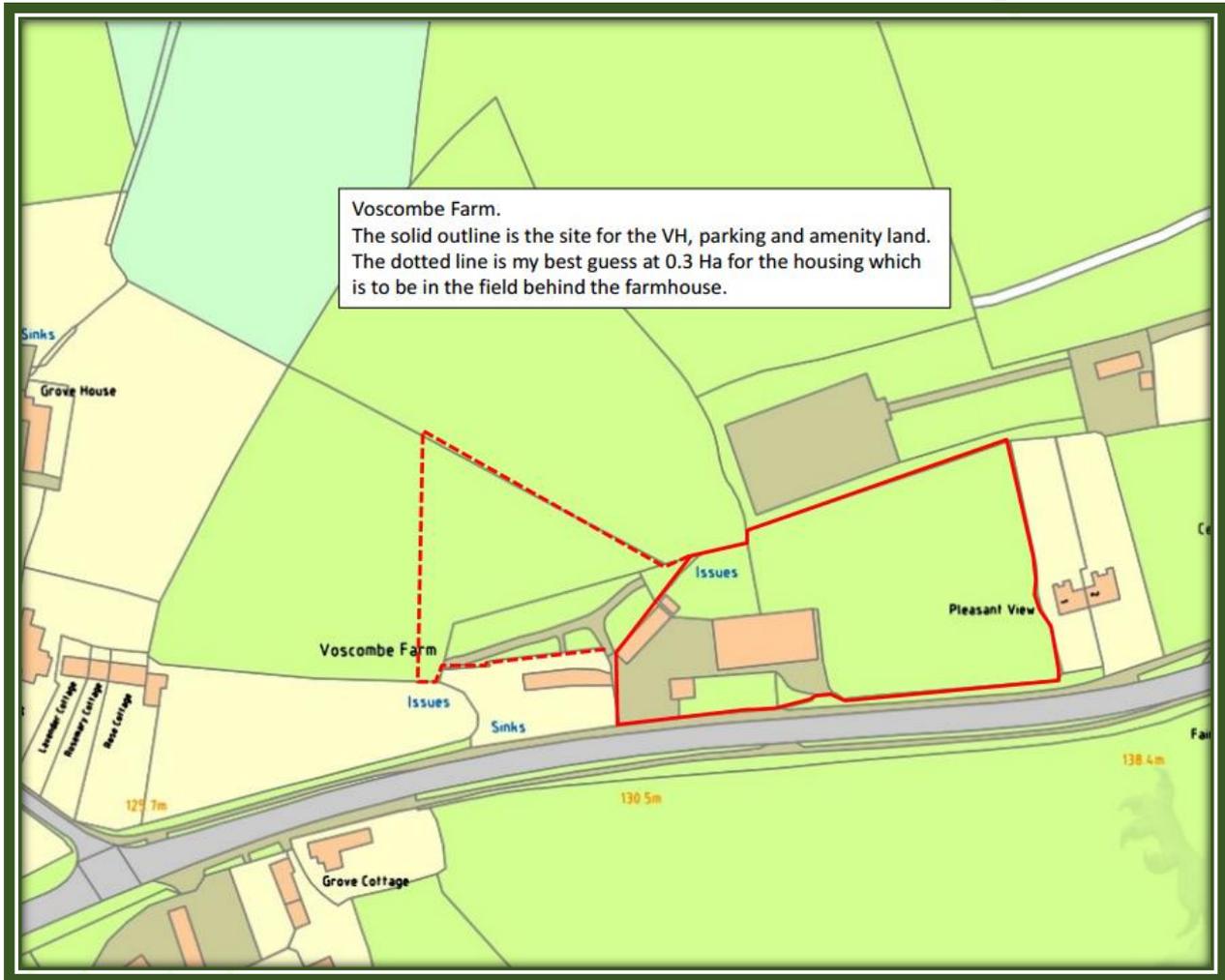
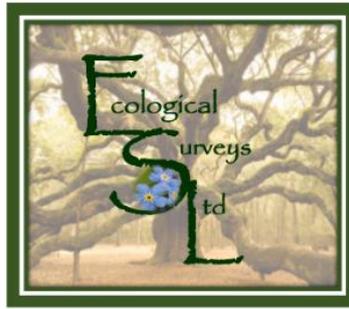


Ecolological
Surveys
Ltd

Land at Voscombe Farm,
Pleasant View,
Bourton, Gillingham, Dorset
SP8 5BU.



ECOLOGICAL IMPACT ASSESSMENT

EcIA

October 2015

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1. Survey Details.

It is the responsibility of the client/developer to ensure they familiarise themselves with and comply with any law and legislation relating to this survey's findings and recommendations. An overview of specific governance relating to this survey may be found within section 22 of this report but is by no means comprehensive.

It should be noted that this Ecological Impact Assessment report relates specifically to the specified brief and proposal description. If any changes to the brief or the proposal are made, then Ecological Surveys Ltd should be consulted. A re-appraisal or appraisal amendment may be required.

Biodiversity is dynamic. Therefore, the information contained within this report should only be relied upon for a maximum of twelve months from the date of issue. An updated report will be required after this time.

This report presents the results of an Ecological Impact Assessment (EcIA) of land at Voscombe Farm, Pleasant View, Bourton, Gillingham, Dorset SP8 5BU.

The site survey followed the Phase 1 Habitat Survey methodology (JNCC 2010) and was completed on the 06/10/2015 by Ecological Surveys Ltd

Grid reference	ST 76473 30324
Date of Report	19/10/2015
Client	Chairman Neighbourhood Planning Group: Mike Withers
Architect/Planning Consultant:-	
Report Reference: -	15/10/019/AC/JF/PD/EcIA
Author: -	J.Y Frewin BACA (Hons)
Verified by: -	Paul Diamond. Cert (Hort), BSc (Hons), MSc, Grad CIEEM TechArborA
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Ecological Surveys Ltd	Registered Address:
admin@ecological-surveys-ltd.co.uk	14, Lower Clicker Road, Menheniot, Liskeard. Cornwall. PL14 3PJ
www.ecological-surveys-ltd.co.uk	Tel: (01503) 240769 / 07736 458609

Local Planning Authority Ecological Check List

Species potentially impacted by the development are indicated below.

Species	Yes	No	Protected Species Surveys Completed		
			Yes	No	Underway
Bats (roost)	X				
Bats (flight line / foraging habitat)	X				
SAC Greater Horseshoe Roosts within 10km		No roost listed on DERC / MAGIC search			
Dormice	X				
Otters		X			
Red listed Birds		X			
Barn owls		X			
Other Schedule 1 birds	X		Lapwing. Hedge Sparrow		
Breeding birds	X				
Reptiles		X			
Water voles		X			
Badgers		X			
Other protected species		X			
Species of Principal Importance	X		Potential amphibian sp.		
Conservation Priority Habitat	X		Hedgerow		
Significant Natural Area		X			
Invasive weed species on site	x				

Avoidance, Mitigation, Compensation and Enhancement recommendations within the report	
Avoidance	<ul style="list-style-type: none"> ✓ Protect and preserve the hedgerows on each border, protect and preserve the trees. ✓ Removal of hedgerow and building 3 with nest should be outside nesting season and overseen by a suitably qualified ecologist. ✓ Protect the area nearest the stream
Mitigation	<ul style="list-style-type: none"> ✓ Plant Native plants of biodiversity value ✓ Where hedgerows removed: replant/create equivalent hedgerow ✓ Low lighting (0.5 lux) or none on hedgerows ✓ Where buildings demolished replace lost nests with equivalent nest boxes ✓ Dependent on requirement for further surveys.
Compensation	See Section 18
Enhancement	<ul style="list-style-type: none"> ✓ Include native species and some ornamentals with wildlife value into the planting plan (Ecological Surveys Ltd, Landscaping, can provide this.) ✓ 1 in 3 Properties - Sparrow Terrace ✓ 1 in 3 Properties - Bird nest boxes ✓ 1 in 3 Properties - Built in bat boxes ✓ 2 Hedgehog houses ✓ Planting a grass mix other than low amenity lawn grass ✓ Planting of nectar rich plants/shrubs which yield fruits /nuts.

2. Summary

- There ARE conservation priority habitats present: hedgerows.
- There are NO Key Habitat features present.
- NO rare/protected plants were observed during the survey.
- No evidence of badgers utilising the site was observed.
- NO evidence of dormice occupying the site was observed during the survey although the site is suited to habitation.
- There WERE features on the site that might offer roosting opportunities for bats.
- NO bird nests were observed during the survey, although nesting and roosting potential exists within the surrounding hedges.
- This site has NO standing water and is therefore not suitable for the full life cycle of Amphibians.
- The site grounds do provide a suitable habitat for reptiles.
- Further ecological surveys: Bat Activity Survey and a Reptile Survey are recommended
- Bat Emergence Surveys and Dormouse Surveys are recommended should trees or hedgerows need to be impacted (crowned/cut back) or removed for the development of the site.
- A Habitats Regulation Assessment (HRA) is unlikely to be required.
- Mitigation requirements are discussed within Section 17.
- Recommendations have been made to retain features of value and enhance the site post – construction.

3. Conclusions

The following conclusions contained within the body of this report relate specifically to the brief and development proposal descriptions supplied at the time of writing. If the proposals should change, a re-appraisal or appraisal amendment may be required.

Providing the recommendations within this report are adhered to, surveys completed and mitigation and enhancements agreed, there would appear to be no ecological constraints to prevent this development.

4. Introduction

To the best of my knowledge there have been no previous ecological surveys of this site.

The purpose of this report is:

- To identify and describe all potentially significant ecological effects associated with the proposed development
- To set out the mitigation measures required to ensure compliance with nature conservation legislation and to address any potentially significant ecological effects
- To identify how mitigation measures will/could be secured
- To provide an assessment of the significance of any residual effects
- To identify appropriate enhancement measures
- To set out the requirements for post-construction monitoring

The aim of the survey is to:

- Assess the ecological value of the site by identifying any habitats, features or species of conservation importance that would constitute a potential constraint to the proposed development.
- Provide advice and recommendations where possible to avoid or mitigate any adverse impacts, consider compensation measures if required, and enhance the site post-development.
- If further surveys / reports have been recommended within this report and developers have been keen to submit planning applications, it is unlikely that the results of any further surveys will have been available at the time this EcIA has been submitted.
- The LPA should ensure that any avoidance, mitigation and compensation measures, together with enhancement recommendations are either 'conditioned' where appropriate, or that full permission is withheld pending the agreement of

mitigation, compensation (where necessary) and enhancement measures, and the results of protected species surveys are known and reports presented to the LPA.

5. Description of the Site and Proposed Development.

The site proposed for development is situated near to the village of Bourton. It is a compound with three buildings and east and west fields. It borders the B3081 on its Southern boundary. Bourton community website describe Bourton as a vibrant village adjoining an Area of Outstanding Natural Beauty on the borders of Wiltshire and Somerset. There is a village store including a Post Office, a petrol station and a pub. The White Lion pub stands on High St, which was once the main London to Exeter road. The village was bypassed to the south in 1992. The village lies on the River Stour which passes through the historic Bourton Mill, once the home of one of the largest water wheels in Britain, standing at 18.2 metres it may well have been the biggest in England at the time it was built (1837).

The proposal is to develop this site of approximately 1.3 hectares and a perimeter of 645 metres approximately, with the construction of a village hall and residential units. It is not known at the time of producing this report how the construction will proceed, its phases or when the development will be completed by.

To minimise ecological effects, any proposed scheme should retain all boundary hedgerows and ensure all recommended ecological surveys are completed and mitigation plans adhered to. The landscape architect should include some native species and some ornamentals with wildlife value into the planting plan. The need for enhancements to improve the biodiversity of this site will need to be acknowledged and agreed.

6. Site Evaluation

There are potentially natural habitats to be lost to the development of the site in the form of hedgerows, potential dormouse habitat, an oak tree which is suited to bat habitation and an area suited to reptiles. However, it is not known at this point if

these habitats are to be fully retained, partially removed, or removed. If not fully retained, mitigation/compensation will be required.

It is important that further presence/absence surveys and /or appropriate mitigation strategies are put in place for the protection of these species as below. Please refer to the Mitigation (17), Compensation (18) and Enhancement (19) sections for more details.

Bat Activity Survey: To determine which species are present and exactly how they are utilising this site.

Reptile Survey: in respect of the area of rough grassland to the south and east of building 1 as indicated on the Site Map.

Bat Emergence Survey: in respect of impacting or removing the oak tree on site.

Dormouse Survey: in respect of hedgerow/scrub impact/removal although this may also be mitigated for with approval of Dorset N.E.T.



-  Oak tree with Bat Potential
-  Fence
-  Hedgerow
-  Buildings

7a. *Site Plan.*

Not available at issue of this report.

8. Desk Study

Methodology

The data search focused on websites holding designated sites and habitats, rather than simply species data. DERC biological data records were used to provide detailed local information. The search radius is set at 2km. DERC data information date has informed this report.

Desk Study Results

Significant species	Lapwing: within site Tree Sparrow Approx 1,638m distant
----------------------------	--

Significant Natural Area (all distances measured approx')	
Special Areas of Conservation (SAC)	None
Special Protection Area (SPA)	None
RAMSAR: None within 2km	None
Site of Special Scientific Interest (SSSI)	None
National Nature Reserve (NNR)	None
Local Nature Reserve (LNR):	MOLDRAMS GROUND
Areas of Outstanding Natural Beauty	Dorset Area of Outstanding Natural Beauty Cranborne Chase & West Wiltshire Downs AONB
World Heritage Site	Dorset and East Devon World Heritage Site
BAP Priority Habitat (distance measured from site approximate) within 2km	
<ul style="list-style-type: none"> • Ancient Woodland Pen Pits Wood • Moldrams Ground 620m • Lowland Meadow 833m • Deciduous Woodland (Broadleaved) • Purple Moorgrass & Rush Pasture 	
A ' Habitats Regulation Assessment', HRA is unlikely to be required on this site. Refer to section 23 for details.	

9. Field Study

Methodology

The Extended Phase 1 Habitat Survey consisted of a walkover assessment of the site using Phase 1 Habitat Survey methodology (JNCC, 2010). This is a standard technique for classifying and mapping British habitats. All areas within the site were surveyed and assessed for indicators of ecological value, including the presence or signs of any protected or rare.

The survey was completed on the 06/10/2015 by Ecological Surveys Ltd.

The weather conditions on the day were dry and clear.

The survey study area is shown on the site map. (Section 7) Areas outside of this area were assessed where possible, if evidence from the site indicated that protected species may be present in close proximity. Examples include: badger trails, potential nesting or roosting habitat adjoining the site.

All habitats on site were identified and where required, are recorded within the Report. A plant species list was also compiled (Section 24, Table 2).

A search was made to identify the presence or potential presence of notable and protected species such as dormice, badgers, bats and reptiles following the applicable guidelines from Natural England and relevant conservation organisations.

Any hedges present would have been assessed for their 'importance' under the 1997 Hedgerows Regulations. As all native hedgerows over 20m in length are now classified as a priority habitat feature, these too would be recorded.

10. Survey Limitations

Data held by county record centres is reliant on the information input into the system. The absence of a record of a species in a particular area is not evidence that the particular species does not exist, but may simply be due to a lack of survey effort, or

a failure to record its presence. Therefore, an absence of evidence (records) should not be interpreted as evidence of absence.

Consequently, protected species surveys are recommended based on the suitability of habitat and potential presence of such species, rather than simple reliance on the previously recorded or otherwise presence of such species, within the vicinity.

11. Assessment

Methodology

A site visit was undertaken to physically survey the site. Site visits permit a far more accurate assessment of a site, its receptors, habitats and potential species than is ever possible using a desk based assessment alone.

Each habitat type on site is described below and each species recorded or potentially present is also described below.

Whilst the initial survey is not intended to prove conclusively, or otherwise the presence of notable and / or protected species, it does highlight the potential presence of any such species and makes recommendations as to any additional surveys that might be required to ensure the LPA fulfils its responsibilities under the various regulations and legislation intended to protect specified habitats and species.

12. Baseline Ecological Conditions (Habitats)

Grassland (Pasture)

Semi-improved grass field, potentially for hay or silage. It is dominated with perennial rye-grass, common bent, Yorkshire fog and creeping buttercup. The ecological value of this area is low.

Grassland (Amenity and Rough Grassland)

Area 5 on the Site Map indicates a garden with a gravel pathway surrounded by an amenity grass lawn and introduced shrubs: New Zealand Flax by the house. This area is of low ecological value.

South of building 1 and indicated as area 1 is a combination of rough grassland, tall ruderals and bare ground with piles of rubble. False oat-grass, nettles, valerian, foxes and cubs and red fescue dominate this area. Mosses and Cladonia lichens also grow here. This rough grassland and Area 2 of rough-grass of cocksfoot, nettles and false oat grass is of ecological value to reptiles.

Hedges and Trees

Four 'hedgerows' as defined under the '1997 Hedgerows Regulations' (refer to appendices) exist on the site. These are the one continuous hedgerow on the eastern, western, southern and northern boundaries of the eastern field and three broken hedgerows 2, 3, 4 on the west. These hedgerows being longer than 20m and largely comprised of native British species, are BAP priority habitats.

Wherever possible hedgerows and trees should be retained.

Western Field Hedgerow

H2: Cypress hedge surrounding garden.

H3 – southern boundary to western field

Dominants - English elm, bramble

Elder, hazel, blackthorn

Damp ditch at base with horsetail sp.

H4 – western boundary to western field

Dominants - ash, bramble

Field maple, hawthorn, English elm, field rose,

Eastern Field Hedgerow

H1 – north, east and south boundaries to eastern field

2m high, 2m thick. Hawthorn, blackthorn, with Field maple, oak, holly, hazel and ash

Where possible, trees present within the site were assigned a value based on Bat Survey Guidelines (BCT, 2012).

- 🌳 **1*** - Tree with multiple, highly suitable features capable of supporting larger roosts.
- 🌳 **1** - Tree with definite potential, supporting fewer suitable features than Category 1* trees or capable of supporting roosts for single/low numbers of bats.
- 🌳 **2** - Tree with no obvious potential for roosting bats although due to its size and maturity the tree may support some features with limited potential to support bats.
- 🌳 **3** - Tree with no roosting potential.

One tree is considered to be a Category 1. This is the oak tree as marked on the Site Map with a hollow trunk, holes, splits & broken branches, and is suited to both bat and bird habitation. If this tree is not to be retained or is to be impacted by the development a Bat Survey will be necessary.

Water

No standing water exists on site. Water is apparent in the immediate vicinity (label 4) as a small stream flowing between two lines of fencing and with short steep grass banks. A damp ditch with horsetail species lays along the southern boundary to the western field.

Woodland

No woodland exists on site

Scrub

Some scrub exists on site. Trees and scrub provide important habitats for a wide range of species and sympathetic management of these areas has a positive effect on European Protected Species including bats and within river corridors, otters. Breeding birds, amphibians and reptiles are also commonly associated with trees and scrub and are at risk from unsympathetic management. As such many species associated with trees/scrub are protected by law under The Wildlife and Countryside Act 1981. There is statutory protection for nesting birds under the Wildlife and Countryside Act 1981. This applies to any cutting or removal of trees, woodland or scrub which may affect nesting birds. Between March and August, it should be assumed that nesting birds are present unless careful checks are made.

Buildings/ Structures

There are 3 buildings/structures onsite.

Building 1

Large barn, corrugated metal walls. Corrugated metal and fibreboard roof.

Lots of free flight and crevice access points for birds and bats

Building 2

Lean-to double garage. Walls are combination of stone, stone block and breezeblock. Roof is corrugated fibreboard.

Crevice access points.

Building 3

Adjacent lean-tos. Corrugated metal walls and roof. Some Virginia creeper and Russian vine. Birds' nests were observed.

Description and significance of adjoining land/habitats

Data searches revealed AONB and SSSI impact zone within the 2km search. The proposed development should not impact any special or significant sites, neither being adjacent to nor adjoining.

13. Baseline ecological conditions (Species)

Plants

A species list is included within the appendices. Invasive/non-native species/invasive weeds on site were recorded. Refer to section 22 for client's responsibilities.

Invertebrates

The habitats on site are common and unlikely to support notable species of invertebrates or species of conservation importance.

Amphibians

The site is unlikely to support amphibians. There is no standing water on site this prevents any amphibians from breeding here. The site may provide for the terrestrial phase of the amphibian cycle with the damp ditch and damper areas near the stream. Overall the site has low potential to support a full amphibian life cycle.

Reptiles

It is possible the hedgerows are used for dispersal by reptiles and the rough grassland provides a habitat, albeit an isolated patch. It is best to err on the side of caution and make a presence/absence survey. Overall, the site has a low-moderate potential to support reptiles.

Birds

There are small trees on site within the hedgerow with the potential to support nesting birds as well as a small amount of scrub and the oak tree. Building 3 showed previous occupation by birds with nests within. This building cannot be demolished unless outside of the nesting and breeding season of birds. Mitigation in the form of nest boxes will be required to offset the loss of their nest site. Protecting the hedgerows and wherever possible avoiding the removal of trees as recommended under previous headings will also benefit birds too.

Schedule 1 birds

No schedule 1 bird species were recorded during the survey. Lapwings are recorded as protected within the area of Voscombe Farm and hedge sparrows are recorded as further afield (Within 2km.) Any development of this site must be mindful of and lawful towards the breeding cycle and habits of lapwings and hedge-sparrows. Removal of sections of hedgerow will require mitigation for hedge-sparrows. DERC data information was consulted. Please see appendices.

Bats

Bat roost sites normally consist of caves, buildings of various types, trees with holes / cracks / peeling bark or coverings of ivy. On this site the obvious potential roost sites are the trees and structures, as there are no caves. The trees were observed for signs of potential bat habitation and usage. It was concluded that there was an oak tree with the potential to support bats/roosts. This tree is marked and named on the Site Map Section 7.

The buildings/structures appeared to offer potential access to bats but were inaccessible at the time of the initial survey. A closer scrutiny at a later date showed them to be unsuitable with no evidence of bat habitation.

Bats might also use the site for foraging purposes, however, to put this into perspective, bats are known to use numerous kinds of sites to forage for food. The grassland will undoubtedly offer some foraging potential and the hedgerows will offer

both foraging potential and navigational aids for commuting bats. Therefore, should the hedgerows or the trees be impacted by the development, Bat Emergence Surveys for the oak tree and Bat Activity Surveys for the site will be required.

Some bat species have learned to utilise street lighting as feeding stations, whilst others prefer total darkness and shun lighting. In general, low light levels are to be preferred. It is therefore important that light is not focused on either the trees or the hedgerows as part of the development of this site. Please see the mitigation section for ideas on how to limit light interference.

The site is considered to have low to moderate potential to support both foraging bats and to host a roost site.

Badgers

The site was surveyed for the presence of badger activity and setts. Any setts identified were classified into the following sett types:

- **Main sett** - large number of entrance/exit with signs of recent activity including fresh spoil and well-worn obvious tracks to and from the sett.
- **Annexe sett** – entrance/exits close to a main sett and connected by frequently used pathways.
- **Subsidiary sett** - small number of entrance/exits not connected to another sett by paths.
- **Outlier sett** - one or two holes with signs of occasional use.

No setts or other evidence of badger activity was observed on site. It is likely that badgers may on occasion traverse the site. There are however, no badger tracks, paths, latrines or any other indication that badgers regularly use this site. Consequently, the proposed development is unlikely to have any significant impact on badgers.

Dormice

Dormice are a protected species. It is possible for dormice to be found within small areas of woodland and within fragmented hedgerows. The connectivity of such small

sites is very important and if such connectivity exists it is possible that dormice might spend at least part of the year, even if simply commuting, in such areas.

Dormice are also proven to cross roads including dual carriageways. Consequently, if a site has seasonal foraging opportunities and is within a known dormouse area, even if in close proximity to roads, there is the possibility that dormice may visit such sites.

This site has habitat suited to occupation by dormice having some thicker hedgerow. However,

- No evidence of dormice was recorded during the survey: nests/nuts/dormice
- This site has poor connectivity to any known dormouse site with the closest recorded as being Bayford at 5km approx' and Motcombe 9.5km approx'.
- Data searches do not show dormice within a 2km search of this site

If the presence of dormice is possible and / or are suspected on site but the hedgerows and necessary habitat is not going to be destroyed, it should be sufficient to produce a dormouse mitigation report. This should detail the impacts on dormouse habitat and mitigation and enhancement measures that should be followed on this site.

However, if the hedgerows are to be impacted or removed then further ecological advice should be sought regarding the need for a Dormouse Survey.

To limit the threat to potential dormice through development on this site, hedgerows on site should be protected and preserved. They should be maintained at a height of not less than 3m and a width of 2m+. This will reduce the risk of predation by domestic cats.

Lighting should be installed which maintains a dark corridor alongside the hedgerows. The lighting discussed within the bat section is applicable here too.

Other mammals

None observed or expected given the type of habitat and location.

14. Biodiversity Action Plan (BAP) Priority Species or Species of Principal Importance

Under the NERC (2006) Act, local authorities have a responsibility to protect Priority species, not just 'Protected Species'. Priority species may be included within the County Biodiversity Action Plan or be listed as a National Biodiversity Action Plan (BAP) species.

The following Priority Species are present or potentially present on site:

- Possibility of toads in the damper areas.

15. Further Survey Work

ODPM Circular 06/2005 'Biodiversity and Geological Conservation – Statutory Obligations and their Impact within the Planning System' advises that the presence of a protected species is a **material consideration** that must be taken into account by the local planning authority when determining the outcome of planning applications. Where there is potential for a protected species to be present on site full survey data is necessary to properly address the impacts of the proposed development upon these species. If the survey work is not carried out before planning application is determined there is a risk that not all material considerations will have been addressed. This may cause delays in determining the outcome of the planning application while full survey data is collected and analysed.

"However, bearing in mind the delay and cost that may be involved, developers should not be required to undertake surveys for protected species unless there is a reasonable likelihood of the species being present **and** affected by the development" Defra circular 01.2005 *Biodiversity and Geological Conservation – Statutory Obligations and their Impact Within the Planning System* 2005.

Providing the mitigation measures are followed, only the following surveys are necessary at this time: Bat Activity Surveys / Reptile Surveys.

However, should trees and/or hedgerows be removed further surveys are also deemed necessary at this time: Bat Emergence Surveys and Dormouse Surveys. These are detailed below for information. Law and Legislation pertaining to the protection of these species may be referred to in section 22 of this report.

Bats

To ensure compliance with legislation, bat activity surveys are recommended to determine whether or not bats are present and if so how they are utilizing the site.

The Ecological Appraisal report has assessed the site to be of low - medium value for bats and is obliged to recommend Bat Activity Surveys be conducted.

On this basis and in accordance with BCT (2012) Bat Survey Good Practice Guidelines, it is recommended that the bat activity on the site is surveyed using two methodologies:

(i) Bat activity surveys

(ii) Automated surveys.

For a site of this size, more than 1 hectare approx., and of low-medium bat habitat value, the guidelines recommend three bat activity surveys between June and September.

In addition to activity surveys the guidelines recommend a remote recorder per bat activity survey transect.

The Ecological Appraisal report has assessed the site to be of low - medium value for bat roosts and is obliged to recommend Bat Emergence Surveys be conducted if potential roost such as the oak tree are impacted.

Bat Conservation Trust (BCT) guidelines recommend Bat emergence surveys should consist of a minimum of two visits at least 14 days apart. This is site dependent and additional surveys may be required.

A bat ecologist should assess the significance of any bat roost discovered and the potential scale of impact. Works involving significant disturbance or roost destruction (including changes to the roost) may require an EPS licence before the work can lawfully commence. Natural England is the licensing authority in England. Works involving minor disturbance may be carried out under a mitigation statement to ensure that no offence is committed. Only a suitably experienced and licensed ecologist can act as the named ecologist in the licence application, or prepare and implement a mitigation statement.

For further information, clarification and advice contact Natural England on 0845 601 4523.

Dormouse Survey: legislation, methodology and quotation

Dormice are a protected species. If Dormouse habitat is to be impacted a survey is required to ascertain the presence or absence of dormice on site.

Surveys are normally conducted over the course of eight months, or even longer if the survey commences late in the year. Should dormice be discovered on site and are likely to be affected by the development it will be necessary to apply for Natural England licenses.

Best practice for surveys using dormouse nest tubes.

Surveys should not be limited to habitat perceived as 'optimal' but should be undertaken in any areas of affected woody habitat (including adjacent areas if the impact of development is likely to extend beyond the site footprint). In practice this means placing tubes along roadside hedges and hedges within fields even where little or no hedge remains. This is because dormice may use such hedgerows as dispersal corridors.

If dormice were shown to be present a license would be required from Natural England prior to the commencement of any works that might affect this species. This process is time consuming and can be costly. In order to have any chance of obtaining a license to carry out work affecting dormouse habitat, a survey must be conducted with a probability of 20.

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

To calculate the probability score for your survey you add together the scores (Table 1) for the months during which the survey was conducted. If at the end of the survey, a score of 20 has been achieved and no evidence of dormice discovered, this is deemed sufficient evidence to conclude that dormice are absent.

If dormice are shown to be present, a license would be required from Natural England. This must be obtained prior to the commencement of any works that might affect this species. The optimum time to conduct surveys is April – October and in this case the survey would be due to commence in April 2016.

Reptiles

A reptile survey to establish the presence or otherwise of reptiles on site is deemed necessary.

The reptile survey will assess and detail the presence of reptiles and taking into account the applicable legislation, make recommendations to ensure that any reptiles present (if indeed there are any), are translocated to a place of safety prior to the planned development commencing. The planning authorities require this confirmation to ensure they discharge their duties in accordance with the NPPF.

Reptile surveys should be conducted between April and September inclusive, although this may be extended if the weather is warm. Planning officers will be aware of this and rightfully dismiss any report produced outside of this time. Failure to complete reptile surveys within the above time frame may result in delays in the planning process.

Further mitigation may be required if reptiles are found to be present and should be highlighted in the subsequent reptile report.

A quotation can be provided to undertake the recommended presence / absence survey.

16. Results of Protected Species/Species of Principal Importance

Surveys

No Protected Species Surveys have yet been undertaken, therefore no results are currently recorded.

The LPA should ensure that any avoidance, mitigation and compensation measures, together with enhancement recommendations, are either 'conditioned' where appropriate, or that full permission is withheld pending the agreement of mitigation, compensation (where necessary) and enhancement measures, and the results of protected species surveys are known and mitigation if required, is presented to the LPA.

17. Assessment of Effects and Mitigation Measures

Plants

- **Potential impacts** – Potential loss of hedgerow. Loss of grassland and some native species of low ecological value.
- **Mitigation measures** – Replacement of lost hedgerow onsite, where possible, and planting of native species on hedgerow/ within borders
- **Significance of residual effects** – Minimal where mitigation followed

Invertebrates

- **Potential impacts** – Unlikely
- **Mitigation measures** – Retain as many trees/shrubs as possible.
- **Significance of residual effects** – Minimal where mitigation followed

Amphibians

- **Potential impacts** – Possible
- **Mitigation measures** – Protect damp areas and edge of stream from impact by machinery and development procedures during amphibian breeding and spawning season

- **Significance of residual effects** – Minimal if mitigation followed

Reptiles

- **Potential impacts** – Harm or death
- **Mitigation measures** –Subject to survey results
- **Significance of residual effects** – Unlikely if mitigation and report recommendations followed

Birds

- **Potential impacts** – Loss of nesting / roosting sites
- **Mitigation measures** – Retention of hedges and trees, birds boxes on buildings/trees
- **Significance of residual effects** – Minimal if mitigation followed

Schedule 1 birds

- **Potential impacts** – Unlikely, as no Schedule 1 birds recorded on site
- **Mitigation measures** – Works to commence outside of the breeding season
- **Significance of residual effects** – N/A

Bats

- **Potential impacts** – Loss of foraging / navigational aids/loss of roosting
- **Mitigation measures** – Retention of hedges and trees. Restriction on light spill onto hedgerows: .5 lux maximum.
Recommendations for further mitigation will be given in the Bat Survey Reports, should surveys be necessary.
- **Significance of residual effects** – Negligible if mitigation followed.

Badgers

- **Potential impacts** – Unlikely
- **Mitigation measures** – N/A
- **Significance of residual effects** – N/A

Dormice

- **Potential impacts** – Unlikely/dependent upon need for a Survey.
- **Mitigation measures** – Dependent upon need for a Survey. However, retention of hedgerows and limitation on lighting of hedge lines, will ensure the hedges remain as they have been.
- **Significance of residual effects** – Negligible

Other mammals

- **Potential impacts** – None
- **Mitigation measures** – N/A
- **Significance of residual effects** – N/A

18. Compensation:

Where compensation measures are considered necessary to off-set significant residual effects, these are described below.

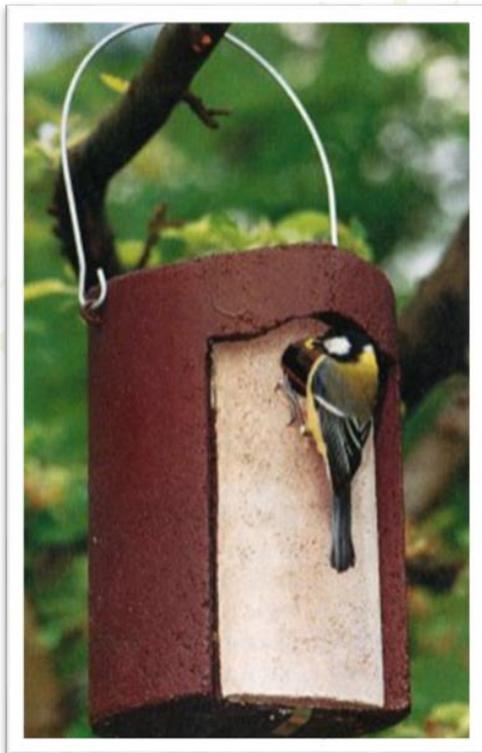
Habitats	Actions	Compensation Measures Required
Grassland (Pasture)	Removal	None
Grassland (Amenity)	Removal	None
Hedges and Trees	Potential Partial Removal	Should any portion of hedgerow need to be removed it can be mitigated for onsite by the planting of an equivalent area of hedgerow, OR where mitigation is not possible, the hedgerow should be compensated for offsite with an equivalent area planted. LPA agreement is required for offsite compensation. Should the trees need to be removed and mitigation is not possible onsite, appropriate replacement roosts (subject to absence/presence survey results) will need to be established. Further details should be sought from Ecological Surveys Ltd in this case.
Water	None	Avoid impacting the stream habitat. Keep machinery away and ensure storage of materials is not within 30m of the stream bank.
Woodland	None	None
Scrub	Potential removal	Loss of potential nesting area and invertebrate feeding area. Nest boxes are usually required to offset this loss, however, if possible, any scrub loss should be replanted elsewhere onsite, given the residential development will not be covering every part of it. If replanting is not feasible, nest boxes should be located on suitable structures such as trees or new buildings
Buildings/ Structures	Potential removal	None
Other	None	None

19. Enhancement

Enhancement measures are required under the National Planning Policy Framework (NPPF). *This must be undertaken by a suitably qualified ecologist and a report evidencing completion of enhancement works sent to LPA.* The National Planning Policy Framework (NPPF) sets out the UK Government's national policies on enhancement of biodiversity and promotion of ecosystem services through the planning system.

20. Birds

Modern buildings no longer offer nesting opportunities for birds in the manner that older properties do. So to enhance the nesting opportunities on site, a minimum of one nest box for birds, for every three new properties constructed, should be installed at various locations on the new buildings. On this site, this equates to an unknown total of nest boxes in total. Nesting boxes should be a mixture of both 'open fronted' and 'hole type' boxes in order that they appeal to the widest possible number of species. These boxes should be erected not less than 3m high unless tucked tightly under an eave.



This example (left) hole fronted box is available from:

<https://www.nhbs.com/title/158587/1b-schwegler-nest-box>

Boxes are available from a range of outlets and this advice is in no way prescriptive; however, Schwegler (type) Nest Boxes are much longer lasting than wooden ones and are therefore preferable.

The 'common' house sparrow has declined significantly and is now a red-listed bird. Part of the reason for its decline is believed to be a lack of suitable nest sites within modern houses.



There is a link within the appendices giving details of suitable nest boxes. The choice of supplier is not prescriptive

<http://www.nhbs.com/title/174850/1sp-schwegler-sparrow-terrace>

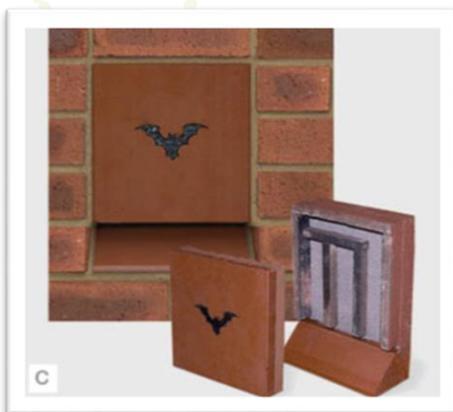
New developments offer an opportunity to help. I would therefore recommend 1 in 3 properties should have house sparrow boxes, or sparrow 'terraces' erected upon them. To avoid conflict with residents, erection of the boxes should not be above doors or windows.

In total the recommended enhancement for birds equates to a presently unknown total of individual nest boxes and house sparrow nest boxes.

Nest boxes should be installed by an experienced ecologist, who will confirm to the LPA that the enhancement work has been completed.

21. Bats

1 in 3 properties should have bat boxes built into the gable end of properties, these would offer potential bat roosts and augment the natural roosting opportunities. These boxes should be erected not less than 3m high.



There are other bat box designs available and different types can be found to match individual properties. Details of this and others can be found here:

<http://www.ibstock.com/sustainability-ecozone.asp>

22. Plants

Areas of new planting/landscaping should be planted to compensate for habitat loss, and should consist of wildlife-attracting and/or native species of local provenance, with appropriate aftercare and management to ensure that these areas are maintained.

Wherever possible the planting of 'open spaces' with a grass mix other than traditional amenity type grass can be beneficial to a range of invertebrates and consequently to species which feed directly or indirectly upon them. This link to the Royal Horticultural Society (RHS) provides advice on such plantings.

<https://www.rhs.org.uk/advice/profile?pid=436>

Not only do such wildflower areas look beautiful but they actually require less maintenance than traditional lawns.

Planting of nectar rich shrubs or trees which produce either fruit or nuts, will be of benefit, either directly or indirectly, to a multitude of organisms. Species lists are provided in appendices.

23. Hedgehogs:

No evidence of hedgehogs was observed, however **two** hedgehog boxes, placed in the base of any shrubs being planted (or alongside the boundary hedges), would offer a home to these once common, now rare UK BAP species. Garden fences should permit the free movement of hedgehogs between gardens and the surrounding countryside. This means raising a fence up 150mm or allowing a gap between panels.

24. Impact Avoidance During the Construction Phase

Trenches or large excavations should be covered overnight to prevent wildlife such as badgers or hedgehogs falling in and failing to escape. If this is not possible then a strategically placed plank may provide a means of escape. Any large bore pipes should be capped at the end of the day to reduce the potential for badgers and other wildlife entering and becoming trapped.

Areas that are being retained should be protected from damage during construction by erecting Heras (or similar) fencing around these features. The fencing should be erected outside the line of the canopy as this helps protect the roots from compaction of the soil.

Any areas proposed for planting post-development should be fenced off where possible to prevent compaction of the soil through vehicle movements.

Contractors must ensure that no harm can come to wildlife by maintaining the site efficiently, clearing away any material such as wire in which animals can become entangled and preventing access to toxic substances.

If there is a substantial delay before development commences, the site should be maintained in a way that would prevent wildlife colonising it and causing constraints in the future. Such management should include mowing grassland at least twice a year and preventing scrub encroachment.

Piles of brush wood and or log piles should be carefully inspected for signs of wildlife prior to their removal. This is especially crucial during the period March – September (inclusive) as some species of bird choose such sites to construct their nests. Ideally removal of such features should be done outside of the nesting season. If this is not possible, it is recommended that these features are covered in such a way as to exclude / prevent birds and / or reptiles taking up residence. Should nesting birds or reptiles be discovered, work must cease immediately and ecological advice sought.

All hedgerows / trees / shrubs removal should be done outside of the bird nesting season March – September (inclusive). If removal is not possible during this period, careful checks of such, must be conducted by a suitably experienced ecologist prior to works commencing.

25. Site Images



Building 1 Eastern Wall



Building 1 interior



Building 2 NW corner



Building 2 Interior



Building 3 open fronted section



Building 3 West Corner



Ditch



Hedge Eastern Field



Large tree: potential roost site



Hole (potential roost) in the tree

26. Planning Policy and Legislation

Local Planning Authorities are charged with the responsibility for protection of endangered species under the European Union Habitats Directive on the Conservation of Natural Habitats and of Wild Fauna and Flora (Council Directive 92/43/EEC. This Directive is implemented in the UK by the Conservation (Natural Habitats & Conservation) Regulations 1994 (Statutory Instrument No 2716) amended in 1997. The presence of a protected species is a material consideration when a local authority is considering a planning application that could affect any protected species.

“However, bearing in mind the delay and cost that may be involved, developers should not be required to undertake surveys for protected species unless there is a reasonable likelihood of the species being present and affected by the development” Defra circular 01.2005 Biodiversity and Geological Conservation – Statutory Obligations and their Impact Within the Planning System 2005.

The National Planning Policy Framework (NPPF) sets out the national planning policy which is committed to minimising impacts on biodiversity and providing net gains in biodiversity where possible. Under NPPF, local planning authorities have an obligation to promote the preservation, restoration and recreation of priority habitats, ecological networks and the protection and recovery of priority species as identified under the Natural Environment and Rural Communities Act (2006). Local Planning Authorities will seek to produce a net gain in biodiversity, by requiring developers to design wildlife into their plans and to ensure that any unavoidable impacts are appropriately mitigated for.

Hedgerows

Any hedgerows classified as ‘important’ under the 1997 Hedgerows Regulations cannot be removed without a Hedgerow Removal Notice issued by the relevant Local

Authority unless previously approved as part of a planning permission. The UK Biodiversity Action Plan (BAP) now classifies any native hedge over 20m in length as a priority habitat feature. Priority hedgerows should be those comprising 80% or more cover of any native tree/shrub species.

The LA is the arbiter as to classification of hedgerows

Plants

The Wildlife and Countryside Act 1981 makes it an offence (subject to exceptions) to pick, uproot, trade in, or possess (for the purposes of trade) any wild plant listed in Schedule 8 and prohibits the unauthorised intentional uprooting of such plants. Certain plant species are also afforded protection under the EC Habitats and Species Directive (92/43/EC).

Invasive Non Native Plants:

The site owner has a responsibility to:

- Prevent invasive, non-native plants on their land spreading into the wild and causing a nuisance.
- Prevent harmful weeds on your land spreading onto a neighbour's property

The owner of the site must not plant in the wild or cause certain invasive and non-native plants to grow in the wild. This can include moving contaminated soil or plant cuttings. If this occurs there is a fine or prison term for up to 2 years.

The most commonly found invasive, non-native plants include:

- Giant hogweed
- Himalayan balsam
- Rhododendron ponticum
- New Zealand pigmyweed (this is banned from sale)

- Japanese knotweed

The site owner is not legally obliged to remove these plants or to control them. It is important that they are identified and their spread controlled in the most appropriate way.

Prevent the spread of harmful weeds

A number of weeds are a danger to animals, or cause problems for agricultural production if left to spread unchecked. The following weeds are controlled by law:

- common ragwort
- spear thistle
- creeping or field thistle
- broad-leaved dock
- curled dock

It's not an offence to have these weeds growing on your land, but you must:

- stop them spreading to agricultural land, particularly grazing areas or land used for forage, like silage and hay
- choose the most appropriate control method for your site, e.g if it is a protected site
- not plant them in the wild

If you allow these weeds to spread onto someone else's property, Natural England could serve you with an enforcement notice. You can also be prosecuted if you allow animals to suffer by eating these weeds.

Refer to www.gov.uk/prevent-the-spread-of-harmful-invasive-and-non-native-plants for further advice.

Badgers

Badgers are protected by the Protection of Badgers Act (1992) and the Wildlife and Countryside Act (1981), Schedule 6. Under the Wildlife and Countryside Act it is illegal

to intentionally kill, capture, injure or ill-treat any badger. Under the Protection of Badgers Act, it is an offence to obstruct, destroy or damage a badger sett or disturb badgers within a sett. Disturbance is defined, for development purposes, as any activity that could damage a sett or be greater than what badgers commonly tolerate. Badgers are seen to be tolerant of low-moderate disturbance levels.

This is only a guide to the main provisions of the law. Natural England does not provide legal advice to developers and the text of the Act should be consulted and professional legal advice sought for exact interpretations of offences and defences. The Protection of Badgers Act 1992 is based primarily on the need to protect badgers from baiting and deliberate harm or injury. It also contains restrictions that apply more widely and it is important for developers to know how this may affect their work. All the following are criminal offences: to

- Wilfully Kill, Injure, Take, Possess Or Cruelly Ill-Treat A Badger;
- Attempt To Do So
- Intentionally or recklessly interfere with a sett.

Sett interference includes damaging or destroying a sett, obstructing access to a sett, and disturbing a badger whilst it is occupying a sett. It is not illegal, and therefore a licence is not required, to carry out disturbing activities in the vicinity of a sett if no badger is disturbed and the Sett is not damaged or obstructed.

Since development operations may take place over a protracted period, Natural England recommends that plans consider the effect of the development on seasonally-used setts as well as currently occupied setts. If a sett has shown signs of occupation within the past few months, it could be in use by badgers when development starts and should therefore be taken into account during the survey and any planning stages of the development. Where interference with a sett showing signs of use cannot be avoided during the development, a licence should be sought from Natural England.

Penalties for offences can be severe with fines of up to £5,000 plus up to six months imprisonment, for each illegal sett interference, or badger death or injury. The legislation does, however, recognise the need for a range of legitimate activities to be

carried out and allows licences to be granted for certain purposes permitting work that would otherwise be illegal. The purposes for which licences can be granted include:

- Preventing serious damage to land, crops, poultry or any other form of property (e.g. a house, garden, road etc.)
- Any agricultural or forestry operations
- Any operation to maintain or improve any existing watercourse or drainage works, or to construct new works required for the drainage of land, including works of defence against sea or tidal water
- Preventing the spread of disease
- Development
- Scientific or educational purposes, or conservation
- Preservation or archaeological investigation of scheduled ancient monuments

Natural England will normally only issue a licence after detailed planning permission has been granted, where applicable, so that there is no conflict with the planning process. Licences will only be issued in advance of full planning permission in exceptional circumstances. Local authorities and developers need to be aware that it may be necessary for an environmental assessment to be carried out, prior to the development, if the proposed development site hosts badgers. Before the planning application is determined, the local planning authority should request a detailed ecological survey/report and developers should be prepared to provide the following information:

- The numbers and status of badger setts and foraging areas that are affected by the proposal;
- The impact that the proposal is likely to have on badgers and what can be done by way of mitigation;

Judgment on whether the impact is necessary or acceptable; and a recommendation as to whether a licence will be required.

Planning Permission and badger licensing are separate legal functions. Thus receiving planning permission from the Local Authority is no guarantee that development

operations will not breach the Protection of Badgers Act 1992. Similarly planning permission does not guarantee that a badger licence will be granted. It is important, therefore, that developers take adequate account of badgers at the planning stage in order to ensure that badgers will not be affected or, where a licence is required, that appropriate mitigation measures can be implemented.

Bats

All species of bat, their habitat and roosts are protected by the UK Wildlife and Countryside Act (1981) and the EC Habitats and Species Directive (92/43/EC), enacted in the UK by the Conservation of Habitats and Species Regulations (2010).

All British bats are European protected species (EPS), included on Annex IV (a) of the European Communities Habitats Directive. Annex IV (a) species are protected in this country under Schedule 2 of the Conservation of Habitats and Species Regulations 2010. Additionally bat species in the UK are fully protected under Schedule 5 of the Wildlife and Countryside Act 1981 and Schedule 12 of the Countryside Rights of Way Act 2000. In combination this makes it an offence to:

- Deliberately* kill, injure or capture bats;
- Intentionally or recklessly disturb a bat in its roost, or deliberately disturb a group of bats;

Intentionally or recklessly damage, destroy or obstruct access to a bat roost (a bat roost is interpreted as any structure or place which is used for shelter or protection, regardless of whether bats are present at the time or not);

- Possess or transport a bat or any part of a bat, unless acquired legally; and
- Sell, barter or exchange bats or parts of bats.

In a court, 'deliberately' may be interpreted as someone who, although not intending to capture/injure or kill a bat, performed the relevant action, being sufficiently informed and aware of the consequence his/her action will potentially have.

Otters, Dormice.

Otter and dormice habitat are afforded protection under UK and EU legislation and are protected by the UK Wildlife and Countryside Act (1981) and the EC Habitats and Species Directive (92/43/EC), enacted in the UK by the Conservation of Habitats and Species Regulations (2010).

Hazel dormice, their breeding sites and resting places are protected by law.

You may be able to get a licence from Natural England if you can't avoid disturbing them or damaging their habitats.

What you must not do

You're breaking the law if you do certain things including:

- Capture, kill, disturb or injure hazel dormice (on purpose or by not taking enough care)
- Damage or destroy a breeding or resting place (even accidentally)
- Obstruct access to their resting or sheltering places (on purpose or by not taking enough care)
- Possess, sell, control or transport live or dead hazel dormice, or parts of hazel dormice

You could be sent to prison for up to 6 months and be fined £5,000 for each offence if you're found guilty.

Activities that can harm hazel dormice:

Hazel dormice can be affected by:

- Handling
- Disturbance, e.g. Noise and light, woodland and hedgerow management
- Habitat removal, clearing woodland and removing hedgerows

In most cases you should be able to avoid harming the hazel dormice, damaging or blocking access to their habitats.

Birds

All British birds, their nests and eggs are protected in law. It is an offence to deliberately take, kill or injure any wild bird or to take, damage, or destroy any nest or egg of any wild bird under Part 1 of the Wildlife and Countryside Act 1981 (as amended). However, Schedule 1 provides an additional tier of protection so that rare species are especially protected by increased penalties and cannot be intentionally or recklessly disturbed when nesting.

Reptiles and Amphibians

In addition to the planning implications, it should be noted that all species of reptile and amphibian are protected by the UK Wildlife and Countryside Act (1981), under Schedule 5. Reptiles such as adder, common lizard, slow worm and grass snake are protected against intentional killing, injuring or selling. Species such as the smooth snake, sand lizard and great crested newt are also protected by European legislation as above.

Other species have even greater protection. Failure to take appropriate action to protect reptiles may result in a criminal prosecution.

Invertebrates

A number of invertebrates, including the white-clawed crayfish, are protected by the UK Wildlife and Countryside Act 1981 (as amended), under Schedule 5.

27. Habitats Regulation Assessment (HRA)

Appropriate assessment (or 'Habitats Regulation Assessment', HRA) is one of the most powerful tools currently available to control the environmental impacts of development. Whereas sustainability appraisal is a decision-informing tool, appropriate assessment is often described as a decision-making tool because has the potential to stop development.

Appropriate assessment tests whether a plan or a project is likely to have a significant negative impact on any:

- Special Protection Area (SPA) – a European designation which protects birds
- Special Area of Conservation (SAC) – a European designation which protects habitats
- RAMSAR site – a European designation which protects wetlands.

Jointly, these are called 'European sites'. Appropriate assessment does not apply to other designations, like Sites of Special Scientific Interest (SSSI) or Areas of Outstanding Natural Beauty (AONB).

If the proposed development has the potential to impact up on any of the European sites, the LPA can request an HRA be conducted. The responsibility for conducting such an HRA lies with the LPA, but they can insist that all relevant information is provided to them by the developer.

Proximity to a site is not the defining factor, potential 'impact' is, and for large projects this could be up to 15km from the site. The closer to a protected site, the more likely it is that an HRA will be required, even for a very small site.

28. Appendices

Table 1

29. Scientific names of species mentioned in the text.

Scientific name	Common name
<i>Meles meles</i>	Badger
<i>Pieris brassicae</i>	Large white
<i>Muscardinus avellanarius</i>	Dormouse
<i>Erinaceus europaeus</i>	Hedgehog
<i>Plecotus auritus</i>	Brown long-eared bat
<i>Plecotus austriacus</i>	Grey long-eared bat
<i>Pipistrellus pipistrelles</i>	Common pipistrelle bat
<i>Pipistrellus pygmaeus</i>	Soprano pipistrelle bat
<i>Pipistrellus nathusii</i>	Nathusius' pipistrelle bat
<i>Myotis nattererii</i>	Natterers' bat
<i>Myotis mystacinus</i>	Whiskered bat
<i>Myotis brandtii</i>	Brandt's bat
<i>Myotis daubentonii</i>	Daubenton's bat
<i>Myotis bechsteinii</i>	Bechsteins' bat
<i>Nactylus noctula</i>	Noctule bat
<i>Nactylus leislerii</i>	Leislars bat
<i>Eptesicus serotinus</i>	Serotine bat
<i>Barbastella barbastellus</i>	Barbastelle bat
<i>Rhinolophus ferrumequinum</i>	Greater horseshoe bat
<i>Rhinolophus hipposiderous</i>	Lesser horseshoe bat
<i>Lacerta vivipara</i>	Common lizard
<i>Vipera berus</i>	Adder
<i>Anguis fragilis</i>	Slow worm
<i>Natrix natrix</i>	Grass snake
<i>Rana temporaria</i>	Common Frog
<i>Bufo Bufo</i>	Common Toad
<i>Coronella austriaca</i>	Smooth snake
<i>Lacerta agilis</i>	Sand lizard
<i>Triturus cristatus</i>	Great crested newt
<i>Parus major</i>	Great tit
<i>Passer domesticus</i>	House sparrow

Table 2

30. Flora species recorded on site		
DAFOR scale: - Frequency of species on the site: Dominant-Abundant-Frequent-Occasional-Rare		
D	Annual meadow grass	<i>Poa annua</i>
R	Ash	<i>Fraxinus</i>
O	Blackthorn	<i>Prunus spinosa</i>
D	Bramble	<i>Rubus fruticosus agg.</i>
O	Bristly ox-tongue	<i>Picris echioides</i>
O	Broad leaved plantain	<i>Plantago major</i>
O	Broad-leaved Dock	<i>Rumex obtusifolius</i>
O	Buddleia	<i>Buddleia</i>
R	Cladonia lichen sp.	<i>Cladonia</i>
D	Cocksfoot	<i>Dactylis glomerata</i>
D	Common bent	<i>Agrostis capillaris</i>
O	Common Dandelion	<i>Taraxacum aggregate</i>
D	Common mouse ear	<i>Cerastium fontanum</i>
O	Common Sorrel	<i>Rumex acetosa</i>
O	Cow parsley	<i>Anthriscus sylvestris</i>
D	Creeping bent	<i>Agrostis stolonifera</i>
D	Creeping Buttercup	<i>Ranunculus repens</i>
O	Cuckoo flower	<i>Cardamine pratensis</i>
D	Cypress	<i>Chamaecyparis lawsoniana</i>
O	Elder	<i>Sambucus nigra</i>
R	English elm	<i>Ulmus procera</i>
D	False oat grass	<i>Arrhenatherum elatius</i>
R	Field Maple	<i>Acer campestre</i>
R	Field Rose	<i>Rosa Arvensis</i>
D	Foxes and cubs	<i>Pilosella aurantiaca</i>
R	Grey Willow	<i>Salix cinerea</i>
O	Hawthorn	<i>Crataegus monogyna</i>
O	Hazel	<i>Corylus avellana</i>
O	Hedge Bindweed	<i>Calystegia sepium</i>
O	Hogweed	<i>Heracleum sphondylium</i>
O	Holly	<i>Ilex aquifolium</i>
D	Horsetail	<i>Equisetum sp.</i>
O	Lesser trefoil	<i>Trifolium dubium</i>
R	Moss	<i>Sphagnum</i>
D	Nettle	<i>Urtica</i>
R	New Zealand Flax	<i>Phormium</i>
O	Nipplewort	<i>Lapsana communis</i>
O	Oak	<i>Quercus</i>
D	Perennial Rye-grass	<i>Lolium perenne</i>
O	Red Clover	<i>Trifolium pratense</i>
D	Red fescue	<i>Festuca rubra agg.</i>

D	Red valerian	<i>Centranthus ruber</i>
R	Ribwort Plantain	<i>Plantago lanceolata</i>
O	Smooth Hawksbeard	<i>Crepis capillaris</i>
D	Smooth meadow grass	<i>Poa pratensis sens. lat.</i>
O	Sow thistle	<i>Sonchus arvensis</i>
D	White Clover	<i>Trifolium repens</i>
O	White dead nettle	<i>Lamium album</i>
D	Yorkshire-fog	<i>Holcus lanatus</i>

31. Table 3 Recommended Planting

Native shrubs for hedges and landscaping small sites

Hawthorn	<i>Crataegus monogyna</i>
Wayfarer	<i>Viburnum lantana</i>
Guelder rose	<i>Viburnum opulus</i>
Holly	<i>Ilex aquifolium</i>
Rowan	<i>Sorbus aucuparia</i>
Spindle	<i>Euonymus europaeus</i>
Field maple	<i>Acer campestre</i>
Dogwood	<i>Cornus sanguinea</i>
Wild privet	<i>Ligustrum vulgare</i>
Blackthorn	<i>Prunus spinosa (with caution)</i>
Hazel	<i>Corylus avellana</i>
Elder	<i>Sambucus nigra</i>
Willow	<i>Salix sp</i>
Crab apple	<i>Malus sylvestris</i>

Non-native shrubs with wildlife value

American elder	<i>Sambucus canadensis</i>
Aucuba	<i>Aucuba japonica</i>
Autumn olive	<i>Eleagnus umbellate</i>
Barberry	<i>Berberis varieties</i>
Beauty bush	<i>Callicarpa bodinieri</i>
Blue spiraea	<i>Spiraea arguta</i>
Butterfly bush	<i>Buddlejea sp.</i>
Californian lilac	<i>C. glorie</i>
Daisy bush	<i>Olearia haastii</i>
Escallonia	<i>Escallonia spp</i>
Flowering currant	<i>Ribes sanguineum</i>
Flowering quince	<i>Chaenomeles sp.</i>
Goumi	<i>Eleagnus miltiflora</i>
Lavender	<i>Lavandula spica</i>

Oregon grape	<i>Mahonia sp</i>
Rugosa rose	<i>Rosa rugosa</i>
Viburnum	<i>Viburnum spp</i>
Willow (dwarf varieties)	<i>Salix sp</i>
Shrub honeysuckle	<i>Lonicera fragrantissima</i>

Plug plants/seeds/bulbs for under and around shrub planting

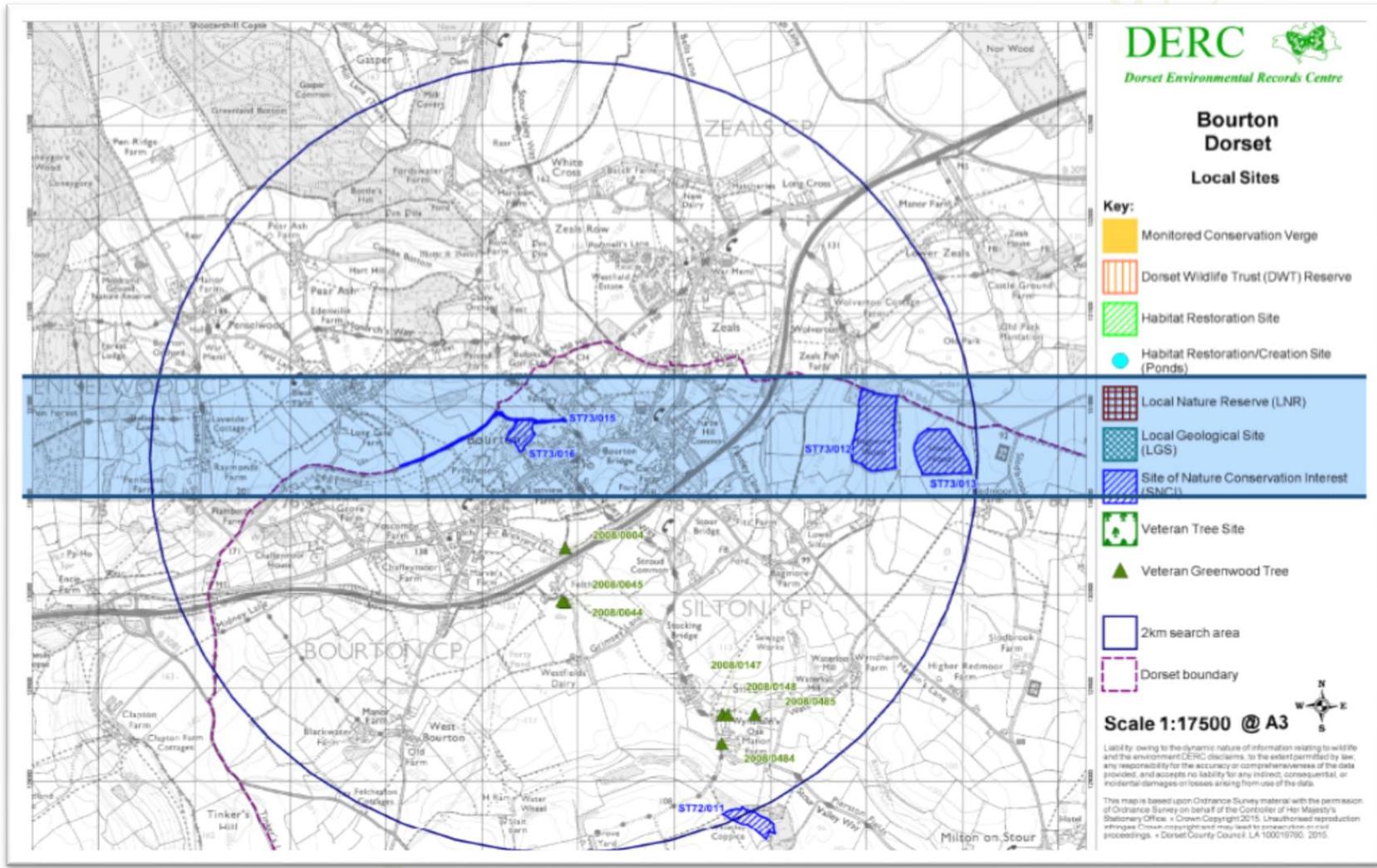
Bugle	<i>Ajuga reptans</i>
Bluebell	<i>Hyacinthoides non-scripta</i>
Primrose	<i>Primula vulgaris</i>
Wood anemone	<i>Anemone nemorosa</i>
Wild daffodil	<i>Narcissus pseudonarcissus</i>
Wild garlic	<i>Allium ursinum</i>
Columbine	<i>Aquilegia vulgaris</i>
Wood sage	<i>Teucrium scorodonia</i>
Male fern	<i>Dryopteris filix-mas</i>
Broad buckler fern	<i>Dryopteris dilatata</i>
Wood sedge	<i>Carex sylvatica</i>

Additional tree planting:

All are fairly small and offer berries & flowers and good for birds too:

Mountain Ash	<i>Sorbus Ssp</i>
White Beam	<i>Sorbus aria 'Lutescens'</i>
Bird Cherry	<i>Prunus padus</i>
Snowy mespilus	<i>Amelancier candenensis</i>

32. Data Search Results



33. References and Further Information

- AA Route planner. www.theaa.com/route-planner/classic/planner_main.jsp
- Bat Conservation Trust (2009) *Bats and lighting in the UK – Version 3, May 2009*, The Bat Conservation Trust, London.
- Bat Conservation Trust (2007) *Bat surveys – Good Practice Guidelines*, The Bat Conservation Trust, London.
- Bright P., Morris P., and Mitchell-Jones, A. (2006) *The dormouse conservation handbook*; second edition, English Nature, Peterborough.
- DEFRA (2007a) *Securing a Healthy Natural Environment: an action plan for embedding an ecosystems approach*. PB12853. DEFRA, London.
- DEFRA (2007b) *An Introductory Guide to Valuing Ecosystem Services*. PB12852. DEFRA, London.
- Department of the Environment (1997) *The Hedgerows Regulations 1997: A guide to the law and good practice*. Department of the Environment, London. www.chaninweb.co.uk/Chanin%20&%20Gubert2012_Lutra_55_1_LOWRES.pdf
- Dorset Biodiversity Action Plan: -www.dorsetwildlifetrust.org.uk/bap
- English Nature (2001) *Great Crested newt mitigation guidelines*, English Nature, Peterborough, ISBN 1 85716 568 3.
- English Nature (2004) *Bat Mitigation Guidelines*, English Nature, Peterborough.
- English Nature (2005) *Reptiles: guidelines for development* English Nature, Peterborough.
- Froglife Advice Sheet 10 (1999) *Reptile survey methods*, Herpetological Conservation Trust, Peterborough.
- Gent, T., and Gibson, S. (2003) *Herpetofauna Workers Manual*, JNCC, Peterborough.
- Chartered Institute of Ecology and Environmental Management (2006) *Guidelines for Ecological Impact Assessment in the United Kingdom*, www.cieem.org.uk
- Joint Nature Conservation Committee (JNCC) (1993) *Handbook for Phase 1 Habitat Survey*. JNCC Peterborough.

- Joint Nature Conservation Committee (2004) *Bat Workers Manual*, Joint Nature Conservation Committee, Peterborough.
- Natural England (2007) *Badgers and Development; A guide to best practice and licensing*. Natural England, Peterborough.
- Natural England (2009) *Protection of Badgers Act (1992) as amended: Interpretation of 'Disturbance' in relation to Badgers occupying a sett*, Natural England, Peterborough.
- Stace, C. (1997) *New Flora of the British Isles, Second edition*. Cambridge University Press.
- Williams, C. (2010) *Biodiversity for Low and Zero Carbon Buildings: a technical guide for new build*, RIBA Publishing, London.

Data search websites: -

- Barn Owl Trust www.barnowltrust.org.uk
- Multi Agency Geographical Information for the Countryside: www.magic.gov.uk
- National biodiversity network: www.nbn.org.uk/Home.aspx
- UK Biodiversity Action Plan: - www.ukbap.org.uk/NewPriorityList.aspx
- Dorset Wildlife Trust: - www.dorsetwildlifetrust.org.uk
- www.gov.uk/prevent-the-spread-of-harmful-invasive-and-non-native-plants