, Section 9.

Bats

4.3.2 WSBRC provided three records of bats within 1 km of the site, for common pipistrelle, an unidentified species, and a long-eared species of bat; see Table 4-3 for details.

Table 4-3: Bat records within 1 km of the site

Species	Number of Records	Approximate Distance from Site	Details
Common pipistrelle	1	1.59 km (+/- 1 km)	Roost
Long-eared species	1	0.18 km (+/- 1 km)	Roost
Unidentified species	1	0.18 km (+/- 1 km)	Roost

4.3.3 The site forms part of a small (0.9 ha) woodland, which provided a small area of high-quality foraging and commuting habitat which is connected to further suitable habitat in the local and wider landscape. On-site trees could contain bat roosts.

Preliminary Bat Roost Assessment

4.3.4 Five storage containers/prefabricated structures were present on the site. The locations of these structures, which are referred to B1 – B5, are shown in Figure 2, Section 9. Photographs of the structures are provided in Figure 4-1.



Structure B1



Structure B2



Structure B3



Structure B3 interior



Structure B4



Structure B4 interior



Structure B5

Figure 4-1: Photographs of on-site structures

4.3.5 There were no potential roost features on the exterior of any of the structures, and no access was possible for bats into the interior of B1, B2 and B5.

4.3.6 Access by bats into the interior of B3 was possible via an open door, open window and gap in a vent on the western elevation. The interior was very light due to the presence of windows and a semi-transparent roof. No potential roost features were noted in the interior, and no evidence of bats was identified.

4.3.7 Access by bats into the interior of B4 was possible via an open doorway, open window, and partially collapsed roof, and the structure was relatively light within. There were small voids in the collapsed section of plywood ceiling where insulation was absent; however, these were inspected and no evidence of bats was found.

4.3.8 All structures are assessed to have **negligible** suitability for roosting bats.

Birds

4.3.9 WSBRC provided 50 records of 15 species within 1 km of the site. These species are either protected under Schedule 1 of the Wildlife and Countryside Act 1981 (as amended), listed as priority species under the NERC Act 2006, identified as Birds of Conservation Concern (BoCC) red or amber list species, or listed as Birds Directive Annex 1 species; see Table 4-4 for details.

4.3.10 None of these records originated from the site itself, with the records for kingfisher and grey wagtail originating from waterbodies more than 700 m from the site. The record for little egret and firecrest originated from Codford; little egrets are typically found in wetlands and along watercourses, while firecrest favours evergreen woodland and are mainly winter migrants in Wiltshire, although have been known to breed in the county. The record for red kite originated from Boyton, approximately 860 m to the south-west, and was not for a nest site. The grey partridge record originated from a location approximately 1.6 km to the north-east; this species typically favours arable habitat. The location of the barn owl record was withheld. The records for fieldfare, hobby, house sparrow, mistle thrush, redwing, song thrush, starling and yellowhammer were imprecisely recorded (+/- 1 km).

4.3.11 Birds could nest within the interiors of structures B3 and B4. Trees and shrubs within the on-site woodland provided good quality foraging and nesting habitat for a range of common woodland species, and the grassland, dense scrub, and tall ruderals also provided a small area of foraging habitat. The dense bramble provided a small area of suitable nesting habitat.

Table 4-4: Summary of relevant bird species records within 1 km

Species	WCA S1[1]	NERC[2]	BoCC[3]	BD1[4]
Barn Owl	*			
Fieldfare	*		R	
Firecrest	*			
Grey partridge		*	R	
Grey wagtail			R	
Hobby	*			
House sparrow		*	R	
Kingfisher	*		A	*
Little egret		*	R	*
Mistle thrush			R	
Red kite	*			*
Redwing	*		R	
Song thrush		*	R	
Starling		*	R	
Yellowhammer		*	R	

[1]WCA S1 = species listed on Schedule 1 of the Wildlife & Countryside Act 1981; [2]NERC = priority species under the NERC Act 2006; [3]BoCC = Birds of Conservation Concern 4 (R= red list species; A = amber list species); [4]BD1 = Birds Directive Annex 1 species.

Badger

4.3.12 WSBRC provided one record of badger within 1 km of the site, which was of a road casualty on the A36 approximately 350 m to the north-west of the site, dating from 2009.

4.3.13 On-site habitats provided a small area of suitable foraging and dispersal habitat. However, no signs of badger activity were noted (e.g. dung, hair, footprints etc.) and no setts were present on site or noted within at least 30 m of the site boundary.

Hazel Dormouse

4.3.14 WSBRC provided no records of hazel dormouse within 1 km of the site.

4.3.15 The site forms part of a small (0.9 ha) woodland which provided a small area of potentially suitable habitat. However, the woodland had an open canopy and lacked a diverse range of tree and shrub species which would provide an optimal food resource. Additionally, a woodland size of at least 20 ha is considered to be the minimum size to support viable dormouse populations, unless linked to other areas of suitable habitat. This woodland does not have good connectivity to other suitable habitat in the wider landscape which could be sufficiently large to support dormice populations, with the closest extensive woodland located approximately 1 km to the south-west. Due to the absence of records, the sub-optimal habitat on the site, and poor connectivity to suitable habitat in the wider landscape it is assessed that dormice are unlikely to occur on the site.

Otter

4.3.16 WSBRC provided one record of otter within 1 km of the site, which originated from a location approximately 960 m (+/- 100 m) to the south of the site, on the far side of the A36.

4.3.17 There was no suitable habitat for otters on or close to the site. The nearest waterbody, which was a drainage system linking to the River Wylye, was located approximately 245 m to the south-west of the site, and separated from the site by the A36. The Chitterne Brook, which also provides suitable habitat, is located approximately 800 m to the east of the site at its closest point.

Water vole

4.3.18 WSBRC provided 13 records of water vole within 1 km of the site, which originated from locations approximately 800 m (+/- 100m) and 960 m (+/- 10 m) to the east of the site.

4.3.19 There was no suitable habitat for water voles on or close to the site. The nearest watercourse, which was a drainage system linking to the River Wylye, was located approximately 245 m to the south-west of the site, and separated from the site by the A36. The Chitterne Brook, which also provides suitable habitat, is located approximately 800 m to the east of the site at its closest point.

Other Mammals

4.3.20 WSBRC provided 26 records of hedgehog within 1 km of the site, the closest of which originated from a location approximately 330 m (+/- 100 m) to the south-west, on the other side of the A36, and approximately 380 m to the east (+/- 100 m). WSBRC provided one record of polecat within 1 km of the site (location imprecise) dating from 2007. WSBRC provided no recent records of brown hare, and no records of harvest mouse.

4.3.21 The site provided a small area of suitable foraging, dispersal, and refuge habitat for hedgehogs. There were no areas of extensive long sward grassland on site which could provide habitat for brown hares and harvest mice. The woodland habitat has suitability for polecat, although it is considered unlikely that this species would be entirely reliant upon the habitats present as it is a generalist species with wide territory ranges.

Amphibians

4.3.22 WSBRC provided no recent records of amphibians within 1 km of the site.

4.3.23 No waterbodies were present on the site. One waterbody containing standing water is mapped within 500 m of the site, located approximately 245 m to the south-west and on the other side of the A36. See Figure 3, Section 9 for a map showing the location of this waterbody. The A36 is likely to pose a barrier to movement for any amphibians between this waterbody and the site.

4.3.24 The site provided a small area of suitable terrestrial habitat for foraging, and tree roots and piles of rubble (TN1), timber, refuse, and rubble (TN2), and logs (TN3) provided suitable habitat for refuge and hibernation (brumation).

Reptiles

4.3.25 WSBRC provided no recent records of reptiles within 1 km of the site.

4.3.26 The site provided small area of suitable habitat, particularly the semi-improved grassland and tall ruderal habitats which had a diverse vegetation structure, mosaic of habitats, edge habitat, and connectivity to further suitable habitat along the road embankment adjacent to the southern site boundary. Tree roots and piles of rubble (TN1), timber, refuse, and rubble (TN2), and logs (TN3) provided suitable habitat for refuge and hibernation (brumation).

Invertebrates

4.3.27 WSBRC provided 47 records of 28 invertebrate species within 1 km of the site, the majority of which originated from a location approximately 1.1 km to the south-west of the site.

4.3.28 The site provided suitable habitat for a range of invertebrate species, including brash (TN2) and log piles (TN3) and fallen dead wood (TN4) which provided potential for saproxylic species.

Plants

4.3.29 WSBRC provided eight records of seven species within 1 km of the site: summer snowflake, fat duckweed, meadow brome, rye brome, dwarf spurge, broad-leaved spurge, and large-leaved lime.

4.3.30 It is considered that the woodland is unlikely to support rare or notable plant species as it is a relatively new woodland (post-1945) with low botanical diversity. No rare or notable species were noted during the survey; but see Limitations (Section 3.4).

Non-native Invasive Species

4.3.31 WSBRC provided no records of invasive species and/or non-native species within 1 km of the site.

4.3.32 No invasive species were observed during the survey; but see Limitations (Section 3.4). Non-native species present included a low abundance of buddleia and Canadian goldenrod.

5 Ecological Constraints

5.1.1 It is proposed to construct a residential dwelling on the site; see Appendix 1 for the proposed site plan. The proposed development would require the removal, of less than 0.05 ha of semi-improved grassland, tall ruderals, and shrubs. It is understood that no trees would be felled to facilitate the proposed development.

5.2 Great Crested Newt Rapid Risk Assessment

5.2.1 No waterbodies were located on the site. One waterbody is located within 500 m of the site; see Figure 3, Section 9 for a map showing the location of this waterbody, which is approximately 245 m to the south-west of the site. The A36 is likely to pose a barrier to movement for any amphibians between this waterbody and the site.

5.2.2 Figure 5-1 presents a Natural England Rapid Risk Assessment (RRA), which is an assessment of the likelihood of the proposed development resulting in an offence with respect to great crested newts. This assessment is based on the assumptions that a breeding population is present in the waterbody located within 500 m and that Reasonable Avoidance Measures (RAMs) would be implemented during works which would minimise any potential impacts on great crested newts (see Appendix 3). The RRA indicates that it is **highly unlikely** that the proposed development would result in an offence being committed with respect to great crested newts.

Figure 5-1: Rapid Risk Assessment

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)	0.01 - 0.1 ha lost or damaged	0.01
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:	0.01
Rapid Risk Assessment result:	**GREEN: OFFENCE HIGHLY UNLIKELY**	

5.3 Evaluation of Potential Impacts

5.3.1 Statutory and non-statutory designated sites, protected and ecologically valuable habitats, and protected and notable species may pose a constraint if there is potential for them to be impacted by a proposed development. Invasive non-native species may also pose a constraint to development, and provide opportunities to enhance the biodiversity value of a site by their removal or control.

5.3.2 Table 5-1 provides a summary of the known or estimated valuation of features on and close to the site which could be impacted by the proposed works, justification for the valuation, and details of potential impacts upon these features in the absence of mitigation.

5.3.3 Only species which were assessed to have the potential to be present on or close to the site are included in the valuation. Features highlighted in blue have the potential to pose a constraint to the development of the site and would require further surveys and/or mitigation (see Section 6).

Table 5-1: Valuation and potential impacts on ecological features

Ecological Feature	Value	Justification for Value	Potential Impacts Without Mitigation
Statutory designated sites (River Avon SAC and River Avon System SSSI)	International/ National	Site of international and national importance for biodiversity.	Although the site is located within the River Avon SAC catchment area, the site is relatively distant from the SAC/SSSI and there are no direct linkages (e.g. watercourses/tributaries) linking the site to the SAC and SSSI, with the A36 separating the site from the nearest connecting watercourse, and the site is not located in Flood Zone 3. No significant effects from the development are considered likely, although cumulative impacts of development within the SAC catchment area on phosphate load are likely.
Non-statutory designated sites	County	Sites of county importance for biodiversity.	No impacts are anticipated due to the distance between the proposed development site and non-statutory designated sites.
Mapped priority habitats (off-site)	County	Habitats of value for wildlife and with intrinsic value which contribute to the biodiversity resource of the county.	No impacts are anticipated due to the distance between the proposed development site and off-site priority habitats.
Ancient woodlands	County	Irreplaceable habitat with value for a range of wildlife species	No ancient woodlands are located in the vicinity of the site (closest more than 1 km from the site) and therefore no potential impacts are anticipated.
Broadleaved semi-natural woodland	County	Priority habitat which contributes to the county's biodiversity resource.	Degradation of the woodland would negatively impact the county's biodiversity resource.
Neutral semi-improved grassland	Site	Small area of widespread and common habitat.	Loss would have no significant biodiversity impact (but see potential impacts on species below).
Tall ruderal	Site	Small area of widespread and common habitat.	Loss would have no significant biodiversity impact (but see potential impacts on species below).
Structures	Negligible	Negligible ecological value.	Removal would have no significant biodiversity impact but could impact nesting birds (see below).
Bats (roosting)	Unknown	On-site trees could potentially provide roosting habitat.	Damage to trees which could contain roosts during works. Artificial light spill onto trees could disturb roosting bats (if present) and result in roost abandonment.

Ecological Feature	Value	Justification for Value	Potential Impacts Without Mitigation
Bats (foraging & commuting)	Local	Site provides a small area of suitable foraging and commuting habitat. Further and more extensive similar habitats are present in the local landscape.	Loss of small area of suitable habitat. Artificial light spill could disturb foraging and commuting bats.
Birds	Site	Small area of suitable foraging and nesting habitat. Further and more extensive similar habitats are present in the local landscape. Structures B3 and B4 have the potential to be used for nesting.	Damage/destruction of active nests (if present) if shrubs and structures B3 and B4 are removed during the nesting season (which is generally March to August inclusive).
Badger	Site	Site provides suitable foraging and dispersal habitat. Further and more extensive similar habitats are present in the local landscape.	Injury/death if badgers are trapped in any open excavations or pipework during works.
Other mammals	Site	Site provides suitable habitat for hedgehog and polecat. Further and more extensive similar habitats are present in the local landscape.	Injury/death if animals are harmed during vegetation clearance or are trapped in open excavations or pipework during works.
Amphibians	Unknown	Site provides a small area of suitable foraging, dispersal and refuge habitat. Further and more extensive similar habitats are present in the local landscape.	Injury/death during site clearance and if amphibians become trapped in any open excavations or pipework during construction.
Reptiles	Unknown	Site provides a small area of suitable foraging, dispersal and refuge habitat. Further and more extensive similar habitats are present in the local landscape.	Injury/death during site clearance and if reptiles become trapped in any open excavations or pipework during construction.
Invertebrates	Site	Site provides suitable habitat for invertebrate species.	Loss of small area of suitable habitat, including log and brash piles.

6 Surveys, Mitigation and Enhancements

6.1 Surveys

6.1.1 No further survey work is considered necessary provided that mitigation for foraging and commuting bats is implemented (see Section 6.2).

6.1.2 If mitigation to avoid significant artificial light impacts on bats cannot be avoided then it is recommended that seasonal static detector and transect surveys are carried out to characterise bat foraging and commuting activity on the site and permit an impact assessment to be made These surveys would comprise one survey visit per season (spring: April/May; summer: June/July/August; autumn: September/October).

6.2 Mitigation

River Avon SAC/River Avon System SSSI

6.2.1 Although no significant effects from phosphate discharge from the proposed development on the SAC/SSSI are considered likely in isolation, cumulative impacts of phosphate loading from development within the SAC catchment are likely.

6.2.2 The local planning authority must carry out a Habitats Regulations Assessment (HRA) for the proposed development, which would include an Appropriate Assessment to assess whether significant effects due to phosphate loading to the SAC are likely.

6.2.3 It is recommended that water efficiency measures are built into the design of the proposed new dwelling to reduce total foul flow to sewage treatment works, to reduce phosphate loads to the SAC/SSSI. Offsetting measures which would lead to no net increase in the total phosphorus load discharged to SAC/SSSI are also likely to be required.

Broadleaved Semi-Natural Woodland

6.2.4 It will be necessary to ensure that the biodiversity value of the woodland is not negatively impacted by the proposed development. Therefore, it is recommended that a planting scheme and management plan is prepared to ensure that the necessary removal of shrubs and ground flora required for the proposed development is compensated for by planting native shrub and tree species, and that management of the woodland is carried out to enhance the value of the habitat for wildlife (including foraging/commuting bats, birds, hedgehog, polecat, amphibians, reptiles, and invertebrates). It is recommended that a planting scheme and management plan is secured by planning condition.

6.2.5 Retained trees located close to construction works must be protected by erecting temporary fencing or barrier tape around the root protection area or using suitable ground protection in accordance with BS5387 - trees in relation to design, demolition and construction (BSI, 2012). The root protection area should be calculated as 12 times the tree stem diameter, unless otherwise advised by an arboricultural specialist. This should be installed prior to works commencing and retained throughout the construction period.

Bats

6.2.6 To avoid impacts on foraging and commuting bats it is recommended that external artificial lights are not installed on the exterior of the proposed building, or anywhere else on the site. If the use of external artificial lighting cannot be completely avoided then this should be kept to a minimum and warm-white (long wavelength, not UV) LED lights used, and motion sensors on short-duration timers and high motion threshold fitted (e.g. so that moths do not set them off).

6.2.7 Compensate for the removal of any shrubs by planting native trees and shrubs on the site where practicable.

Birds

6.2.8 It is recommended that any necessary removal of shrubs, and removal/demolition of structure B3 and B4 takes place outside of the nesting season (which is generally March to August inclusive). If this is not possible then these must be checked by an ecologist for the presence of active nests no more than 48 hours before removal/demolition. If active nests were then found these would have to be left undisturbed until the young had fledged.

Badger

6.2.9 During works it is recommended that any excavations are covered overnight to prevent badgers falling in and becoming trapped. If excavations cannot be covered then a ramp at least 40 cm wide must be installed, with an angle no steeper than 40 degrees, to enable animals to escape. Excavations must be checked every morning to ensure that there are no trapped animals, and any animals present left to escape by their own volition. Any open pipework larger than 100 mm outside diameter must be capped overnight to prevent badgers (and hedgehogs) becoming trapped.

Other Mammals

6.2.10 Reasonable Avoidance Measures (RAMs) must be implemented during the clearance of vegetation to avoid causing harm to mammals, particularly hedgehogs. See Appendix 3 for details of appropriate RAMs.

Amphibians and Reptiles

6.2.11 Implement RAMs during site clearance and construction to minimise the risk of injuring or killing amphibians and reptiles. See Appendix 3 for details of appropriate RAMs.

Invertebrates

6.2.12 Retain or relocate log and brash piles.

6.3 Enhancements

6.3.1 Paragraph 170 of the NPPF states that planning decisions should contribute to net biodiversity gains, and Core Policy 50 of the Wiltshire Council Core Strategy states that developments should seek opportunities to enhance biodiversity. Therefore, the following measures are recommended to permit an enhancement of the biodiversity value of the site; see Table 6-1. It is recommended that full details for ecological enhancements of the site are provided within a Landscape and Ecological Management Plan (LEMP), secured by a planning condition.

Table 6-1: Opportunities for biodiversity enhancements

Opportunity	Details
Woodland enhancement	Prepare and implement a planting scheme and management plan to enhance botanical diversity and structure, benefiting a range of wildlife species and providing a net biodiversity gain.
Provision of bat tubes/ shelters/boxes	It is recommended that at least two bat tubes are provided on the new dwelling (e.g. Schwegler 1FR). Bat tubes provide permanent roosts for bats, requiring little or no maintenance. Schwegler 1FR bat tubes can either be installed on external walls or incorporated into walls beneath a rendered surface. Bat tubes should be installed on or in south/south-westerly facing elevations close to the eaves, at least 4 m from ground level, away from windows and other artificial light sources, close to hedgerows and tree lines and with a clear flight path to and from the entrance. Alternatively, at least two wall mounted bat shelters could be provided on the new dwelling (e.g. Schwegler 2FE), and/or bat boxes could be installed on trees (e.g. 2F Schwegler bat boxes, 1FF Schwegler bat boxes, 2FN Schwegler bat boxes and Beaumaris Woodstone bat boxes). These shelters/boxes should be installed at least 4 m above ground level and orientated to face to the south/south-west.
Provision of bird nest boxes	It is recommended that at least two bird boxes are installed on the exterior of the new building or on trees (e.g. Schwegler 1B nest box, Schwegler 1SP sparrow terrace, 3S Schwegler starling nest box, and/or 2GR Schwegler nest box). Nest boxes should be installed 3 – 4 m from ground level, facing between the north and east. Birds must have a clear flight path to and from the nest boxes.

7 Conclusions

7.1.1 It is proposed to construct a residential dwelling on the site; see Appendix 1 for the proposed site plan. The proposed development would require the removal, of less than 0.05 ha of semi-improved grassland, tall ruderals, and shrubs. It is understood that no trees would be felled to facilitate the proposed development.

7.1.2 No significant impacts on protected or notable species are considered likely if the mitigation measures provided in this report are implemented. However, if artificial light impacts cannot be voided then it is recommended that bat activity surveys are undertaken to permit an impact assessment for foraging and commuting bats to be made.

7.1.3 A summary of the proposed developments impacts, necessary mitigation, and potentially required surveys is provided in Table 7-1.

Table 7-1: Summary of potential impacts, surveys and mitigation

Ecological Feature	**Potential Impacts without Mitigation** (refer to Section 5)	**Potentially Required Surveys & Necessary Mitigation** (refer to Sections 6.1 and 6.2)
Statutory designated sites (River Avon SAC and River Avon System SSSI)	No significant effects from the development are considered likely in isolation, but cumulative impacts of development within the SAC catchment area on phosphate load are likely.	Implement water efficiency measures.
Broadleaved semi-natural woodland	Degradation of the woodland would negatively impact the county's biodiversity resource.	Protect trees during works. Prepare a planting scheme and management plan to ensure no net loss of biodiversity.
Bats (roosting)	Damage to trees which could contain roosts during works. Artificial light spill onto trees could disturb roosting bats (if present) and result in roost abandonment.	Protect trees during works. Avoid installing external lighting, or if lighting is essential then minimise the impacts of artificial lighting.
Bats (foraging & commuting)	Loss of small area of suitable habitat. Artificial light spill could disturb foraging and commuting bats.	Where practicable, compensate for loss of shrubs and ground flora by planting native trees and shrubs on the site. Avoid installing external lighting, or if lighting is essential then minimise the impacts of artificial lighting. **If artificial lighting impacts cannot be avoided then undertake seasonal bat activity surveys (April – October).**
Birds	Damage/destruction of active nests (if present) if shrubs and structures B3 and B4 are removed during the nesting season (which is generally March to August inclusive).	Remove shrubs and structures 3 and 4 outside of the nesting season. If this is not possible then these must be checked for the presence of active nests by an ecologist no more than 48 hours before removal/demolition.
Badger & other mammals	Injury/death if badgers are trapped in any open excavations or pipework during works.	Implement Reasonable Avoidance Measures.

Ecological Feature	Potential Impacts without Mitigation (refer to Section 5)	Potentially Required Surveys & Necessary Mitigation (refer to Sections 6.1 and 6.2)
Amphibians & reptiles	Injury/death during site clearance and if amphibians or reptiles become trapped in any open excavations or pipework during construction.	Implement Reasonable Avoidance Measures.
Invertebrates	Loss of small area of suitable habitat, including log and brash piles.	Retain or relocate brash and log piles.

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9 Figures

Figure 1 - Site Location Map

Figure 2 - Phase 1 Habitat Map

Figure 3 - Waterbodies Location Map



Figure 1 - Location Map

Land South West of
Ashdown Farm
New Road
Codford
Wiltshire
BA12 0NS

Site Boundary

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Date:	16/11/2020
Drawn by:	Robert Dunn
Checked by:	Rachel Barber

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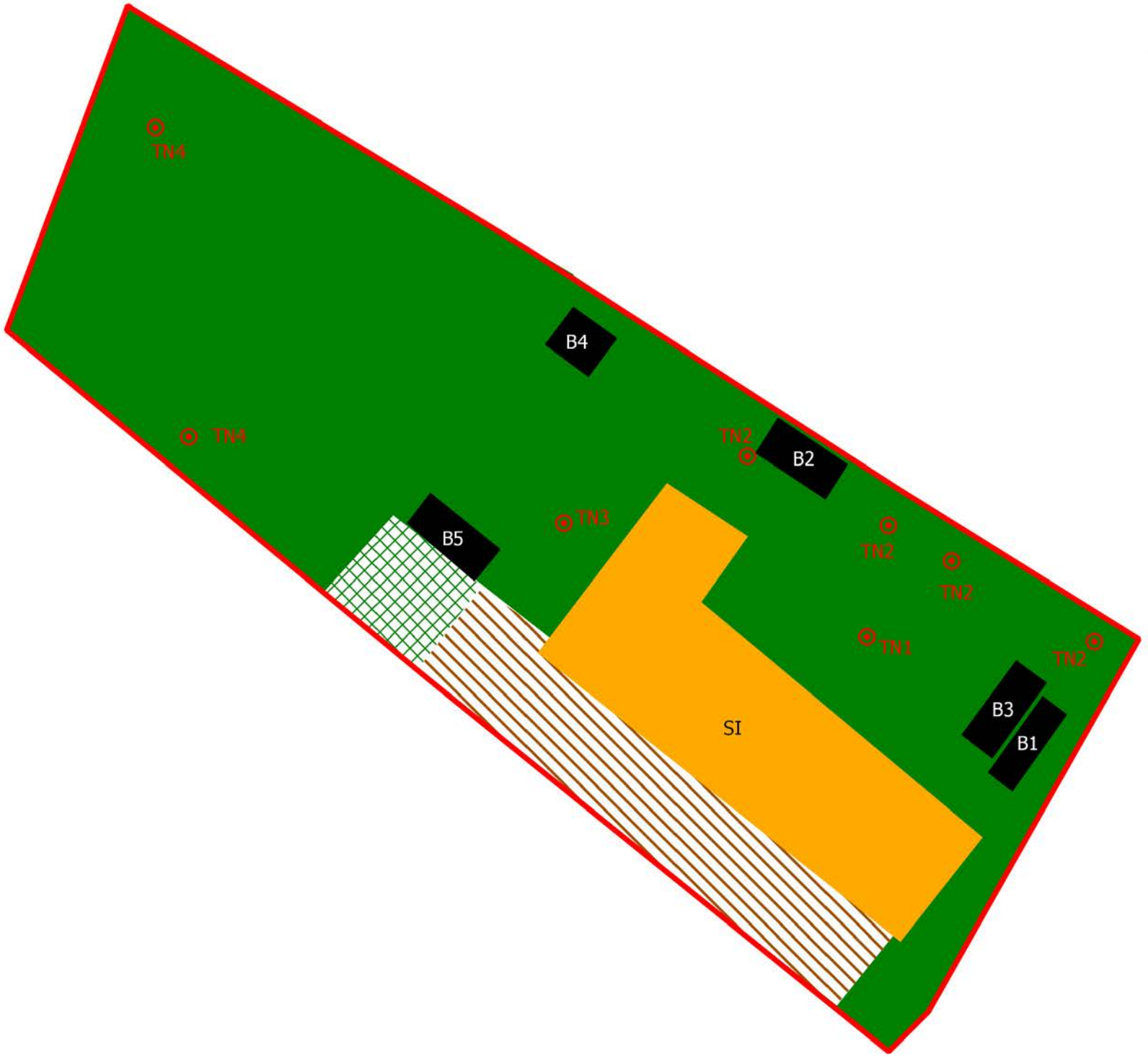


Figure 2 -
Phase 1 Habitat Map

Land South West of
Ashdown Farm
New Road
Codford
Wiltshire
BA12 0NS

- Broadleaved Semi-Natural Woodland
- Dense Scrub
- SI Neutral Semi-Improved Grassland
- Structures
- Tall Ruderals
- Target Note (TN)
- Site Boundary

Indicative positions shown. Not to scale.

Date:	16/11/2020
Drawn by:	Robert Dunn
Checked by:	Rachel Barber

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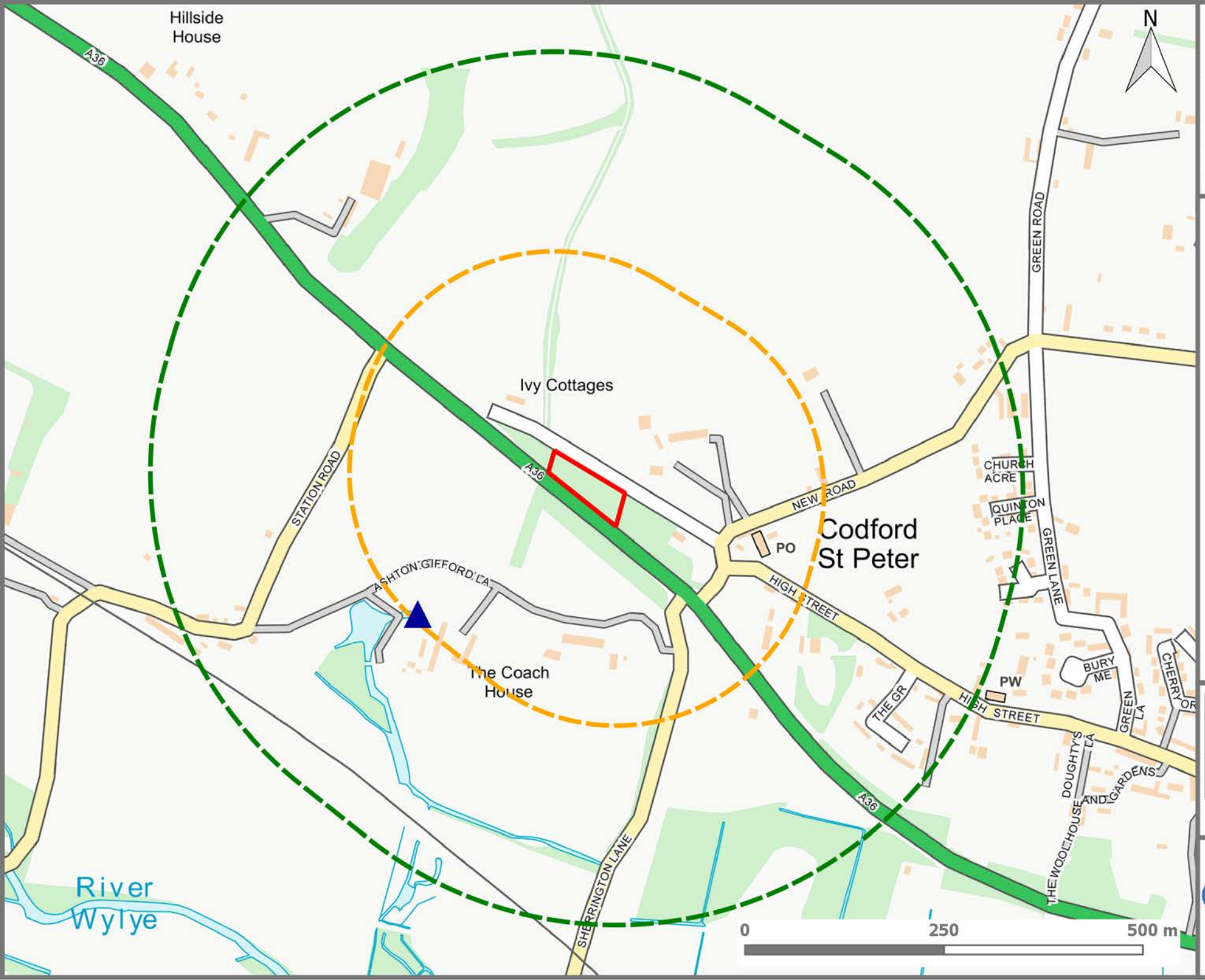


Figure 3 - Waterbodies Map

Land South West of
Ashdown Farm
New Road
Codford
Wiltshire
BA12 0NS

250 m Buffer

500 m Buffer

Waterbody

Site Boundary

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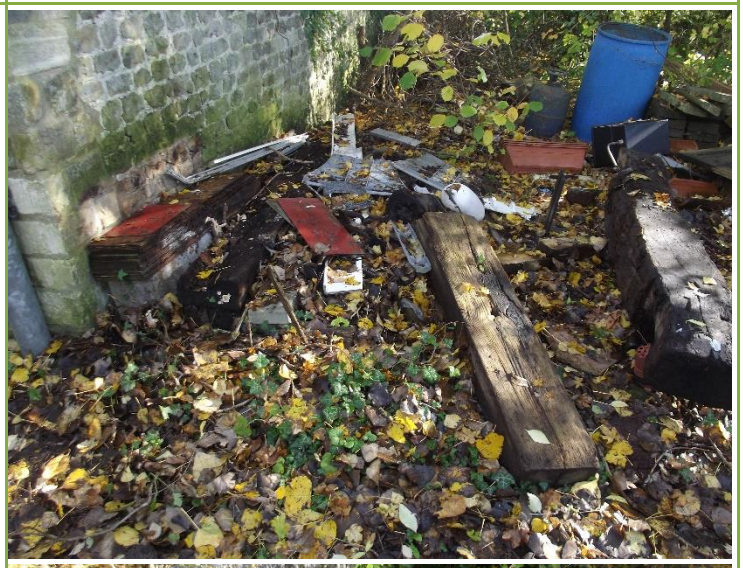
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Appendix 1 – Proposed Site Plan



Appendix 2 – Target Notes (TN)

Number	Description	Photographs
TN1	Rubble pile.	
TN2	Timber, refuse, and rubble piles.	 

Number	Description	Photographs
TN3	Log pile.	
TN4	Fallen dead wood.	

Appendix 3 – Reasonable Avoidance Measures (RAMs)

To minimise the risk of injury or death to amphibians, reptiles and small mammals (including hedgehog and polecat) during site preparation and construction the following Reasonable Avoidance Measures (RAMs) will be followed. All contractors on site will be made aware of these measures by a site induction provided by an ecologist prior to work commencing.

Site Induction

Before any clearance works begin on the site, an ecologist will meet contractors and provide a site induction. This talk will provide information on legal protection, where amphibians, reptiles and small mammals are likely to be found on the site, an explanation of the RAMs and the importance of adhering to the RAMs.

Site Clearance

A suitably qualified ecologist will be present to supervise clearance of all features/habitat with suitability for amphibians, reptiles and small mammals.

If amphibians, reptiles or hedgehogs are found during site clearance they will be carefully moved outside of the clearance area by the supervising ecologist.

If a great crested newt is found at any time, then work will stop immediately, and the supervising ecologist will provide advice.

If a great crested newt is found when the supervising ecologist is not present, work will stop immediately and the ecologist contacted. A guide to amphibian identification is provided at the end of these RAMs.

Timing

All site clearance will be undertaken during the amphibian and reptile active season (April to September) and in suitable weather (i.e. temperature between 9°C and 18°C, calm and no precipitation) to ensure that animals are active and can readily move from work areas. Any shrubs that require removal will be felled to stumps outside of the bird nesting season (March to August inclusive), and root removal will then take place between April to September.

Hand Clearance

Any potential refugia (i.e. log, refuse and brash piles) will be carefully removed by hand.

Vegetation Cut

Clearance of vegetation will begin once potential refugia have been removed. Clearance of grass and tall ruderals will be undertaken using the following phased approach. Vegetation will be strimmed or brush cut and all cuttings raked and removed from the clearance area on the same day.

- Day 1 – cut vegetation to a height of 150 mm
- Day 2 – cut vegetation to a height of 75 mm
- Day 3 – cut vegetation to a height of 30 mm

Cutting will start from the south and work towards the northern boundary to encourage any animals present to move out of the development area into the adjacent woodland. After the vegetation has been cut it will be kept short to deter animals from re-entering the area.

Turf and Soil Strip

Once the vegetation has been cut it will be left at least 24 hours before vegetation roots and topsoil are stripped.

Turf and topsoil will be carefully stripped, to a depth of approximately 15 cm, using an excavator with a toothed bucket. Use of a larger bucket is optimal as this will require less scrapes and therefore reduces the risk of injury to amphibians and reptiles if present.

Construction

During construction, any building material will be stored on pallets or hardstanding to deter reptiles, amphibians and small mammals from sheltering underneath. All waste will be stored in skips or containers and not in piles on the ground.

All excavations will be covered overnight, or a ramp installed with an angle no steeper than 40 degrees, to enable reptiles to escape. Excavations will be checked every morning to ensure there are no trapped animals; any animals found will be carefully moved outside of the works area. However, if a great crested newt is found then work will stop immediately, and an ecologist contacted. All open pipework will be capped overnight to ensure that animals do not enter and become trapped.

Newt Identification Guide

(source: Amphibian and Reptile Conservation Trust)

Smooth newt

Grows to about 10 cm. Both sexes have orange or yellow belly stripe, with rounded black spots. Male has undulating crest running from head to tail tip.







A widespread species which breeds in a variety of water bodies. Often found in garden ponds.

After the 'tadpole' stage, young newts live on land. Most likely to be found from late summer to autumn as they disperse from ponds.

Palmate newt

Grows to 9 cm. Breeding male has ridge running along back, rather than a crest. Dark, webbed hind feet, and tail ends in filament.







There are two pale coloured nodules on the underside of the hind feet of female palmate newts.



Female looks similar to smooth newt.





Throat of palmate newt has no pigment (looks pink). Throat of smooth newt is off-white and usually spotted.

Great crested newt

Grows to 16 cm, but usually smaller. Crest in male has break at base of tail. Silvery-white stripe towards rear of tail conspicuous.

Both sexes have rough, granular skins and yellow/ orange bellies with irregular black spots.





Juveniles look like smaller versions of the female and may live on land or in the water.

Strictly protected species, requiring a licence to handle or disturb.