



Ecological  
Surveys  
Ltd

Land near Chaffeymoor Farm  
Chaffeymoor Hill, Bourton,  
Dorset, SP8 5BY.

Nearest postcode to land: SP8 5BU

Grid reference: ST 76648 30201



# ECOLOGICAL IMPACT ASSESSMENT

EcIA

October 2015

# CONTENTS

1.	Survey Details.....	5
2.	Summary.....	7
3.	Conclusions.....	7
4.	Introduction.....	8
5.	Description Of The Site And Proposed Development.....	9
6.	Site Evaluation.....	9
7.	Site Plan.....	11
7a.	Site Plan.....	11
8.	Desk Study.....	13
9.	Field Study.....	14
10.	Survey Limitations.....	14
11.	Assessment.....	15
12.	Baseline Ecological Conditions (Habitats).....	15
	Grassland (Pasture).....	15
	Grassland (Amenity).....	15
	Hedges And Trees.....	16
	Water.....	17
	Woodland.....	17
	Scrub.....	17
	Buildings / Structures.....	17

	Description And Significance Of Adjoining Land / Habitats .....	17
13.	Baseline Ecological Conditions (Species).....	18
	Plants.....	18
	Invertebrates .....	18
	Amphibians .....	18
	Reptiles .....	18
	Birds .....	19
	Schedule 1 Birds .....	19
	Bats.....	19
	Badgers .....	20
	Dormice.....	20
	Other Mammals.....	21
14.	Biodiversity Action Plan (Bap) Priority Species Or Species Of Principal Importance .....	21
15.	Further Survey Work.....	22
16.	Results Of Protected Species Of Principal Importance Surveys .....	25
17.	Assessment Of Effects And Mitigation Measures .....	26
18.	Compensation:.....	28
19.	Enhancement .....	29
	Birds .....	29
	Bats.....	30

Plants.....	31
Hedgehogs: .....	31
20. Impact Avoidance During The Construction Phase .....	31
21. Site Images .....	33
22. Planning Policy And Legislation .....	34
23. Habitats Regulation Assessment (Hra) .....	41
24. Appendices .....	42
Table 1 Scientific Names Of Species Mentioned In The Text.....	43
Table 2 Flora Species Recorded On Site .....	44
Table 3 Recommended Planting.....	45
25. Data Search Results .....	47
26. References And Further Information.....	48



## 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 off Chaffeymoor Farm, Bourton, Dorset SP8 5BY, UK**

**The site survey followed the Phase 1 Habitat Survey methodology (JNCC 2010) and was completed on the 6th October 2015 by Ecological Surveys Ltd**

<b>Grid reference</b>	ST 76648 30201
<b>Date of Report</b>	19/10/2015
<b>Client</b>	Chairman Neighbourhood Planning Group: Mike Withers
<b>Architect/Planning Consultant:-</b>	
<b>Report Reference: -</b>	15/10/019/AC/JF/PD/EcIA
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## 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			
Conservation Priority Habitat	X		Hedgerow		
Significant Natural Area		X			
Invasive species on site	X				

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

## 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 Amphibians.
- The site grounds do NOT provide suitable habitat for reptiles and harvest mice.
- Further ecological surveys: Bat Activity Surveys are recommended. Additionally, Bat Emergence 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 towards the western extent of the village of Bourton. It borders the B3081 on its north boundary with the A303 lying further to the south. 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 3.9 hectares and a perimeter of 873 metres, 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 commenced or 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. However, it is not known at this point if they are to be fully retained, partially removed, or removed. If not fully retained, mitigation/compensation

will be required, in particular regarding boxes for hedge sparrows, and further surveys conducted prior to removal: Bats. It is important that Bat Surveys are carried out to establish their presence / absence and if present to consider appropriate mitigation strategies should the development of the site include removal or impact to the trees and hedgerows. Please refer to the Mitigation (17), Compensation (18) and Enhancement (19) sections for more details.

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7. Site Map

★ Trees with Potential Bat Roost/habitation.





7a. Site Plan.

Not available at issue of this report.

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## 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

<b>Significant species</b>	Lapwing: Within Site Tree Sparrow within 1,638m approx
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<b>Significant Natural Area (all distances measured approx.)</b>	
<b>Special Areas of Conservation (SAC)</b>	None
<b>Special Protection Area (SPA)</b>	None
<b>RAMSAR: None within 2km</b>	None
<b>Site of Special Scientific Interest (SSSI)</b>	None
<b>National Nature Reserve (NNR)</b>	None
<b>Local Nature Reserve (LNR):</b>	Moldrams Ground
<b>Areas of Outstanding Natural Beauty</b>	Dorset Area of Outstanding Natural Beauty Cranborne Chase & West Wiltshire Downs AONB
<b>World Heritage Site</b>	Dorset and East Devon World Heritage Site
<b>BAP Priority Habitat (distance measured from site approximate) within 2km</b>	
<ul style="list-style-type: none"> <li>• <b>Ancient Woodland Pen Pits Wood 1,137m</b></li> <li>• <b>Moldrams Ground 620m</b></li> <li>• <b>Lowland Meadow 833m</b></li> <li>• <b>Deciduous Woodland (Broadleaved) 560m</b></li> <li>• <b>Purple Moorgrass &amp; Rush Pasture 1,931m</b></li> </ul>	
A ' <b>Habitats Regulation Assessment', HRA</b> ) 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 06/10/15 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 dominant with perennial rye-grass, common bent, Yorkshire fog and creeping buttercup. The ecological value of this area is low.

### Grassland (Amenity)

None.







## Hedges and Trees

Four 'hedgerows' as defined under the '1997 Hedgerows Regulations' (refer to appendices) exist on the site. These are the hedgerows on the eastern, western, southern and northern boundaries. 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.

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.

### Hedge 1 – Northern Hedge

Dominant - Bramble

Occasional - Ash, hawthorn, dog-rose, blackthorn

Including 1 semi-mature ash with ivy (marked on plan) Category 2 Tree

### Hedge 2 – western hedge

Dense – 3 to 7m thick

Dominant – blackthorn, bramble

Dog-rose, English elm, field maple, ash

### Hedge 3 – southern hedge (dog-legged)

Dry ditch along field side

Dominant – blackthorn, bramble

Ash, hawthorn, field maple, grey willow, English elm,

Oak with split limb Category 2 Tree (marked on plan)

### Hedge 4 – eastern hedge

Dominants – blackthorn, bramble

Ash, hawthorn, field maple, English elm, field rose, oak, crab apple, damson, crack willow

Oak with hole/crevice Category 2 Tree (marked on plan)

### Water

No standing or flowing water exists on site. No water was apparent in the immediate or nearby vicinity.

### Woodland

No woodland exists on site

### Scrub

None

### Buildings/ Structures

There are no buildings or structures onsite.

### 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 sites, neither being adjacent to

nor adjoining. There is a residence fenced off from the main site on the corner of the north-east boundary. The north boundary is adjacent to a road. The remaining boundaries are adjacent to agricultural fields.

### 13. Baseline ecological conditions (Species)

#### Plants

A species list is included within the appendices. Corky-fruited water-dropwort *Oenanthe pimpinelloides* a Dorset 'notable' was recorded. 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 which prevents any amphibians from breeding here. No water bodies could be seen in adjoining properties or on a Google Earth search.

Overall the site has low – negligible potential to support amphibians

#### Reptiles

It is possible the hedgerows are used for dispersal by reptiles. Overall the site has negligible-low potential to support reptiles.

## Birds

There are trees and shrubs on site within the hedgerows with the potential to support nesting birds. 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. No schedule 1 bird species were recorded during the survey. Lapwings are recorded as protected within the area of Chaffeymoor 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. 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 as there are no caves or structures. The trees were observed for signs of potential bat habitation and usage. It was concluded that there were trees with the potential to support bats/roosts. These trees are marked and named on the site map Section 7.

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. Bat Activity Surveys for the site will be required. Additionally, should the hedgerows or the trees be impacted by the development, Bat Emergence Surveys will be required for the trees. 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 roost sites.

## 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.

No evidence of dormice was recorded during the survey. 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'. However, the site has potential habitat that would normally support Dormice, if they were present, and it is therefore important to err on the side of caution. Providing the boundary hedges are being retained and lighting is restricted on the hedgerows, it is unlikely to have any impact on dormice. To limit the potential threat to 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.

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. Should the hedgerow be impacted or removed, a dormouse survey and mitigation will be required.

### 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:

- None recorded.

## 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, **One** survey is necessary at this time: Bat Activity Surveys.

**However**, should trees and/or hedgerows be removed further surveys are deemed necessary at this time: Bats and Dormouse. 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, if trees are to be impacted, further surveys would be recommended to determine whether or not bat roosts are present.

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.

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) Manual Bat activity transect surveys
- (ii) Automated bat detector recording surveys.

For a site of this size, more than 0.5 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.

Depending upon the result of the initial surveys, further survey work may be required to determine exactly how the bats are utilising the site. This is especially true for a small number of species including greater and lesser horseshoe bats and soprano pipistrelle, all of which are found within this area of Dorset. You should be kept apprised of the situation should the need for additional survey efforts become apparent.

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. A survey might therefore be required to ascertain the presence or absence of dormice on site if a large section of hedgerow is to be removed.

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.

## 16. Results of Protected Species/Species of Principal Importance

### Surveys

Results of Bat Activity Surveys are not available and mitigation requirements are therefore unknown at this stage.

Further mitigation will be dependent upon surveys required should trees or hedgerows be impacted or need removing. 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 to create entrance. 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

### Amphibians

- **Potential impacts** – Unlikely
- **Mitigation measures** – Not necessary
- **Significance of residual effects** – N/A

### Reptiles

- **Potential impacts** – Unlikely
- **Mitigation measures** – Not necessary
- **Significance of residual effects** – N/A

### Birds

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

### Schedule 1 birds

- **Potential impacts** – None, providing trees are protected (Tree sparrows) and works commence outside of the bird nesting season.

- 
- **Mitigation measures** – None
  - **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
<b>Grassland (Pasture)</b>	Removal	None
<b>Grassland (Amenity)</b>	Removal	None
<b>Hedges and Trees</b>	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 trees/roosts (subject to absence/presence survey results) will need to be established. Further details should be sought from Ecological Surveys Ltd in this case.
<b>Water</b>	None	None
<b>Woodland</b>	None	None
<b>Scrub</b>	None	None
<b>Buildings/ Structures</b>	None	None
<b>Other</b>	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 the 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.

### 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 house sparrow boxes, or sparrow 'terraces' to be erected upon 1 in 3 of the new properties. 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 1 in 3 individual nest boxes and 1 in 3 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.*

## Bats

1 in 3 properties should have bat boxes built into the gable end 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>

## 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.

## 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.

## 20. 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.

## 21. Site Images



Northern Hedge to West



Southern Hedgerow



Large tree in hedgerow



Eastern hedgerow

## 22. 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, eg 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](http://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 month 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.

## 23. 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.

## Appendices

Table 1

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

<p>Flora species recorded on site</p> <p><b>DAFOR scale: - Frequency of species on the site: Dominant-Abundant-Frequent-Occasional-Rare</b></p>		
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R	Corky fruited water dropwort	<i>Oenanthe pimpinelloides</i>
R	Ash	<i>Fraxinus</i>
O	Blackthorn	<i>Prunus spinosa</i>
D	Bramble	<i>Rubus fruticosus agg.</i>
O	Broad-leaved Dock	<i>Rumex obtusifolius</i>
D	Common bent	<i>Agrostis capillaris</i>
O	Common Dandelion	<i>Taraxacum aggregate</i>
O	Common Sorrel	<i>Rumex acetosa</i>
R	Cornish Elm	<i>Ulmus minor Mill. subsp. angustifolia</i>
R	Field Rose	<i>Rosa Arvensis</i>
R	Crack Willow	<i>Salix fragilis</i>
D	Creeping Buttercup	<i>Ranunculus repens</i>
O	Creeping Thistle	<i>Cirsium arvense</i>
R	Curled Dock	<i>Rumex crispus</i>
R	Damson	<i>Prunus domestica subsp institia</i>
O	Dog-rose	<i>Rosa canina agg.</i>
R	Field Maple	<i>Acer campestre</i>
R	Grey Willow	<i>Salix cinerea</i>
O	Hawthorn	<i>Crataegus monogyna</i>
O	Meadow Buttercup	<i>Ranunculus acris</i>
D	Perennial Rye-grass	<i>Lolium perenne</i>
O	Red Clover	<i>Trifolium pratense</i>
R	Ribwort Plantain	<i>Plantago lanceolata</i>
D	White Clover	<i>Trifolium repens</i>
D	Yorkshire-fog	<i>Holcus lanatus</i>

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>
Cotoneaster	<i>Cotoneaster sp</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>

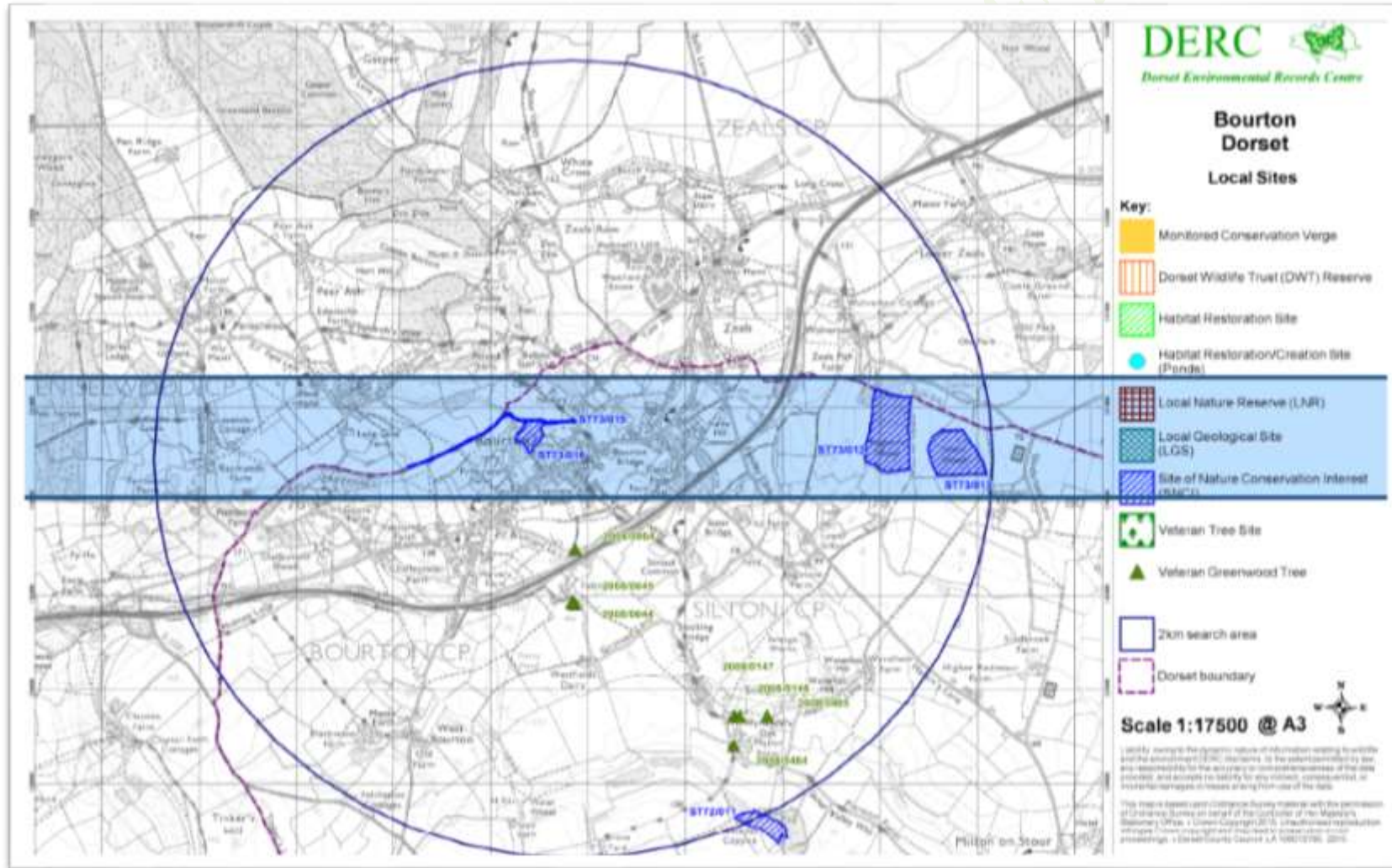
### Additional tree planting:

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> )



## 24. Data Search Results





## 25. References and Further Information

- AA Route planner. [www.theaa.com/route-planner/classic/planner\\_main.jsp](http://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](http://www.chaninweb.co.uk/Chanin%20&%20Gubert2012_Lutra_55_1_LOWRES.pdf)
- Dorset Biodiversity Action Plan: -[www.dorsetwlifetrust.org.uk/bap](http://www.dorsetwlifetrust.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](http://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](http://www.barnowltrust.org.uk)
- Multi Agency Geographical Information for the Countryside: [www.magic.gov.uk](http://www.magic.gov.uk)
- National biodiversity network: [www.nbn.org.uk/Home.aspx](http://www.nbn.org.uk/Home.aspx)
- UK Biodiversity Action Plan:- [www.ukbap.org.uk/NewPriorityList.aspx](http://www.ukbap.org.uk/NewPriorityList.aspx)
- Dorset Wildlife Trust:- [www.dorsetwildlifetrust.org.uk](http://www.dorsetwildlifetrust.org.uk)
- [www.gov.uk/prevent-the-spread-of-harmful-invasive-and-non-native-plants](http://www.gov.uk/prevent-the-spread-of-harmful-invasive-and-non-native-plants)