

MHD 008
MHD 011
MHD 012

Written Representations

**NORTH DORSET LOCAL PLAN PART 1
EXAMINATION IN PUBLIC - RESPONSE ON BEHALF OF CHARLES CHURCH DEVELOPMENTS
LTD. TO MID HEARING STATEMENTS**

MHD 008 - ISSUE 4 HOUSING: SHOWING CHANGES TO THE HOUSING TRAJECTORY

**MHD 011 - ISSUE 7 BLANDFORD: THE WEIGHT AFFORDED TO THE AONB IN RELATION TO
SITES IN BLANDFORD**

**MHD 012 - ISSUE 7 BLANDFORD: ECOLOGICAL ISSUES SURROUNDING DEVELOPMENT AT
BLANDFORD AND THE IMPACT ON THE SSSI**

May 2015

1.0 INTRODUCTION

1.1 This statement comprises a response to the Mid Hearing Documents (MHD) as published by North Dorset District Council (NDDC) on the 30th April. It is submitted on behalf of Charles Church Developments Ltd. (CCDL), part of the Persimmon Homes Group of Companies.

2.0 ISSUE 4: HOUSING

2.1 The first issue to be dealt with is no. 4 - housing - and in particular changes to the housing trajectory. In Paragraphs 4.4 and Figure 3.1 of MHD 008, it is proposed to alter the start date for development at Dorchester Hill, Blandford St. Mary, to the end of the plan period so as to allow for nature conservation mitigation matters to be implemented. CCDL object to this proposed change.

2.2 The basis for the change is set out in MHD 012, with Paragraphs 1.1, 4.3, 4.4 & 5.0 claiming, without any evidence being produced, that time is required to mitigate and enhance the long term prospects for the bat population. However, there is no foundation for this assertion.

2.3 In preparing for the submission of a detailed application on the land controlled by CCDL (see Appendix 1 to our EIP February representations on Issue 1), the following ecological studies have been carried out:

- Ecological Appraisal Phase 1
- Ecological Mitigation Plan
- Ecological Appraisal Phase 2

2.4 These studies accompany this response to the MHD's, and provide suitable evidence of the ecological value of the site. They conclude that appropriate mitigation can be implemented in respect of Bats, Cockchaffer Beetles, Common Dormice, Reptiles and Nesting Birds. Precise details are set out in Section 5 and the Appendices to the Phase 2 Report.

2.5 In considering this evidence, the conclusions and proposed mitigation, there is no justification for amending the housing trajectory from the estimate set out in MHD

003. Instead, this anticipated a commencement of development in 2016, with a three year build programme to 2019. This is therefore endorsed, and NDDC are requested to amend the trajectory back to its original prediction.

3.0 ISSUE 7: BLANDFORD - AONB

3.1 Within MHD 011, Appendix A includes reference to the development of land west of Blandford St. Mary. This includes the site controlled by CCDL. Paragraphs 6.3-6.5 and A.4 set out criteria by which the impact on the AONB can be minimised. These include locating development away from the more elevated and exposed southern arable field; avoid any break in the skyline when seen from viewpoints on New Road; retain, protect and manage the key mature old hedgerows that cross the site; and maintain a network of vegetation within which development could 'sit'.

3.2 The development proposed by CCDL can fulfil all of these objectives in their entirety. In addition, there are four mature Horse Chestnut trees in the centre of the site. These are proposed to be retained within an area of open space that will compliment, in landscape terms, the mature boundaries of the site. The visual impact, when viewed from the AONB, is therefore considered to be acceptable - and for the reasons set out in the SOCG as submitted in advance of the EIP.

4.0 ISSUE 7: BLANDFORD - ECOLOGY

4.1 Before commenting on matters of ecology, CCDL would like to express their disappointment that the communication between Natural England (NE) and NDDC, comprising the e-mail exchange of the 16th April (Appendix C of MHD 012) was not immediately brought to their attention. In particular, both parties had knowledge of the EIA Screening and Pre-Application processes. Had we been made aware of this information, work on the additional required evidence could have commenced at an earlier date.

4.2 We strongly disagree with the third bullet point of Paragraph 1.1 of MHD 012. There is no justification for excluding the CCDL site as a residential designation until such time as mitigation is agreed with Natural England. Indeed, it is noted that this approach runs contrary to the retention of the site within Policy 16.

- 4.3 Instead, it is more appropriate for the residential designation to remain, albeit a mitigation package should be agreed prior to planning permission being granted. Given the evidence and conclusions of the ecological appraisals, this is considered to be the appropriate way of ensuring that the housing delivery targets of the plan are not compromised, whilst ensuring that matters of ecological importance are appropriately dealt with through conditions of planning permission and a Section 106 Agreement.
- 4.4 Similarly, we disagree with the comments of NE as set out in the bullet points at the end of Page 8 and the top of Page 9 of MHD 012. Ecological information is available - as now accompanying these representations. The site is of moderate ecological interest, and mitigation can be agreed and secured. There is therefore no reason to suggest that the site can only come forward for development at the end of the plan period. Evidence clearly demonstrates that it is developable at an early stage. The conclusion in Paragraph 5.4 is therefore incorrect.



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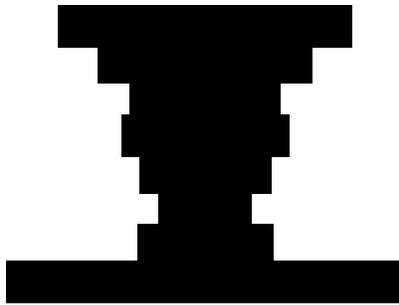
LAND AT DORCHESTER HILL, BLANDFORD ST. MARY

MAY 2014

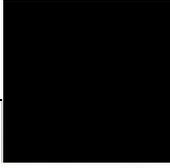
ON BEHALF OF PERSIMMON HOMES



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SUMMARY

1. Lindsay Carrington Ecological Services Limited were commissioned by Persimmon Homes to conduct an Ecological Appraisal at Dorchester Hill, Blandford St. Mary (Grid ref: ST 882 056).
2. This survey was required to support a planning application for construction of new residential buildings on the site.
3. An Ecological Appraisal is essentially a multi-disciplinary walk-over survey and was conducted with the objective of identifying any ecological constraints associated with the proposals such as the site's potential to support any legally protected species or habitats of high nature conservation value.
4. The site currently consists of an improved field with semi-improved grassland strips, mature trees and boundary hedgerows.
5. Bryanston SSSI lies within close proximity to the site and the population of roosting greater horseshoe bats may use the site for foraging, as such further recommendations have been made in Section 5.2.
6. Further recommendations have been made in regards to hedgerows, bats, dormice, reptiles and birds. This includes surveys for dormice, reptiles and bats.
7. Recommendations have been made in Section 5.6 to increase the biodiversity value of the site, which includes the planting of native shrubs in any landscaping and providing nesting opportunities for birds.

1.0 INTRODUCTION

Lindsay Carrington Ecological Services Limited were commissioned by Persimmon Homes to conduct an Ecological Appraisal at Dorchester Hill, Blandford St. Mary (Grid ref: ST 882 056). This survey was undertaken in support of a planning application for the construction of new residential buildings on the site.

An Ecological Appraisal is essentially a multi-disciplinary walk-over survey and was conducted with the objective of identifying any ecological constraints associated with the proposals such as the site's potential to support any legally protected species or habitats of high nature conservation value.

Section 2 of the report provides some background information on legislative requirements and relevant policy. Section 3 details the methodologies adopted for the ecological surveys that were conducted and Section 4 provides an account of the survey results. Section 5 provides information on the relevance of the results to the proposed development and makes recommendations for measures to mitigate and compensate for the effects on a particular habitat or species.

2.0 LEGISLATION AND POLICY

2.1 Legislation

The following legislation may be of relevance to the proposed works. Full details of statutory obligations with respect to biodiversity and the planning system can be found in DEFRA Circular 01/2005.

- **The Conservation of Habitats and Species Regulations 2010:**
This transposes the EU Habitats Directive (Council Directive 92/43/EEC) into domestic law. The Regulations provide protection for a number of species including:
 - All species of bat;
 - Dormouse;
 - Otter; and
 - Great crested newt.

This legislation makes it an offence to deliberately capture, kill or injure individuals of these species listed on Schedule 2 and damage or destroy their breeding site or place of shelter. It is also illegal to deliberately disturb these species in such a way as to be likely to significantly affect: (i) the ability of any significant group of the species to survive, breed or rear or nurture their young; or (ii) the local distribution or abundance of the species¹;

This legal protection means that where development has the potential to impact on bats, or other European protected species, the results of a protected species survey must be submitted with a planning application.²

Special Areas of Conservation (SACs) and Special Protection Areas (SPAs) are also protected under this legislation. These are a network of sites designated for supporting habitats or species of high nature conservation importance in the European context. Any activity that has a detrimental effect on these European sites is made an offence under the Regulations. Where a development is likely to have a significant impact on a European site, the Regulations require a rigorous assessment of the impacts, known as an Appropriate Assessment.

¹ Note that the amendment to the Habitats Regulations in August 2007 and January 2009 has resulted in an increase in the threshold of illegal levels of disturbance to European Protected Species (EPS). An offence is only committed if the deliberate disturbance would result in significant impacts to the EPS population. However, it should be noted that activities that cause low levels of disturbance to these species continue to constitute an offence under Section 9 of the Wildlife and Countryside Act (see below).

² DEFRA Circular 01/2005: Biodiversity and Geological Conservation – Statutory Obligations and their Impact within the Planning System.

- **The Wildlife and Countryside Act 1981 (and amendments):** Protected fauna and flora are listed under Schedules 1, 5 & 8 of the Act. Species likely to be of relevance include:
 - All species of **bat**. It is an offence to intentionally or recklessly disturb any bat whilst it is occupying a roost or to intentionally or recklessly obstruct access to a bat roost;
 - All species of **British reptile** (in particular grass snake, common lizard, adder and slow-worm). It is illegal to kill or injure these species; and
 - **Great crested newt**. It is illegal to obstruct access to any structure or place which great crested newts use for shelter or protection or to disturb any great crested newt while it is using such a place.

This Act also makes it an offence to intentionally kill, injure or take any wild bird or to take, damage or destroy their eggs and nests (whilst in use or being built). In addition, it is an offence to disturb any nesting bird listed on Schedule 1 or their young.

Schedule 9 of the Act lists those species for which it is an offence to plant or cause their spread. Species listed under Schedule 9 that are most likely to be encountered are Japanese knotweed (*Fallopia japonica*) and giant hogweed (*Heracleum mantegazzianum*).

Sites of Special Scientific Interest (SSSIs) are also protected under the Wildlife and Countryside Act 1981. These are a network of sites identified as being of national nature conservation importance and hence afforded legal protection.

- **The Countryside and Rights of Way Act 2000:** This Act strengthens nature conservation and wildlife protection through a number of mechanisms. It places a duty on Government Ministers and Departments to conserve biological diversity, provides police with stronger powers relating to wildlife crimes, and improves protection and management of SSSIs.
- **The Protection of Badgers Act 1992:** This Act makes it an offence to wilfully take, injure or kill a badger (*Meles meles*); cruelly mistreat a badger; interfere with badger setts, sell or possess a live badger; mark or ring a badger. A licence is required for work which might damage or disturb a sett.
- **Wild Mammals (Protection) Act 1996:** This Act provides protection for all wild animals from intentional acts of cruelty.
- **Hedgerow Regulations 1997:** These Regulations establish a set of criteria for assessing the importance of hedgerows. Where a hedgerow is deemed to be 'important' its removal is prohibited without consent from the local Planning Authority.

2.2 Policy

The following policy is of relevance to the proposed works:

- **National Planning Policy Framework (NPPF):** This sets out the Government's vision for biodiversity in England with the broad aim that planning, construction, development and regeneration should maintain and enhance, restore or add to biodiversity and geological conservation interests. NPPF includes sections on legally protected species and sites (see Section 2.1).
- **Local Sites (including Sites of Nature Conservation Interest (SNCIs), Local Nature Reserves (LNR), and Biological Notification Sites (BNSs)/County Wildlife Sites (CWSs):** These are a network of sites designated for their nature conservation importance in a local context. Although they are not afforded legal protection they contribute towards local and national biodiversity. Where such development is permitted, the local planning authority will use conditions and/or planning obligations to minimise the damage and to provide compensatory and site management measures where appropriate.
- **Biodiversity Action Plans (BAPs):** BAPs set out policy for protecting and restoring priority species and habitats as part of the UK's response as signatories to the Convention on Biological Diversity. BAPs operate at both a national and local level with priority species and habitats identified at a national level and a series of Local BAPs that identify ecological features of particular importance to a particular area of the country. The requirement to consider and contribute towards BAP targets was strengthened through the Countryside and Rights of Way Act 2000. Habitat and Species Action Plans that are likely to be of relevance include:
 - Slow worm (UK BAP).
 - Pipistrelle bat (UK BAP).
 - Brown long-eared bat (UK BAP).
 - Hedgerow (UK BAP).

3.0 METHODOLOGY

3.1 Desk study

Records of protected species and non-statutory designated sites were obtained from Dorset Environmental Records Centre (DERC) within 2 km of the site. The Multi-Agency Geographical Information for the Countryside (MAGIC) website was also used to provide any information they may hold on statutory designated sites within 5 km of the proposed development.

3.2 Field study

3.2.1 Vegetation

The standard Phase 1 habitat survey methodology (JNCC, 2010) was adopted whereby habitats are mapped using colour codes (see Appendix II). A detailed walkover survey was undertaken on the 15th April 2014 by Sophie Smith, directly searching for legally protected and invasive species of plant and categorising any habitats of ecological value that were encountered. A general description of the vegetation was also noted, listing species encountered and scoring their abundance using the DAFOR scale:

- D Dominant;
- A Abundant;
- F Frequent;
- O Occasional;
- R Rare;
- L Local (used as a prefix to any of the above).

3.2.2 Protected Species Assessment

Habitats and features were assessed for their potential to support protected species (see Section 2). In many cases determining the presence, distribution and population size of protected species will require additional, specialist surveys.

Badgers

A direct search was undertaken for signs of badger. Signs of badger may include setts, dung pits, latrines, paths or hairs on fences and vegetation. Any setts encountered were classified according to the number of entrances and the extent of their use.

Bats

Trees

Bats often roost in trees. Features such as old woodpecker holes, splits, cavities and rot holes, loose or flaking bark and ivy creepers will be exploited by bats to roost. Any trees present on site were therefore assessed for their potential to support roosting bats by searching for such features.

The presence of roosting bats can be spotted through signs such as accumulations of moth or butterfly wings or bat droppings, the presence of bats or bat remains and the presence of urine or grease staining, particularly around potential entrance and exit points.

The absence of droppings / evidence cannot be treated as conclusive evidence that bats are not present, and therefore an assessment was made of the potential of the trees on-site to support bats based on the scale described below in Table 1:

Table 1 - Criteria for assessing bat roosting potential of buildings and trees

Confirmed Roost	Evidence of bat occupation found
High Roosting Potential	With significant roosting potential, either because they contain a large number of suitable features or those features present appear optimal
Medium Roosting Potential	Features with moderate roosting potential, with roosting features appearing less suitable
Low or Negligible Roosting Potential	Buildings or trees with few, if any, features suitable for roosting

Dormice

The habitat on the site was assessed for the potential to support dormice (*Muscardinus avellanarius*), which are found in habitats such as woodlands, scrub and hedgerows with good connectivity and suitable food plants. A visual inspection for their distinctive nests was undertaken. Where fruiting hazel (*Corylus avellana*) is present nuts are checked for dormice distinctive opening holes. Satellite images were used to assess the connectivity of any suitable habitat present on the site to other areas of woodland and hedgerow networks.

Great crested newts

Suitable breeding ponds are essential to support populations of great crested newt (*Triturus cristatus*) although they actually only spend a relatively short period of the year in the ponds during the spring for breeding. The remainder of the year is spent in suitable 'foraging' habitat such as tall grassland and woodland. During the winter the great crested newt hibernates, often amongst the roots of trees and scrub or in places such as piles of rubble, amongst foundations of buildings or under fallen trees and logs.

Great crested newts are known to forage up to at least five hundred metres from their breeding sites and suitable habitats that fall within two hundred and fifty metres must be considered even in situations where the breeding site itself will not be affected. Any

ponds within a two hundred and fifty metre radius will therefore be identified during this survey and habitats within and immediately adjacent to the site were assessed in terms of their suitability as foraging habitat. Further specialist surveys will be recommended where appropriate.

Reptiles

Reptiles are widespread in habitats that provide both cover, in the form of scrub or tall vegetation, and basking areas such as areas of hard standing or short grassland communities. Piles of debris or rubble also provide excellent cover and hibernation sites for reptiles. Effective survey for reptiles is time-consuming and labour intensive involving the use of artificial refuges (usually roofing felt or carpet tiles) which attract individuals. Suitable habitat for reptiles was therefore identified during this survey and recommendations for targeted survey made where appropriate.

4.0 RESULTS

4.1 Desk study

Statutory and non-statutory sites

Table 2 below lists sites designated for nature conservation located within 5 km of the site.

Table 2: Statutory designated sites within a 5 km radius and non-statutory sites within a 2 km radius of Dorchester Hill, Blandford St. Mary

Site name	Conservation status	Distance from site	Size (Ha)	Habitat description
Bryanston	SSSI ³	1.5 km north west	0.3	The large roof space in the derelict 18th century kitchens at Bryanston is the only known breeding site for the greater horseshoe bat <i>Rhinolophus ferrum-equinum</i> in Dorset and the colony is one of only 7 remaining in Britain.
Blandford Camp	SSSI	4.0 km north east	28.49	The site is of special interest for its high quality downland turf which has developed on brown rendzina soils on an exposed and undulating plateau of the upper chalk dissected by dry valleys.
The Cliff, Bryanston	SNCI ⁴	140 m north west	unknown	A mostly Yew woodland on a steep slope.
The Milldown	SNCI	1.9 km north	unknown	A small remnant of unimproved chalk grassland & semi-improved neutral grassland.

Bryanston SSSI lies within close proximity to the site and the population of roosting greater horseshoe bats may use the site for foraging, as such further recommendations have been made in Section 5.2,

³ SSSI: Site of Special Scientific Interest

⁴ SNCI: Sites of Nature Conservation Interest

Protected species records

Table 3 below presents the results of the search for protected species highlighted by DERC database within 2 km of the site.

Table 3 - Protected and notable species within a 2 km radius of land at Dorchester Hill, Blandford St. Mary

Common Name	Scientific name	Status	Location
<i>Amphibians and reptiles</i>			
Slow worm	<i>Anguis fragilis</i>	Schedule 5, WCA ⁵ , UK BAP ⁶	1 record 145 m east dated 2006
<i>Mammals</i>			
Barbestelle	<i>Barbastella barbastellus</i>	Schedule 2 ⁷ , Habs Regs, Schedule 5, WCA, Annex II ⁸	12 records dated 2000-2004 with the closest records 1.1 km north west of the site.
Serotine	<i>Eptesicus serotinus</i>	Schedule 2, Habs Regs, Schedule 5, WCA	6 records dated 2001-2011 with the closest record 450 m to the west.
Otter	<i>Lutra lutra</i>	Schedule 2, Habs Regs, Schedule 5, WCA	54 records dated 2003-2011 with the closest record 335 m to the north of the site on the river Stour.
Badger	<i>Meles meles</i>	Protection of Badger Act 1992	36 records dated 2003 – 2011 with the closest record 84 m north east of the site
Hazel dormouse	<i>Muscardinus avellanarius</i>	Schedule 2, Habs Regs, Schedule 5, WCA, UK BAP	2 records dated 2000 and 2003 with both records from Bryanston wood and closest record 1.6km north west.
Daubenton's	<i>Myotis daubentonii</i>	Schedule 2, Habs Regs, Schedule 5, WCA	1 record dated 2011 620m to the north east of the site.
Natterer's	<i>Myotis nattereri</i>	Schedule 2, Habs Regs, Schedule 5, WCA	7 records dated 2000-2005 1.6km to the north west of the site.
Common pipistrelle	<i>Pipistrellus pipistrellus</i>	Schedule 2, Habs Regs, Schedule 5, WCA	11 records dated 2000 and 2006 with the closest record 410 m north east

⁵ WCA: Wildlife and Countryside Act (1981) (as amended)

⁶ UK BAP: UK Biodiversity Action Plan

⁷ Habs Regs: The Conservation of Habitat and Species Regulations 2010

⁸ Annex II: Habitats Directive Annex II

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Common Name	Scientific name	Status	Location
Soprano pipistrelle	<i>Pipistrellus pygmaeus</i>	Schedule 2, Habs Regs, Schedule 5, WCA UK BAP	8 records dated 2003-2007 with the closest record 670m north east
Brown long-eared	<i>Plecotus auritus</i>	Schedule 2, Habs Regs, Schedule 5, WCA, UK BAP	12 records dated 2001-2011 with the closest record 1.1 km north west
Grey long-eared	<i>Plecotus austriacus</i>	Schedule 2, Habs Regs, Schedule 5, WCA, UK BAP	2 records dated 2001 and 2005 1.6km north west
Greater Horseshoe	<i>Rhinolophus ferrumequinum</i>	Schedule 2, Habs Regs, Schedule 5, WCA, Annex II	93 records dated 2000-2007 from a maternity colony 1.6km to the north west of the site.
Lesser Horseshoe	<i>Rhinolophus hipposideros</i>	Schedule 2, Habs Regs, Schedule 5, WCA, Annex II	4 records dated 2001-2004 1.6km to the north west of the site.
Birds			
Barn owl	<i>Tyto alba</i>	Schedule 1, BoCC ⁹ Amber	12 records within 2km of the site dated 2000-2008
Black redstart	<i>Phoenicurus ochruros</i>	Schedule 1, BoCC Amber	2 records within 2km of the site dated 2001 and 2004
Brambling	<i>Fringilla montifringilla</i>	Schedule 1	2 records within 2km of the site dated 2008
Cettis warbler	<i>Cettia cetti</i>	Schedule 1	20 records within 2km of the site dated 2000-2008
Common Bullfinch	<i>Pyrrhula pyrrhula</i>	BoCC Amber, UK BAP	10 records within 2km of the site dated 2007 and 2010
Common Cuckoo	<i>Cuculus canorus</i>	BoCC Red	1 records within 2km of the site dated 2012
Grasshopper warbler	<i>Locustella naevia</i>	BoCC Red	1 records within 2km of the site dated 2001
Whitethroat	<i>Sylvia communis</i>	BoCC Amber	2 records within 2km of the site dated 2000-2008
Corn bunting	<i>Emberiza calandra</i>	BoCC Red	1 records within 2km of the site dated 2008

⁹ BoCC: Birds of Conservation Concern

Common Name	Scientific name	Status	Location
Hobby	<i>Falco subbuteo</i>	Schedule 1	12 records within 2km of the site dated 2000-2008
Golden Plover	<i>Pluvialis apricaria</i>	Annex 1, BoCC Amber	5 records within 2km of the site dated 2000-2006
Northern Lapwing	<i>Vanellus vanellus</i>	BoCC Red, UK BAP	4 records within 2km of the site dated 2002-2006
Skylark	<i>Alauda arvensis</i>	BoCC Red, UK BAP	3 records within 2km of the site dated 2003-2008
Yellow Wagtail	<i>Motacilla flava</i>	BoCC Red, UK BAP	3 records within 2km of the site dated 2001-2008
Yellowhammer	<i>Emberiza citrinella</i>	BoCC Red, UK BAP	8 records within 2km of the site dated 2000-2008
Invertebrates			
Chalk Hill Blue	<i>Polyommatus (Lysandra) coridon</i>	Schedule 5	1 record within 2km of the site dated 2004
Cinnabar	<i>Tyria jacobaeae</i>	UK BAP	1 record within 2km of the site dated 2004

These records of protected and notable species in the vicinity of the site increase the likelihood of them being present where suitable habitat is identified in the field survey.

4.2 Field study

4.2.1 Vegetation

The accompanying Phase 1 habitat map provided as Appendix I depicts the habitats encountered and highlights areas of particular interest with target notes.

Descriptions of these habitats are provided below:

Improved grassland (Target note 1)

The majority of the site was improved grassland used as pasture fields dominated by perennial rye grass (*Lolium perenne*), with abundant greater plantain (*Plantago major*) and locally frequent spear thistle (*Cirsium vulgare*). A list of species found in the improved grassland is provided in table 4.

Table 4: Species present within the improved grassland

Common name	Latin name	Abundance	Status
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Common name	Latin name	Abundance	Status
Grasses, sedges and rushes			
Cock's-foot	<i>Dactylis glomerata</i>	R	Common & widespread
Perennial rye-grass	<i>Lolium perenne</i>	D	Common & widespread
Herbaceous plants			
Creeping thistle	<i>Cirsium arvense</i>	O	Common & widespread
Spear thistle	<i>Cirsium vulgare</i>	LF	Common & widespread
Red dead-nettle	<i>Lamium purpureum</i>	R	Common on arable, wasteland & hedgebanks
Ribwort plantain	<i>Plantago lanceolata</i>	R	Common & widespread
Greater plantain	<i>Plantago major</i>		Common & widespread
Dock sp.	<i>Rumex sp.</i>	O	Common & widespread
Dandelion	<i>Taraxacum officinale</i> agg.	R	Common & widespread
White clover	<i>Trifolium repens</i>	LF	Common & widespread
Common nettle	<i>Urtica dioica</i>	O	Common & widespread

Species present are common and widespread and no further action is required.

Semi-improved grassland (Target note 2)

Areas of semi-improved grassland are present at the base of the hedgerow/treeline to the south and west of the site. These areas have abundant Yorkshire-fog (*Holcus lanatus*) and creeping buttercup (*Ranunculus repens*) with and occasional cleavers (*Galium aparine*) with rare shepherd's-purse (*Capsella bursa-pastoris*). A list of species found in the semi-improved grassland is provided in table 5.

The strip of semi-improved grassland along the south tree line contained the same species as above but was a mosaic with tall ruderal habitat, with locally dominant common nettle (*Urtica dioica*) and brambles (*Rubus fruticosus* agg.).

Table 5: Species present within the semi-improved grassland

Common name	Latin name	Abundance	Status
Grasses, sedges and rushes			
Yorkshire-fog	<i>Holcus lanatus</i>	A	Common & widespread
Perennial rye-grass	<i>Lolium perenne</i>	O	Common & widespread
Herbaceous plants			
Lesser burdock	<i>Arctium minus</i>	R	Common & widespread
Shepherd's-purse	<i>Capsella bursa-pastoris</i>	R	Common on wasteland, roadsides & arable land
Creeping thistle	<i>Cirsium arvense</i>	R	Common & widespread
Hemlock	<i>Conium maculatum</i>	R	Common by streams, on wasteland & roadsides
Cleavers	<i>Galium aparine</i>	O	Common & widespread
White dead-nettle	<i>Lamium album</i>	LF	Common & widespread

Common name	Latin name	Abundance	Status
Ribwort plantain	<i>Plantago lanceolata</i>	R	Common & widespread
Creeping buttercup	<i>Ranunculus repens</i>	A	Common & widespread
Dock sp.	<i>Rumex sp</i>	F	Common & widespread
Common nettle	<i>Urtica dioica</i>	F	Common & widespread
Germander speedwell	<i>Veronica chamaedrys</i>	O	Common & widespread

Species present are common and widespread and no further action is required. This area could provide habitat for reptiles and further recommendations have been made in section 5.4.

Scattered trees (Target note 3)

Mature ash (*Fraxinus excelsior*) and horse chestnut (*Aesculus hippocastanum*) trees are present in the centre of the site. A tree line is present along the southern boundary of the site with beech (*Fagus sylvatica*), dominant hornbeam (*Carpinus betulus*) and ash present.

Trees present provide potential habitat for nesting birds, roosting bats and foraging habitat for birds, mammals and invertebrates. Further recommendations have been made in Sections 5.2 and 5.3.

Hedgerows

Hedgerows are present on the boundaries of the site with the hedgerow on the western boundary being species rich and infrequently managed. Species present within these hedgerows include sycamore (*Acer pseudoplatanus*), blackthorn (*Prunus spinosa*), hawthorn (*Crataegus monogyna*), spindle (*Euonymus eurpaeus*) and holly (*Ilex aquifolium*). Table 6 lists species that were recorded within the hedgerows present on site.

Table 6: Hedgerows recorded on site

Key (see Phase 1 map)	Woody species	Ground flora	Height (m)	BAP status (5 species / 30 metres?)	General description
T5	Blackthorn Hawthorn Spindle Holly	Ivy (<i>Hedera helix</i>) Bramble	1.2 m	No	Managed intact hedgerow.
T6	Blackthorn Elder Spindle Elm Rose Hawthorn	Sycamore, common nettle, lords and ladies (<i>Arum maculatum</i>), bramble, dock species (<i>Rumex sp.</i>), ivy	1.5 m	Yes	Infrequently managed hedgerow with some small gaps present.

The hedgerow T6 is species rich and qualifies as a UKBAP hedgerow and may qualify under the hedgerow regulations. Both hedgerows present provide potential habitat for nesting birds, and foraging habitat for bats, birds, mammals and invertebrates. Further recommendations have been made in Sections 5.1, 5.2, 5.3, 5.4 and 5.5.

4.2.2 Protected species

Badgers

During the survey no signs of badger activity such as latrines, hair or footprints were noted. No setts were found to be present on the site.

No further action is required.

Bats

The mature trees within the site boundary have cracks and splits present which could be used by roosting bats. The trees were assessed as having low bat potential. The large hedgerows around the boundary of the site could be used as a commuting route for the local bat population and the site itself may provide foraging habitat for the local bat population especially any greater horseshoes in the area.

Further action is recommended in section 5.2

Dormice

The site is close to Bryanston wood which holds records of dormice and the hedgerows on the site provide suitable food plants for dormice. The hedgerows on the site connect to a network of hedgerows in the surrounding area which connect to pockets of woodland. No signs of dormice such as nests were noted during the survey but the hedgerows were assessed as having the potential to support dormice.

Further action has been recommended in section 5.3

Great crested newts

No waterbodies have been identified from aerial photographs and maps within a five hundred metre radius of the site boundary. In addition the short sward grassland habitat on site was considered to be of limited potential for foraging newts. The semi-improved grassland and hedgerows provide suitable habitat but the presence of great crested newts on the site is considered unlikely due to the absence of waterbodies in the area. If a great crested newt is discovered during the works an ecologist should be consulted before works proceed.

As no breeding ponds are on site or within 500 metres of the site no further action is required.

Reptiles

The semi-improved grassland habitat at the base of the hedgerows provides potential habitat for common reptiles such as slow-worm (*Anguis fragilis*). There is a manure pile in the northern corner of the site which may provide egg laying habitat for grass snakes and which could be used as refugia for local reptiles.

Further action is recommended in section 5.4

Nesting birds

The trees and hedgerows on the site provide nesting habitat for common garden and farmland birds.

Further recommendations have been made in section 5.5.

5.0 CONCLUSIONS AND RECOMMENDATIONS

The site was generally considered to be of moderate ecological value and the site does have potential for some protected species to be present on site and therefore encountered during works. Mitigation strategies and further surveys are required relating to the presence of bats, nesting birds, dormice and reptiles. These have been presented below along with recommendations to enhance the developed site for wildlife.

5.1 Hedgerows

The hedgerow along the western boundary has been identified as qualifying as a UKBAP hedgerow with six woody species within it. If this hedgerow or sections within it are planned for removal as part of the development further survey will be required. The survey will be required to ascertain if the hedgerow qualifies as 'Important' under the Hedgerow Regulations 1997. If assessed as 'Important' then permission will be required from the Local Authority to remove sections of the hedge.

5.2 Bats

The mature trees within the site have been assessed as having low bat potential and therefore if these trees are scheduled to be felled as part of the development they will require further survey work to determine if they are used by roosting bats. The trees will need a closer inspection by a licensed tree climber to inspect the cracks and crevices for the presence of bats or signs of their presence such as droppings, grease marks or scratch marks.

The site is 1.6 km away from a SSSI greater horseshoe roost and the site may provide foraging for the bats present in the roost. The pasture fields represent good quality foraging habitat for these species as horseshoe bats forage on dug beetles. It is recommended that activity surveys are carried out on the site due to the proximity of the roost and records of horseshoes in the area. One visit per month between April and October in line with the Bat Conservation Trust guidelines (Hundt 2012) will be required as a minimum. These comprise dusk transects walking the site recording bat usage, and one pre-dawn together with a dusk combined survey (preferably undertaken in August).

5.3 Dormice

The hedgerows on the site are species rich and may provide habitat for dormice in the local area. If any sections of these hedgerows are scheduled to be removed as part of the development surveys will be required to ascertain whether dormice are present. Dormice surveys involve placing dormouse tubes within the hedgerows and checking for signs of use by dormice. These surveys can be carried out once a month between May and October and require a minimum of five visits.

If dormice are found to be present within the of hedgerows which will be impacted by the development a European Protected Species Licence will be required from Natural England with suitable mitigation incorporated into the development design.

5.4 Reptiles

The majority of the site does not provide good foraging habitat for reptiles due to the short sward height, however habitat at the base of the hedgerows is suitable and reptiles may be present on these areas. If any of these sections of habitat are due to be cleared for the development it is recommended that reptile surveys are carried out to establish if reptiles are present on the site. Reptile surveys involve placing artificial refugia across the site, in the form of roofing felt, which are checked seven times. The survey should cover the suitable habitat across the site. These surveys can be carried out between March and October with the most effective months for survey being April, May and September.

5.5 Nesting birds

The mature trees, hedgerows and scrub around the site, provide foraging and nesting habitat both for common and widespread species of bird such as blue tit (*Cyanistes caeruleus*) and wren (*Troglodytes troglodytes*) as well as birds listed as amber on the BoCC (Birds of Conservation Concern) list such as dunnock (*Prunella modularis*), and Biodiversity Action Plan (BAP) species such as song thrush (*Turdus philomelos*). The following precautions should negate risk of harming, injuring or contributing to the demise of these species:

- All vegetation clearance should be conducted outside of the bird nesting season which is considered to run from March to September. Where this is not possible a suitably qualified ecologist should check potential nesting habitat immediately prior to clearance. Where nesting birds are encountered clearance must be postponed until the nestlings have fledged.
- Ecological enhancement measures described in Section 5.6 will provide foraging and nesting opportunities for many species.

5.6 Ecological enhancement

A few suggestions for incorporation within the design of the housing development have been made below:

- Provision of bat boxes and nest boxes for bird species such as swift, house martin and house sparrow on the walls of the buildings or trees. Bat boxes and tubes, and bird boxes can be purchased from websites such as Alana Ecology

<http://www.alanaecology.com> and Jacobi Jayne www.jacobijayne.co.uk, and their provision on site would enhance the habitat for the local bat and bird population.

- Where possible, piles of dead wood (including old tree stumps) should be positioned along the site boundaries to create habitat for a wide range of invertebrates, small mammals and birds.
- Sowing proposed amenity grassland with a wildflower lawn mix (such as Emorsgate EL1 <http://wildseed.co.uk>) would provide better nectar sources for invertebrates and hence is of greater value for foraging birds.
- Use of native shrubs and trees for landscaping schemes provides foraging habitat for a range of bird species. Suitable species include hazel (*Corylus avellana*), ash (*Fraxinus excelsior*), dog-rose (*Rosa canina*), elder (*Sambucus nigra*), blackthorn (*Prunus spinosa*), hawthorn (*Crataegus monogyna*) and field maple (*Acer campestre*).

6.0 REFERENCES

Hundt L (2012) *Bat Surveys: Good Practice Guidelines*, 2nd edition, Bat Conservation Trust.

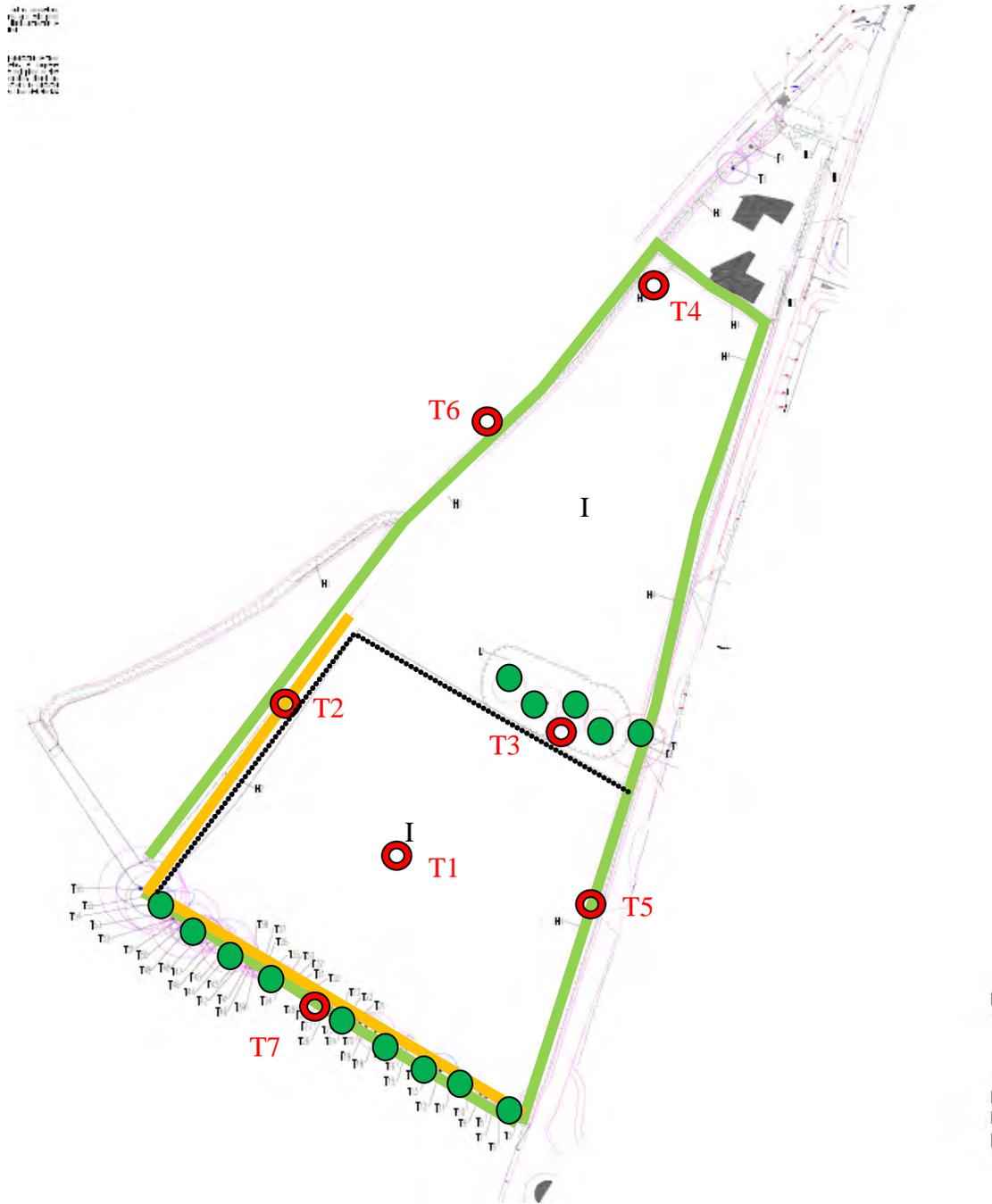
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APPENDIX I: Phase 1 Habitat Map



Key to Phase 1 Habitat Map

	Improved grassland
	Semi-improved grassland
	Hedge
	Fence
	Tree line
	Scattered trees
	Target note

Target notes to accompany Phase 1 habitat map

Target Note	Description
T1	Improved grassland with a short sward height. Species present are cock's foot (<i>Dactylis glomerata</i>), perennial rye-grass (<i>Lolium perenne</i>), ribwort plantain (<i>Plantago lanceolata</i>), creeping thistle (<i>Cirsium arvense</i>), red dead-nettle (<i>Lamium purpureum</i>), common nettle (<i>Urtica dioica</i>), spear thistle (<i>Cirsium vulgare</i>), white clover (<i>Trifolium repens</i>) and dandelion (<i>Taraxacum officinale</i> agg.).
T2	Semi-improved grassland at the base of the hedgerows and tree line. Species present include yorkshire-fog (<i>Holcus lanatus</i>), lesser burdock (<i>Arctium minus</i>), hemlock (<i>Conium maculatum</i>), creeping thistle (<i>Cirsium arvense</i>), shepherd's-purse (<i>Capsella bursa-pastoris</i>), Dock species (<i>Rumex</i> sp.), white dead-nettle (<i>Lamium album</i>), common nettle, creeping buttercup (<i>Ranunculus repens</i>), germander speedwell (<i>Veronica chamaedrys</i>), ribwort plantain (<i>Plantago lanceolata</i>).
T3	Mature ash (<i>Fraxinus excelsior</i>) and horse chestnut (<i>Aesculus hippocastanum</i>) trees are present in the centre of the site.
T4	Manure pile
T5	A managed hedgerow with hawthorn, spindle, holly, ivy and bramble present within it.
T6	A part-managed species rich hedgerow with sycamore, blackthorn, elder, spindle, elm, rose, hawthorn, nettles, lords and ladies, bramble, dock species and ivy.
T7	A tree line is present along the southern boundary of the site with hornbeam (<i>Carpinus betulus</i>), beech (<i>Fagus sylvatica</i>), and ash present.

APPENDIX II: Proposed development





**LINDSAY CARRINGTON ECOLOGICAL
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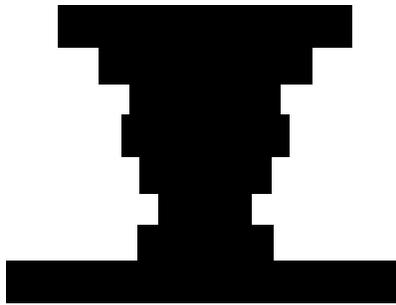
ECOLOGICAL APPRAISAL & PHASE 2 SURVEYS
LAND AT DORCHESTER HILL,
BLANDFORD ST. MARY

MAY 2014 UPDATED MAY 2015

ON BEHALF OF PERSIMMON HOMES



LINDSAY CARRINGTON ECOLOGICAL
SERVICES LIMITED



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SUMMARY

1. Lindsay Carrington Ecological Services Limited were commissioned by Persimmon Homes to conduct an Ecological Appraisal at Dorchester Hill, Blandford St. Mary (Grid ref: ST 882 056).
2. This survey was required to support a planning application for construction of new residential buildings on the site.
3. An Ecological Appraisal is essentially a multi-disciplinary walk-over survey and was conducted with the objective of identifying any ecological constraints associated with the proposals such as the site's potential to support any legally protected species or habitats of high nature conservation value.
4. The site currently consists of an improved field with semi-improved grassland strips, mature trees and boundary hedgerows.
5. Bryanston SSSI lies within close proximity to the site and the population of roosting greater horseshoe bats. The activity surveys identified greater horseshoes use the site for foraging and commuting, as such further recommendations have been made in Section 5.1.
6. Dormice are present within the boundary hedgerows of the site and further recommendations and a mitigation strategy have been provided in section 5.2.
7. A low population of slow worms was found to be present on the site and further recommendations and a mitigation strategy have been provided in section 5.3.
8. Recommendations have been made in Section 5.5 to increase the biodiversity value of the site, which includes the planting of native shrubs in any landscaping and providing nesting opportunities for birds.

1.0 INTRODUCTION

Lindsay Carrington Ecological Services Limited were commissioned by Persimmon Homes to conduct an Ecological Appraisal at Dorchester Hill, Blandford St. Mary (Grid ref: ST 882 056). This survey was undertaken in support of a planning application for the construction of new residential buildings on the site.

An Ecological Appraisal is essentially a multi-disciplinary walk-over survey and was conducted with the objective of identifying any ecological constraints associated with the proposals such as the site's potential to support any legally protected species or habitats of high nature conservation value. Following the initial site visit habitat suitable for dormice, reptiles and foraging bats was noted and Phase 2 surveys undertaken. The results of these surveys are detailed below.

Section 2 of the report provides some background information on legislative requirements and relevant policy. Section 3 details the methodologies adopted for the ecological surveys that were conducted and Section 4 provides an account of the survey results. Section 5 provides information on the relevance of the results to the proposed development and makes recommendations for measures to mitigate and compensate for the effects on a particular habitat or species.

2.0 LEGISLATION AND POLICY

2.1 Legislation

The following legislation may be of relevance to the proposed works. Full details of statutory obligations with respect to biodiversity and the planning system can be found in DCLG Circular 06/2005.

- **The Conservation of Habitats and Species Regulations 2010:**
This transposes the EU Habitats Directive (Council Directive 92/43/EEC) into domestic law. The Regulations provide protection for a number of species including:
 - All species of bat;
 - Dormouse; and
 - Great crested newt.

This legislation makes it an offence to deliberately capture, kill or injure individuals of these species listed on Schedule 2 and damage or destroy their breeding site or place of shelter. It is also illegal to deliberately disturb these species in such a way as to be likely to significantly affect: (i) the ability of any significant group of the species to survive, breed or rear or nurture their young; or (ii) the local distribution or abundance of the species¹;

This legal protection means that where development has the potential to impact on bats, or other European protected species, the results of a protected species survey must be submitted with a planning application.

Special Areas of Conservation (SACs) and Special Protection Areas (SPAs) are also protected under this legislation. These are a network of sites designated for supporting habitats or species of high nature conservation importance in the European context. Any activity that has a detrimental effect on these European sites is made an offence under the Regulations. Where a development is likely to have a significant impact on a European site, the Regulations require a rigorous assessment of the impacts, known as an Appropriate Assessment.

- **The Wildlife and Countryside Act 1981 (and amendments):** Protected fauna and flora are listed under Schedules 1, 5 & 8 of the Act. Species likely to be of relevance include:

¹ Note that the amendment to the Habitats Regulations in August 2007 and January 2009 has resulted in an increase in the threshold of illegal levels of disturbance to European Protected Species (EPS). An offence is only committed if the deliberate disturbance would result in significant impacts to the EPS population. However, it should be noted that activities that cause low levels of disturbance to these species continue to constitute an offence under Section 9 of the Wildlife and Countryside Act (see below).

- All species of **bat**. It is an offence to intentionally or recklessly disturb any bat whilst it is occupying a roost or to intentionally or recklessly obstruct access to a bat roost;
- All species of **British reptile** (in particular grass snake, common lizard, adder and slow-worm). It is illegal to kill or injure these species; and
- **Great crested newt**. It is illegal to obstruct access to any structure or place which great crested newts use for shelter or protection or to disturb any great crested newt while it is using such a place.

This Act also makes it an offence to intentionally kill, injure or take any wild bird or to take, damage or destroy their eggs and nests (whilst in use or being built). In addition, it is an offence to disturb any nesting bird listed on Schedule 1 or their young.

Schedule 9 of the Act lists those species for which it is an offence to plant or cause their spread. Species listed under Schedule 9 that are most likely to be encountered are japanese knotweed (*Fallopia japonica*) and giant hogweed (*Heracleum mantegazzianum*).

Sites of Special Scientific Interest (SSSIs) are also protected under the Wildlife and Countryside Act 1981. These are a network of sites identified as being of national nature conservation importance and hence afforded legal protection.

- **The Countryside and Rights of Way Act 2000:** This Act strengthens nature conservation and wildlife protection through a number of mechanisms. It places a duty on Government Ministers and Departments to conserve biological diversity, provides police with stronger powers relating to wildlife crimes, and improves protection and management of SSSIs.
- **The Protection of Badgers Act 1992:** This Act makes it an offence to wilfully take, injure or kill a badger (*Meles meles*); cruelly mistreat a badger; interfere with badger setts, sell or possess a live badger; mark or ring a badger. A licence is required for work which might damage or disturb a sett.
- **Wild Mammals (Protection) Act 1996:** This Act provides protection for all wild animals from intentional acts of cruelty.
- **Hedgerow Regulations 1997:** These Regulations establish a set of criteria for assessing the importance of hedgerows. Where a hedgerow is deemed to be 'important' its removal is prohibited without consent from the local Planning Authority.

2.2 Policy

The following policy is of relevance to the proposed works:

- **National Planning Policy Framework (NPPF):** This sets out the Government's vision for biodiversity in England with the broad aim that planning, construction, development and regeneration should maintain and enhance, restore or add to biodiversity and geological conservation interests. NPPF includes sections on legally protected species and sites (see Section 2.1).
- **Local Sites (including Sites of Nature Conservation Interest (SNCIs), Local Nature Reserves (LNR), and Biological Notification Sites (BNSs)/County Wildlife Sites (CWSs):** These are a network of sites designated for their nature conservation importance in a local context. Although they are not afforded legal protection they contribute towards local and national biodiversity. Where such development is permitted, the local planning authority will use conditions and/or planning obligations to minimise the damage and to provide compensatory and site management measures where appropriate.
- **Biodiversity Action Plans (BAPs):** BAPs set out policy for protecting and restoring priority species and habitats as part of the UK's response as signatories to the Convention on Biological Diversity. BAPs operate at both a national and local level with priority species and habitats identified at a national level and a series of Local BAPs that identify ecological features of particular importance to a particular area of the country. The requirement to consider and contribute towards BAP targets was strengthened through the Countryside and Rights of Way Act 2000. Habitat and Species Action Plans that are likely to be of relevance include:
 - Slow worm (UK BAP).
 - Pipistrelle bat (UK BAP).
 - Brown long-eared bat (UK BAP).
 - Hedgerow (UK BAP).

3.0 METHODOLOGY

3.1 Desk study

Records of protected species and non-statutory designated sites were obtained from Dorset Environmental Records Centre (DERC) within 2 km of the site. The Multi-Agency Geographical Information for the Countryside (MAGIC) website was also used to provide any information they may hold on statutory designated sites within 5 km of the proposed development.

3.2 Field study

3.2.1 Vegetation

The standard Phase 1 habitat survey methodology (JNCC, 2010) was adopted whereby habitats are mapped using colour codes (see Appendix II). A detailed walkover survey was undertaken on the 15th April 2014 by Sophie Smith, directly searching for legally protected and invasive species of plant and categorising any habitats of ecological value that were encountered. A general description of the vegetation was also noted, listing species encountered and scoring their abundance using the DAFOR scale:

- D Dominant;
- A Abundant;
- F Frequent;
- O Occasional;
- R Rare;
- L Local (used as a prefix to any of the above).

Hedgerow Regulations 1997 Assessment

These Regulations establish a set of criteria for assessing the importance of hedgerows. Where a hedgerow is deemed to be 'Important' its removal is prohibited without consent from the local Planning Authority.

The regulations apply to any hedgerow growing in, or adjacent to, any common land, protected land (local nature reserves and Sites of Special Scientific Interest), or land used for agriculture, forestry or the breeding or keeping of horses, ponies or donkeys, if it: (a) has a continuous length of, or exceeding 20 metres; or (b) it has a continuous length of less than 20 metres and, at each end, meets another hedgerow. The regulations *do not* apply to hedgerows within the curtilage of, or marking a boundary of the curtilage of, a dwelling house.

Any hedgerows present and affected by development were surveyed in accordance with the survey technique set out in the Hedgerow Survey Handbook (2nd Edition, DEFRA, 2007).

All species-rich hedgerows were then re-evaluated against the Hedgerow Regulations 1997 criteria (DEFRA 1997) to determine whether they were 'Important' under the Regulations on wildlife grounds. Hedgerows were noted as 'species-rich hedge' when they contained a minimum of five woody species listed under Schedule 3 of the Hedgerows Regulations 1997 (i.e. most native trees or shrubs). This was because five species is the minimum required to qualify as important under the Regulations, when accompanied by other key features.

This method provides a quick and easy minimum threshold for eliminating less important hedges from detailed Phase 2 surveys. All hedges categorised as 'species-rich' were then assessed against the criteria (Appendix VII). A standard recording form was used (Appendix VIII), which identifies the Hedgerow Regulations criteria and gathers information on features associated with ancient hedgerows such as dimensions, structure, management, and presence of mature and veteran trees (after Defra 2007).

3.2.2 Protected Species Assessment

Habitats and features were assessed for their potential to support protected species (see Section 2). In many cases determining the presence, distribution and population size of protected species will require additional, specialist surveys.

Bats

Trees

Bats often roost in trees. Features such as old woodpecker holes, splits, cavities and rot holes, loose or flaking bark and ivy creepers will be exploited by bats to roost. Any trees present on site were therefore assessed for their potential to support roosting bats by searching for such features.

The presence of roosting bats can be spotted through signs such as accumulations of moth or butterfly wings or bat droppings, the presence of bats or bat remains and the presence of urine or grease staining, particularly around potential entrance and exit points.

The absence of droppings / evidence cannot be treated as conclusive evidence that bats are not present, and therefore an assessment was made of the potential of the trees on-site to support bats based on the scale described below in Table 1:

Table 1 - Criteria for assessing bat roosting potential of trees

Confirmed Roost	Evidence of bat occupation found
Category 1*	Trees with multiple, highly suitable features capable of supporting larger roosts

Category 1	Trees with definite bat potential, supporting fewer suitable features than category 1* trees or with potential for use by single bats
Category 2	Trees with no obvious potential, although the tree is of a size and age that elevated surveys may result in cracks or crevices being found or the tree supports some features which may have limited potential to support bats
Category 3	Trees with no potential to support bats

Activity transects

A combined dusk and dawn bat activity survey was undertaken on the 18th and 19th September 2014 by suitably experienced bat surveyors Louisa Jones and Hannah Stebbings. Four additional dusk bat activity surveys were undertaken by experienced bat surveyors Sophie Smith, Emma Pollard, Sophie Maxey and Aeve Ribbons on the 2nd June, 25th June, 23rd July and 21st August 2014. The dusk transect surveys began 15 minutes before sunset and continued for approximately two hours afterwards in order to detect bats commuting from roost sites to foraging sites. The dawn survey commenced two hours before sunrise and continued until or shortly after sunrise.

The bat transect surveys involved walking a pre-defined route which incorporated key areas that are likely to be important for foraging and/or commuting bats. In this case, the transect routes followed the site boundary comprising hedgerows.

The transect route was walked by the two surveyors working in tandem. The route was walked at a steady speed between three and five times during any one survey, and incorporated a number of listening station stops interspersed along the route. The transect route and listening stops are illustrated on the map in Appendix III.

Bat activity was recorded using either an Echo Meter EM3 bat detectors. Visual observations were also used to record flight patterns and feeding behaviour. To aid identification to species level notes on times, species and behaviour were recorded.

All recorded bat calls were subsequently analysed using the software BatScan and Analook.

Beetle surveys

Both cockchafer and dung beetles are considered important food sources of horseshoe bats. It is therefore necessary to minimise any potential impacts on the food supply of the protected horseshoe bat species.

A beetle survey of the site was undertaken on the 13th May 2015 by Jonty Denton and Erin Whiteside. A total of 58 50 x50cm sample pits were excavated using a spade. The turfs were cut and then gently sifted exposing the roots and soil to a depth of 10-20cm.

Any insect larvae exposed were collected. The sods were then gently broken up over a 1cm mesh sieve and further larvae or adult insects recorded.

Horse dung, from the dung pile in the north-west corner of the site, was also inspected to determine the presence of any beetles or larvae.

Dormice

The habitat on the site was assessed for the potential to support dormice (*Muscardinus avellanarius*), which are found in habitats such as woodlands, scrub and hedgerows with good connectivity and suitable food plants. A visual inspection for their distinctive nests was undertaken. Where fruiting hazel (*Corylus avellana*) is present nuts are checked for dormice distinctive opening holes. Satellite images were used to assess the connectivity of any suitable habitat present on the site to other areas of woodland and hedgerow networks.

Surveys

Dormice tubes were spaced at intervals of approximately 20 metres and positioned on trees or shrubs between 1 to 2 metres from the ground. Nest tubes were suspended by wire underneath horizontal branches or wedged into crevices between branches/ branches and the tree trunk so that the entrance to the tubes pointed slightly downwards (and therefore water would drain away from the nest chamber area).

The nest tubes were inspected on the on a monthly basis between July and September by Sophie Smith (Natural England Class Survey Licence CLS001636) and Hannah Stebbings (Natural England Class Survey Licence CLS03497) and Louisa Jones and Sophie Maxey acting as an accredited agent under licence. Each nest tube was inspected for characteristic signs of dormice, including the following:

- Presence of dormice themselves.
- Presence of dormouse nests. Typically, these are grapefruit-sized and woven from strips of honeysuckle bark or similar material with whole fresh green leaves incorporated into the outer layers. The nests are spherical and lack an obvious entrance hole.
- Presence of droppings: typically these are larger and more crinkly compared to droppings of other small rodents. However, identification of faecal pellets is not fully reliable and should not be used to confirm presence or absence of dormice.
- Presence of characteristically gnawed nuts or other hard fruit: dormice leave a smooth round hole with few tooth marks on the surface.

Any nests or dormice found within the tubes were recorded. Where possible all dormice found were sexed, and age, activity and breeding condition were recorded

Reptiles

Reptiles are widespread in habitats that provide both cover, in the form of scrub or tall vegetation, and basking areas such as areas of hard standing or short grassland communities. Piles of debris or rubble also provide excellent cover and hibernation sites for reptiles. Effective survey for reptiles is time-consuming and labour intensive involving the use of artificial refuges (usually roofing felt or carpet tiles) which attract individuals. Suitable habitat for reptiles was therefore identified during this survey and recommendations for targeted survey made where appropriate.

Surveys

Reptiles are a notoriously difficult group to survey due to their secrecy. They do, however, have an affinity for hiding under debris exposed or partially exposed to the sun. This trait is exploited by adopting a methodology based upon placing artificial refuges around the survey site thus encouraging any reptiles present to use them.

Roofing felt was used in this case, with 80 refugia (0.25m² pieces) being laid out around the site's margins. The reptile mats were distributed on the site on the 11th June 2014 and left to 'settle' for a period of one week before the survey visits commenced, the location of the mats is shown in appendix IV. The 'reptile mats' were checked between 0900 and 1100 hours or between 1600 and 1900 hours and/or during suitable weather conditions, cloudy and/or with sunny breaks with temperatures between ten and eighteen degrees centigrade, when the refuges provide greater heat than the open ground. A total of seven checks were conducted between the 25th June and 23rd July to determine presence or absence.

4.0 RESULTS

4.1 Desk study

Statutory and non-statutory sites

Table 2 below lists sites designated for nature conservation located within 5 km of the site.

Table 1: Statutory designated sites within a 5 km radius and non-statutory sites within a 2 km radius of Dorchester Hill, Blandford St. Mary

Site name	Conservation status	Distance from site	Size (Ha)	Habitat description
Bryanston	SSSI ²	1.5 km north west	0.3	The large roof space in the derelict 18th century kitchens at Bryanston is the only known breeding site for the greater horseshoe bat <i>Rhinolophus ferrumequinum</i> in Dorset and the colony is one of only 7 remaining in Britain.
Blandford Camp	SSSI	4.0 km north east	28.49	The site is of special interest for its high quality downland turf which has developed on brown rendzina soils on an exposed and undulating plateau of the upper chalk dissected by dry valleys.
The Cliff, Bryanston	SNCI ³	140 m north west	unknown	A mostly Yew woodland on a steep slope.
The Milldown	SNCI	1.9 km north	unknown	A small remnant of unimproved chalk grassland & semi-improved neutral grassland.

Bryanston SSSI lies within close proximity to the site and the population of roosting greater horseshoe bats may use the site for foraging, as such further recommendations have been made in Section 5.1.

Protected species records

Table 3 below presents the results of the search for protected species highlighted by DERC database within 2 km of the site.

² SSSI: Site of Special Scientific Interest

³ SNCI: Sites of Nature Conservation Interest

Table 2 - Protected and notable species within a 2 km radius of land at Dorchester Hill, Blandford St. Mary

Common Name	Scientific name	Status	Location
<i>Amphibians and reptiles</i>			
Slow worm	<i>Anguis fragilis</i>	Schedule 5, WCA ⁴ , UK BAP ⁵	1 record 145 m east dated 2006
<i>Mammals</i>			
Barbastelle	<i>Barbastella barbastellus</i>	Schedule 2 ⁶ , Habs Regs, Schedule 5, WCA, Annex II ⁷	12 records dated 2000-2004 with the closest records 1.1 km north west of the site.
Serotine	<i>Eptesicus serotinus</i>	Schedule 2, Habs Regs, Schedule 5, WCA	6 records dated 2001-2011 with the closest record 450 m to the west.
Otter	<i>Lutra lutra</i>	Schedule 2, Habs Regs, Schedule 5, WCA	54 records dated 2003-2011 with the closest record 335 m to the north of the site on the river Stour.
Badger	<i>Meles meles</i>	Protection of Badger Act 1992	36 records dated 2003 – 2011 with the closest record 84 m north east of the site
Hazel dormouse	<i>Muscardinus avellanarius</i>	Schedule 2, Habs Regs, Schedule 5, WCA, UK BAP	2 records dated 2000 and 2003 with both records from Bryanston wood and closest record 1.6km north west.
Daubenton's	<i>Myotis daubentonii</i>	Schedule 2, Habs Regs, Schedule 5, WCA	1 record dated 2011 620m to the north east of the site.
Natterer's	<i>Myotis nattereri</i>	Schedule 2, Habs Regs, Schedule 5, WCA	7 records dated 2000-2005 1.6km to the north west of the site.
Common pipistrelle	<i>Pipistrellus pipistrellus</i>	Schedule 2, Habs Regs, Schedule 5, WCA	11 records dated 2000 and 2006 with the closest record 410 m north east
Soprano pipistrelle	<i>Pipistrellus pygmaeus</i>	Schedule 2, Habs Regs, Schedule 5, WCA UK BAP	8 records dated 2003-2007 with the closest record 670m north east
Brown long-eared	<i>Plecotus auritus</i>	Schedule 2, Habs Regs, Schedule 5, WCA, UK BAP	12 records dated 2001-2011 with the closest record 1.1 km north west

⁴ WCA: Wildlife and Countryside Act (1981) (as amended)

⁵ UK BAP: UK Biodiversity Action Plan

⁶ Habs Regs: The Conservation of Habitat and Species Regulations 2010

⁷ Annex II: Habitats Directive Annex II

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Common Name	Scientific name	Status	Location
Grey long-eared	<i>Plecotus austriacus</i>	Schedule 2, Habs Regs, Schedule 5, WCA, UK BAP	2 records dated 2001 and 2005 1.6km north west
Greater Horseshoe	<i>Rhinolophus ferrumequinum</i>	Schedule 2, Habs Regs, Schedule 5, WCA, Annex II	93 records dated 2000-2007 from a maternity colony 1.6km to the north west of the site.
Lesser Horseshoe	<i>Rhinolophus hipposideros</i>	Schedule 2, Habs Regs, Schedule 5, WCA, Annex II	4 records dated 2001-2004 1.6km to the north west of the site.
Birds			
Barn owl	<i>Tyto alba</i>	Schedule 1, BoCC ⁸ Amber	12 records within 2km of the site dated 2000-2008
Black redstart	<i>Phoenicurus ochruros</i>	Schedule 1, BoCC Amber	2 records within 2km of the site dated 2001 and 2004
Brambling	<i>Fringilla montifringilla</i>	Schedule 1	2 records within 2km of the site dated 2008
Cettis warbler	<i>Cettia cetti</i>	Schedule 1	20 records within 2km of the site dated 2000-2008
Common Bullfinch	<i>Pyrrhula pyrrhula</i>	BoCC Amber, UK BAP	10 records within 2km of the site dated 2007 and 2010
Common Cuckoo	<i>Cuculus canorus</i>	BoCC Red	1 records within 2km of the site dated 2012
Grasshopper warbler	<i>Locustella naevia</i>	BoCC Red	1 records within 2km of the site dated 2001
Whitethroat	<i>Sylvia communis</i>	BoCC Amber	2 records within 2km of the site dated 2000-2008
Corn bunting	<i>Emberiza calandra</i>	BoCC Red	1 records within 2km of the site dated 2008
Hobby	<i>Falco subbuteo</i>	Schedule 1	12 records within 2km of the site dated 2000-2008
Golden Plover	<i>Pluvialis apricaria</i>	Annex 1, BoCC Amber	5 records within 2km of the site dated 2000-2006

⁸ BoCC: Birds of Conservation Concern

Common Name	Scientific name	Status	Location
Northern Lapwing	<i>Vanellus vanellus</i>	BoCC Red, UK BAP	4 records within 2km of the site dated 2002-2006
Skylark	<i>Alauda arvensis</i>	BoCC Red, UK BAP	3 records within 2km of the site dated 2003-2008
Yellow Wagtail	<i>Motacilla flava</i>	BoCC Red, UK BAP	3 records within 2km of the site dated 2001-2008
Yellowhammer	<i>Emberiza citrinella</i>	BoCC Red, UK BAP	8 records within 2km of the site dated 2000-2008
Invertebrates			
Chalk Hill Blue	<i>Polyommatus (Lysandra) coridon</i>	Schedule 5	1 record within 2km of the site dated 2004
Cinnabar	<i>Tyria jacobaeae</i>	UK BAP	1 record within 2km of the site dated 2004

These records of protected and notable species in the vicinity of the site increase the likelihood of them being present where suitable habitat is identified in the field survey.

4.2 Field study

4.2.1 Vegetation

The accompanying Phase 1 habitat map provided as Appendix I depicts the habitats encountered and highlights areas of particular interest with target notes.

Descriptions of these habitats are provided below:

Improved grassland (Target note 1)

The majority of the site was improved grassland used as pasture fields dominated by perennial rye grass (*Lolium perenne*), with abundant greater plantain (*Plantago major*) and locally frequent spear thistle (*Cirsium vulgare*). A list of species found in the improved grassland is provided in table 4.

Table 3: Species present within the improved grassland

Common name	Latin name	Abundance	Status
<i>Grasses, sedges and rushes</i>			
Cock's-foot	<i>Dactylis glomerata</i>	R	Common & widespread
Perennial rye-grass	<i>Lolium perenne</i>	D	Common & widespread
<i>Herbaceous plants</i>			
Creeping thistle	<i>Cirsium arvense</i>	O	Common & widespread
Spear thistle	<i>Cirsium vulgare</i>	LF	Common & widespread

Common name	Latin name	Abundance	Status
Red dead-nettle	<i>Lamium purpureum</i>	R	Common on arable, wasteland & hedgebanks
Ribwort plantain	<i>Plantago lanceolata</i>	R	Common & widespread
Greater plantain	<i>Plantago major</i>		Common & widespread
Dock sp.	<i>Rumex sp.</i>	O	Common & widespread
Dandelion	<i>Taraxacum officinale</i> agg.	R	Common & widespread
White clover	<i>Trifolium repens</i>	LF	Common & widespread
Common nettle	<i>Urtica dioica</i>	O	Common & widespread

Species present are common and widespread and no further action is required.

Semi-improved grassland (Target note 2)

Areas of semi-improved grassland are present at the base of the hedgerow/treeline to the south and west of the site. These areas comprise abundant Yorkshire-fog (*Holcus lanatus*) and creeping buttercup (*Ranunculus repens*) with occasional cleavers (*Galium aparine*) and rare shepherd's-purse (*Capsella bursa-pastoris*). A list of species found in the semi-improved grassland is provided in table 5.

The strip of semi-improved grassland along the south tree line contained the same species as above but was a mosaic with tall ruderal habitat, with locally dominant common nettle (*Urtica dioica*) and brambles (*Rubus fruticosus* agg.).

Table 4: Species present within the semi-improved grassland

Common name	Latin name	Abundance	Status
Grasses, sedges and rushes			
Yorkshire-fog	<i>Holcus lanatus</i>	A	Common & widespread
Perennial rye-grass	<i>Lolium perenne</i>	O	Common & widespread
Herbaceous plants			
Lesser burdock	<i>Arctium minus</i>	R	Common & widespread
Shepherd's-purse	<i>Capsella bursa-pastoris</i>	R	Common on wasteland, roadsides & arable land
Creeping thistle	<i>Cirsium arvense</i>	R	Common & widespread
Hemlock	<i>Conium maculatum</i>	R	Common by streams, on wasteland & roadsides
Cleavers	<i>Galium aparine</i>	O	Common & widespread
White dead-nettle	<i>Lamium album</i>	LF	Common & widespread
Ribwort plantain	<i>Plantago lanceolata</i>	R	Common & widespread
Creeping buttercup	<i>Ranunculus repens</i>	A	Common & widespread
Dock sp.	<i>Rumex sp.</i>	F	Common & widespread
Common nettle	<i>Urtica dioica</i>	F	Common & widespread
Germander speedwell	<i>Veronica chamaedrys</i>	O	Common & widespread

Species present are common and widespread and no further action is required. This area could provide habitat for reptiles and further recommendations have been made in section 5.3.

Scattered trees (Target note 3)

Mature ash (*Fraxinus excelsior*) and horse chestnut (*Aesculus hippocastanum*) trees are present in the centre of the site. A tree line is present along the southern boundary of the site with beech (*Fagus sylvatica*), dominant hornbeam (*Carpinus betulus*) and ash present.

Trees present provide potential habitat for nesting birds, roosting bats and foraging habitat for birds, mammals and invertebrates. Further recommendations have been made in Sections 5.1 and 5.4.

Hedgerows

Hedgerows are present on the boundaries of the site with the hedgerow on the western boundary being species rich and infrequently managed. Species present within these hedgerows include sycamore (*Acer pseudoplatanus*), blackthorn (*Prunus spinosa*), hawthorn (*Crataegus monogyna*), spindle (*Euonymus eurpaeus*) and holly (*Ilex aquifolium*). Hedgerow surveys were carried out with the full results provided in appendix VII. Neither of the hedgerows qualify under the Hedgerow Regulations. Table 6 lists species that were recorded within the hedgerows present on site.

Table 6: Hedgerows recorded on site

Key (see Phase 1 map)	Woody species	Ground flora	Height (m)	BAP status (5 species / 30 metres?)	General description
T5	Blackthorn Hawthorn Spindle Holly	Ivy (<i>Hedera helix</i>) Bramble	1.2 m	No	Managed intact hedgerow.
T6	Blackthorn Elder Spindle Elm Rose Hawthorn	Sycamore, common nettle, lords and ladies (<i>Arum maculatum</i>), bramble, dock species (<i>Rumex sp.</i>), ivy	1.5 m	Yes	Infrequently managed hedgerow with some small gaps present.

The hedgerow T6 is species rich and qualifies as a UKBAP hedgerow but does not qualify under the hedgerow regulations. Both hedgerows present provide potential habitat for nesting birds, and foraging habitat for bats, birds, mammals and invertebrates. Further recommendations have been made in Sections 5.1, 5.2, 5.3 and 5.4.

4.2.2 Protected species

Badgers

During the survey no signs of badger activity such as latrines, hair or footprints were noted. No setts were found to be present on the site.

No further action is required.

Bats

The mature trees within the site boundary have cracks and splits present which could be used by roosting bats. The trees were assessed as having low (category 1) bat potential. The large hedgerows around the boundary of the site could be used as a commuting route for the local bat population and the site itself may provide foraging habitat for the local bat population especially any greater horseshoes (*Rhinolophus ferrumequinum*) in the area. Further activity surveys were conducted and a summary of the results are provided below. The full bat results are provided in appendix VI.

Dusk survey – 2nd June 2014

At 21:31 a serotine (*Eptesicus serotinus*) bat emerged from a roost in a house off site. An additional serotine bat commuted west to east across the site. Activity entirely comprised serotines, common and soprano pipistrelles (*Pipistrellus pipistrellus* and *P.pygmaeus*) which foraged within and around the site for the duration of the survey. Activity was mainly restricted to single bats, with up to two common pipistrelles recorded at any one time. The bats were using both the woodland edge habitats and the central area of the site to forage.

Dusk survey – 25th June 2014

At 21:43 a common pipistrelle was heard and not seen at stopping station F. Common pipistrelles were heard foraging along the hedgerows across the site during the survey. A Noctule (*Nyctalus noctula*) was heard commuting from the direction of the stables at 21:57. A greater horseshoe was heard but not seen at stopping station E. A faint call from a long-eared (*Plecotus* sp.) species was recorded at 22:57 at stopping station A. A leisler's (*Nyctalus leisleri*) was recorded at stopping station B at 22:57. During the survey common pipistrelle, soprano pipistrelle, serotine, leisler's, noctule and greater horseshoe were recorded using the site.

Dusk survey – 23rd July 2014

The first bat was recorded at 21:36 which was a common pipistrelle at stopping station F, shortly followed by a soprano pipistrelle at 21:37. Common pipistrelles were recorded foraging along the tree line in the centre of the site. A greater horseshoe was recorded at

stopping station G at 21:47. This was followed by a whiskered (*Myotis mystacinus*) bat at 21:48 which was observed foraging along the tree line. A serotine was observed foraging over the southern field at 21:51. Additional greater horseshoes were recorded at 22:03 and 22:16 at stopping stations B and C. An additional greater horseshoe was recorded between points G and A. During the survey common pipistrelle, soprano pipistrelle, serotine, and greater horseshoe were recorded using the site.

Dusk survey – 21st August 2014

The first bats recorded was at 20:39 at stopping station E, with serotine, common and soprano pipistrelles present. The pipistrelles were observed foraging along the hedgerow while the serotines were foraging across the open field. A greater horseshoe was recorded foraging along the hedge at stopping station F at 20:46. Another greater horseshoe was recorded at 20:50 at stopping station G along with a serotine, common and soprano pipistrelle bats. Soprano and common pipistrelle were recorded foraging along the hedgerows across the site. Additional species included a whiskered at 21:31 and a noctule at 21:35. During the survey common pipistrelle, soprano pipistrelle, serotine, greater horseshoe, noctule and whiskered bats were recorded using the site.

Dusk survey – 18th September 2014

The first bats recorded were serotines at 19:35 at stopping station E. The bats flew north and were then seen foraging in the fields. Common and soprano pipistrelles were recorded commuting across the site. A noctule commuted across the site at 20:05 shortly followed by a whiskered bat at 20:18, with both bats not seen. During the survey common pipistrelle, soprano pipistrelle, serotine, noctule and whiskered bats were recorded using the site.

Dawn survey – 19th September 2014

A soprano pipistrelle was recorded at stopping station E at 05:10. An unidentified *Myotis* sp. was briefly heard at 05:43 at point C. Common and soprano pipistrelles were recorded across the site foraging along the hedgerows. A Daubenton's (*Myotis daubentonii*) was recorded at 05:57 between points D-E. During the survey common pipistrelle, soprano pipistrelle, an unidentified *Myotis* and Daubenton's were recorded using the site.

During the activity surveys nine species of bat were recorded using the site including common and soprano pipistrelle, noctule, serotine, Leisler's, whiskered, Daubenton's, greater horseshoe and an unidentified Myotis. Of particular note are the greater horseshoes using the site. Further recommendations have been made in section 5.1

Beetle survey

A beetle survey was undertaken on 13th May 2015 by Jonty Denton and Erin Whiteside. Cockchafer (*Melolontha melolontha*) beetles were found to be present on site (Photograph 1), but in very low numbers within the southern part of the site within 5m of

surrounding hedgerows. No beetles were recorded within the northern third of the site. The numbers of insects recorded is shown in table 7.

Horses had not been on the fields for several weeks and no evidence of dung beetles was found. Similarly the small manure heap at the north-west corner of the site was past the stage where it is attractive to large dung beetle species.

Table 7: Insects recorded during beetle survey

Sample no.	<i>Melolontha</i> larvae	<i>Tipulid</i> larvae	<i>Lepidopteran</i> larvae/pupae	Other potential bat prey
1	1 large	2	0	0
2	0	0	0	0
3	0	0	0	0
4	1	0	0	0
5	0	1	1 <i>noctuid</i> pupae	0
6	0	1	0	0
7	0	4	1 <i>noctuid</i> pupae	0
8	0	3		0
9	3 small	1		0
10	0	0		<i>muscid</i> pupae
11	0	4		0
12	0	1	0	0
13	0	0	0	0
14	2 small	0	0	0
15	0	0	0	0
16	0	0	0	0
17	0	0	0	0
18	0	0	0	0
19	0	2	1 <i>noctuid</i> pupae	1 <i>Nebria brevicollis</i> (ground beetle)
20	0	0	0	0
21	0	1	0	
22	0	0	0	0
23	0	0	0	0
24	1 large			1 adult <i>Barynotus obscurus</i> (large weevil)
25	0	0	0	0
26	0	1	1 <i>noctuid</i> caterpillar	0
27	0	0	0	0
28	0	0	0	0
29	0	0	0	0
30	0	0	0	1 <i>Amara aenea</i> (medium ground beetle)
31	0	0	0	0

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Sample no.	<i>Melolontha</i> larvae	<i>Tipulid</i> larvae	<i>Lepidopteran</i> larvae/pupae	Other potential bat prey
32	0	1		1 <i>Notiophilus substriatus</i> , <i>Bembidion lampros</i> (medium ground beetles)
33	0	0	0	0
34	0	1		0
35	0	1		0
36	0	0	0	0
37	0	0	0	0
38	0	0	0	0
39	0	0	0	0
40	0	0	0	0
41	0	1		
42	0	0	0	0
43	0	0	1 <i>lepidopteran</i> pupae	0
44	0	0	0	0
45	0	0	0	0
46	0	0	0	0
47	0	0	0	0
48	0	0	0	0
49	0	0	0	0
50	0	0	0	0
51	0	0	0	0
52	0	1	1 caterpillar	1 <i>Bembidion lampros</i>
53	0	0	0	large <i>Staphylinid</i> larvae
54	0	0	0	0
55	0	0	0	0
56	0	0	1 <i>lepidopteran</i> pupae	0
57	0	0	0	0
58	0	0	0	0
TOTAL	7	26	7	

Photograph 1: Cockchafer grubs, Crane-fly ‘leatherjackets’, and moth pupae



As cockchafer beetles are considered an important food source of greater horseshoe bats, further recommendations have been made in section 5.1.

Dormice

The site is close to Bryanston Wood which holds records of dormice and the hedgerows on the site provide suitable food plants for dormice. The hedgerows on the site connect to a network of hedgerows in the surrounding area which connects to pockets of woodland.

Further surveys were conducted and dormice were found to be present within the hedgerows. The results of the dormice surveys are provided in table 8 below. Following on from the surveys the hedgerows were flailed and all dormice tubes were destroyed.

Table 8 – Dormice survey results

Date	Weather (Cloud cover)	Temp (°C)	Dormice	Other
25/06/2014	Sunny/warm	18.0	0	
23/07/2014	Hot	26.0	Beginnings of a small green nest in tube number 9	Pygmy shrew escaped tube 16
21/08/2014	Cool breezy	16.5	Beginnings of a small green nest in tube numbers 9 and 16	

Date	Weather (Cloud cover)	Temp (°C)	Dormice	Other
19/09/2014	Overcast, dry	18	Small ball nests with bark and green leaves in tubes 1, 2, 4 and 6	
11/12/14	7/8 cloud, cold, occasional showers	8	One woven dormouse nest in tube 15 northern end of western hedgerow	
13/05/15	2/8 cloud, breeze 1, sunny warm	18	One old nest	

Further action has been recommended in section 5.2.

Great crested newts

No waterbodies have been identified from aerial photographs and maps within a five hundred metre radius of the site boundary. In addition the short sward grassland habitat on site was considered to be of limited potential for foraging newts. The semi-improved grassland and hedgerows provide suitable habitat but the presence of great crested newts on the site is considered unlikely due to the absence of waterbodies in the area. If a great crested newt is discovered during the works an ecologist should be consulted before works proceed.

As no breeding ponds are on site or within 500 metres of the site no further action is required.

Reptiles

The semi-improved grassland habitat at the base of the hedgerows provides potential habitat for common reptiles such as slow-worm (*Anguis fragilis*). There is a manure pile in the northern corner of the site which may provide egg laying habitat for grass snakes and which could be used as refugia for local reptiles. Reptile surveys were conducted with a maximum of seven slow worms (four adults) present, representing a low population of slow worms (Froglife 1999). The results of the reptile surveys are provided below in table 9.

Table 9 – Reptile survey results

Site: Land at Dorchester Hill ,Blandford St Mary, for Persimmon homes									
Surveyor: Sophie Smith/Sophie Maxey									
Date	Time	Weather	Temp (°C)	Reptiles				Other	Area recorded
				CL	SW	GS	A		
25/06/14	20.00	Sunny/warm, c/c 0/8, wind 3/12	18.0	0	1 juvenile	0	0	0	Eastern hedge
30/06/14	13.10	Sunny/warm, c/c 3/8, wind 6/12	20.0	0	5 juvenile and 1 male	0	0	0	Juveniles along south western and south eastern boundaries, male centre of north western boundary
01/07/14	18.00	Sunny/warm, c/c 0/8, wind 5/12	22.0	0	1 juvenile and 1 female	0	0	0	Grass to north of site
04/07/14	10.30	Sunny/breezy, c/c 0/8, wind 6/12	21.0	0	3 juvenile and 4 female	0	0	0	All over site but not southern boundary
08/07/14	11.57	Overcast/warm/damp, c/c 8/8, wind 3/12	17.0	0	2 juvenile, 2 female and 1 male	0	0	0	Juveniles on eastern and western boundaries, 1 female in north west corner and 1 on eastern boundary before trees, male east boundary after trees
10/07/14	15.45	Sunny, breezy, c/c 0/8, wind 6/12	24.5	0	0	0	0	Rodent under mat	Centre of southern boundary
23/07/14	20.00	Sunny, hot, c/c 3/8, wind 1/12	26.0	0	2 juvenile	0	0	0	Western hedge

Further action is recommended in section 5.3

Nesting birds

The trees and hedgerows on the site provide nesting habitat for common garden and farmland birds.

Further recommendations have been made in section 5.4

5.0 CONCLUSIONS AND RECOMMENDATIONS

The site was generally considered to be of moderate ecological value and the site does have potential for some protected species to be present on site and therefore encountered during works. Mitigation strategies and further recommendations are provided in relation to the presence of bats, nesting birds, dormice and reptiles. These have been presented below along with recommendations to enhance the developed site for wildlife.

5.1 Bats

5.1.1 Summary of survey findings

The mature trees within the site have been assessed as having low bat potential and these trees will be maintained on the site as part of the development.

The site is 1.6 km away from a SSSI greater horseshoe roost and the site is confirmed to provide foraging habitat for these bats. The pasture fields represent good quality foraging habitat for these species as horseshoe bats forage on dung beetles. During the activity surveys greater horseshoes were observed commuting across the site with some foraging activity. Horseshoe bats are intolerant to light (Stone *et al* 2009) and commuting corridors for greater horseshoes need to be maintained to ensure connectivity to the roost is maintained and no damage is caused to the SSSI by loss of connectivity. In addition to the greater horseshoe bats a wide range of bat species use the site with a serotine roost adjacent to the site in one of the neighbouring houses.

5.1.2 Mitigation strategy

The hedgerow/tree line along the site boundaries are used by foraging and commuting bats. The hedgerows will be maintained with minor breaks created for access into the site. Greater horseshoes will not cross gaps of greater than 15 metres although open fields are crossed after dusk on dark nights (Jones & Billington, 1999; Ransome, 1996). Therefore the access gaps in the hedge must be no greater than 15 metres. The main access onto Dorchester Road will be through a gap 9 metres wide plus some trimming of the hedge for visibility splays.

A 5 metre buffer will be left along the hedges as an unlit corridor for foraging horseshoe bats, as horseshoes tend to fly within 5 metres of woodland edges and hedgerows (Billington & Rawlinson 2006).

Lighting used within the development will need to adhere to the following.

- Low pressure sodium lighting will be used and light levels will be kept as low as possible.

- Lighting will be directed to where it is needed (away from surrounding hedgerows) through the design of the luminaire and by using accessories such as cowls or hoods.
- The height of lighting columns will be kept as short as possible (ideally three metres or less).
- Lights will not be on constantly throughout the night creating dark periods to allow bats to continue foraging without light spill affecting them.

Beetles

Cockchafer beetles were found to be present in very low numbers around the margins of the site. The following mitigation measures are proposed.

- The 5 metre buffer zone will be left uncultivated as undisturbed grassland habitat is vital to larval stages of cockchafers.
- This buffer will be enhanced by over-seeding with Emorsgate EM1 meadow mixture to enhance the grass species available.
- No chemical pesticides or worming compounds that are toxic to cockchafer beetles will be used at all on site.

In addition, several native wood log piles will be placed in the corners of the site within the 5 m buffer zone to provide habitat for other beetles which would enhance the horseshoe foraging within the site.

5.2 Common dormice

5.2.1 Summary of survey findings

Common dormice have been identified on site, and all connected habitat is considered to be in use. Common dormouse is a European Protected Species, a mitigation strategy and Natural England mitigation licence will be required to allow any clearance of habitat.

5.2.2 Mitigation strategy

In order to mitigate the potential risk to dormice from the proposed works the following mitigation measures are proposed at the site:

- As the proposed works will involve clearing sections of hedgerow to provide site access, clearance will need to be carried at a suitable time of year.
- The best method for this, to avoid any conflict with timing restrictions that apply to nesting birds, is to cut trees and scrub to stump level, or a minimum of forty centimetres, during the winter months (December to March) when dormice will be hibernating. The stumps will then be removed during the following May once dormice are active but prior to the birth of their litters. Alternatively trees and scrub can be removed in either September/early October when dormice are active and litters have become independent prior to hibernation or May when dormice

are active prior to the birth of litters although there is potential for conflict with bird nesting restrictions.

- Clearance works will be carried out by directional clearing with dormice being encouraged to move away from the works area into neighbouring suitable habitat. The disturbance from the machinery will encourage the dormice to move away.
- Works will be undertaken in suitably dry warm weather conditions.
- Phased vegetation clearance should ensure that dormice do not have to travel more than approximately fifty metres to the nearest suitable habitat during the clearance.
- A thorough check for dormouse nests will be undertaken by the ecological clerk of works and a watching brief maintained during the clearance works.
- All the workers on site will be briefed before works commence and made aware of the potential presence of dormice on site.

Enhancement

The scheme maintains connectivity around the site with the boundary hedges retained. Prior to any works commencing enhancement measures will be required for the retained boundary features. This can be achieved by erecting nest boxes within the hedgerows providing more breeding opportunities. A minimum of five nest boxes will be erected.

Replacement habitat will also be created with the infilling of gaps and additional hedgerows planted within the landscape design of the scheme. Species within the hedgerow planting will include hazel, dog rose, elder, hawthorn, blackthorn, honeysuckle (*Lonicera periclymenum*), bramble and guelder-rose (*Viburnum opulus*).

Post construction monitoring of the population via the nest boxes will be required for at least two years post-development. Information packs should be provided to the new owners of the housing informing them about the presence of dormice and the mitigation in place, with restrictive covenants to prevent removal of nest boxes and clearance of dormice habitat.

5.3 Reptiles

5.3.1 Summary of survey findings

The majority of the site does not provide good foraging habitat for reptiles due to the short sward height, however habitat at the base of the hedgerows is suitable. The reptile surveys showed the site is currently used by a low population of slow worms which are associated with the hedge bases. To prevent harm to this species which is protected under Wildlife and Countryside Act (1981) (as amended), a mitigation strategy will be required.

5.3.2 Mitigation strategy

To ensure slow worms are not harmed during the works the following will be implemented with the presence of an ecologist on site:

- The majority of the boundary hedgerows will be maintained. This area will provide habitat for the slow worms currently on site.
- An additional area will be enhanced, around the mature trees which are remaining on site, with the construction of one hibernacula, of a design illustrated in Appendix IX. This area will also be seeded with EW1 wildflower woodland mix which will create a tussocky grassland suitable for reptiles under the retained trees. Scrub will also be created to provide a mosaic of habitat suitable for slow worms.
- The five metre buffer maintained on the hedgerows for horseshoe bats will also act as suitable habitat for slow worms this will be enhanced via over-seeding of EM1 seed mix from Emorsgate.
- To encourage slow worms on the site to move away from any works area naturally the habitat within the works area will be made unsuitable by strimming under the careful supervision of a suitably experienced reptile handler. This will be carried out in temperatures above 10°C when reptiles are more mobile. The strimming will be carried out in a two trim cycle with the first cut to 15cm and the second to ground level. This cut will take place in one direction towards the hedgerows on the boundary in order to give any reptiles a chance to leave the area. This will be undertaken when reptiles are active between March and October.
- The breaches in the hedgerows for access will be cut under supervision in suitable weather conditions as above.
- Slow worms will sometimes freeze instead of moving off and these animals should be carefully moved to the suitable habitat before works can proceed again.
- Exclusion fencing (see Appendix IX for design) will be installed around the working area to prevent reptiles accessing the site. This will be removed once construction is complete.
- All arisings from the strimming and clearance will be immediately removed from the works area to prevent any reptiles sheltering within it.
- Fencing panels will be raised off the ground to allow reptiles to spread into the gardens post-construction.

This mitigation strategy will ensure no reptiles are harmed during the works and once the development is complete the slow worms will be able to re-colonise the gardens of the new houses.

5.4 Nesting birds

The mature trees, hedgerows and scrub around the site, provide foraging and nesting habitat both for common and widespread species of bird such as blue tit (*Cyanistes*

caeruleus) and wren (*Troglodytes troglodytes*) as well as birds listed as amber on the BoCC (Birds of Conservation Concern) list such as dunnock (*Prunella modularis*), and Biodiversity Action Plan (BAP) species such as song thrush (*Turdus philomelos*). The following precautions should negate risk of harming, injuring or contributing to the demise of these species:

- All vegetation clearance should be conducted outside of the bird nesting season which is considered to run from March to September. Where this is not possible a suitably qualified ecologist should check potential nesting habitat immediately prior to clearance. Where nesting birds are encountered clearance must be postponed until the nestlings have fledged.
- Ecological enhancement measures described in Section 5.5 will provide foraging and nesting opportunities for many species.

5.5 Ecological enhancement

A few suggestions for incorporation within the design of the housing development have been made below:

- Provision of bat boxes and nest boxes for bird species such as swift, house martin and house sparrow on the walls of the buildings or trees. Bat boxes and tubes, and bird boxes can be purchased from websites such as NHBS <http://www.nhbs.co.uk> and Jacobi Jayne www.jacobijayne.co.uk, and their provision on site would enhance the habitat for the local bat and bird population.
- Where possible, piles of dead wood (including old tree stumps) should be positioned along the site boundaries to create habitat for a wide range of invertebrates, small mammals and birds.
- Sowing proposed amenity grassland with a wildflower lawn mix (such as Emorsgate EL1 <http://wildseed.co.uk>) would provide better nectar sources for invertebrates and hence is of greater value for foraging birds.
- Use of native shrubs and trees for landscaping schemes provides foraging habitat for a range of bird species. Suitable species include hazel (*Corylus avellana*), ash (*Fraxinus excelsior*), dog-rose (*Rosa canina*), elder (*Sambucus nigra*), blackthorn (*Prunus spinosa*), hawthorn (*Crataegus monogyna*) and field maple (*Acer campestre*).

6.0 REFERENCES

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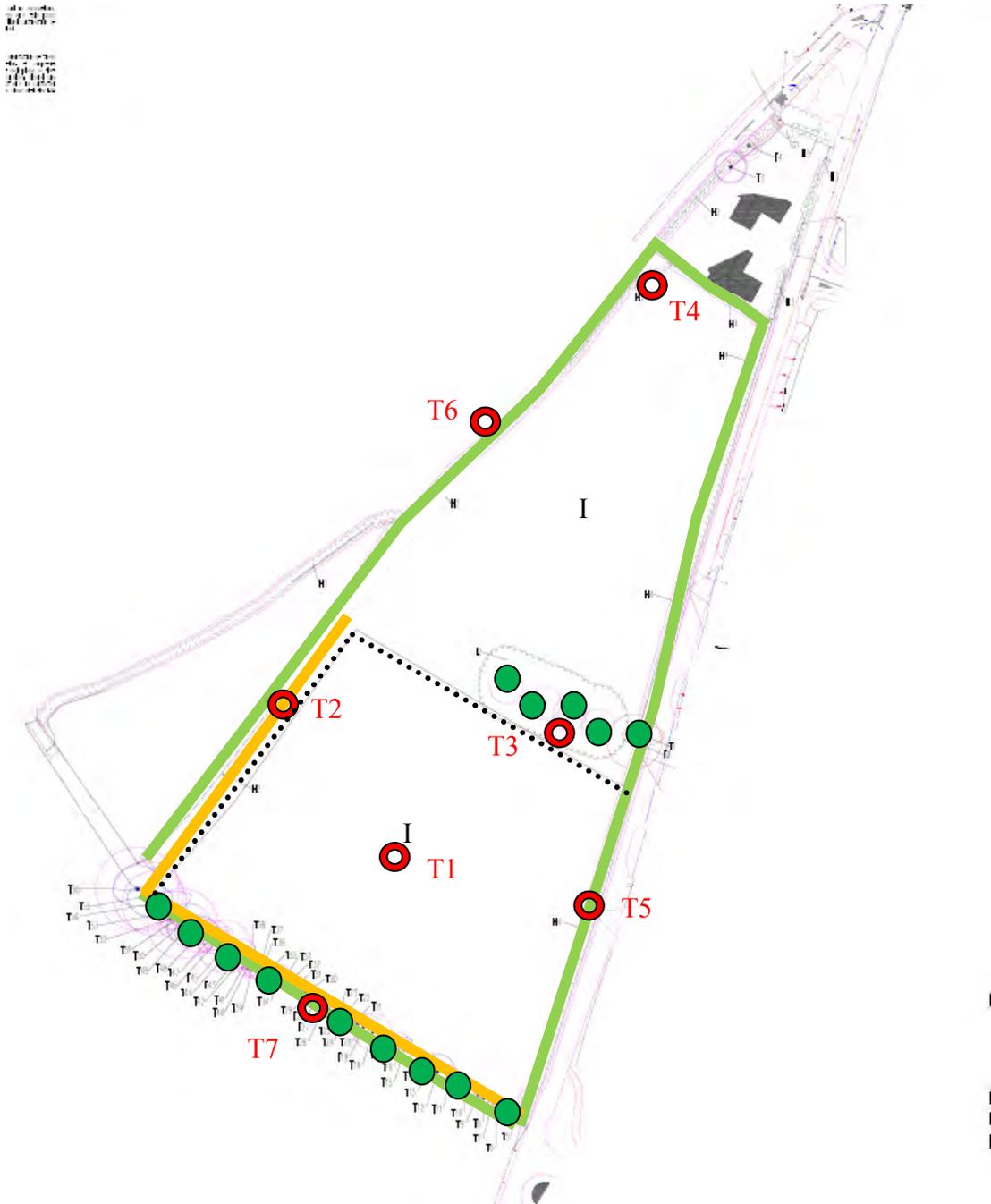
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APPENDIX I: Phase 1 Habitat Map



Key to Phase 1 Habitat Map

	Improved grassland
	Semi-improved grassland
	Hedge
	Fence
	Tree line
	Scattered trees
	Target note

Target notes to accompany Phase 1 habitat map

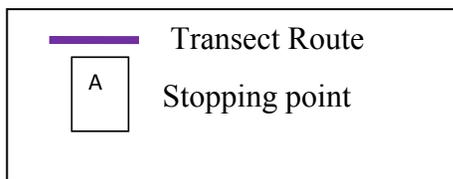
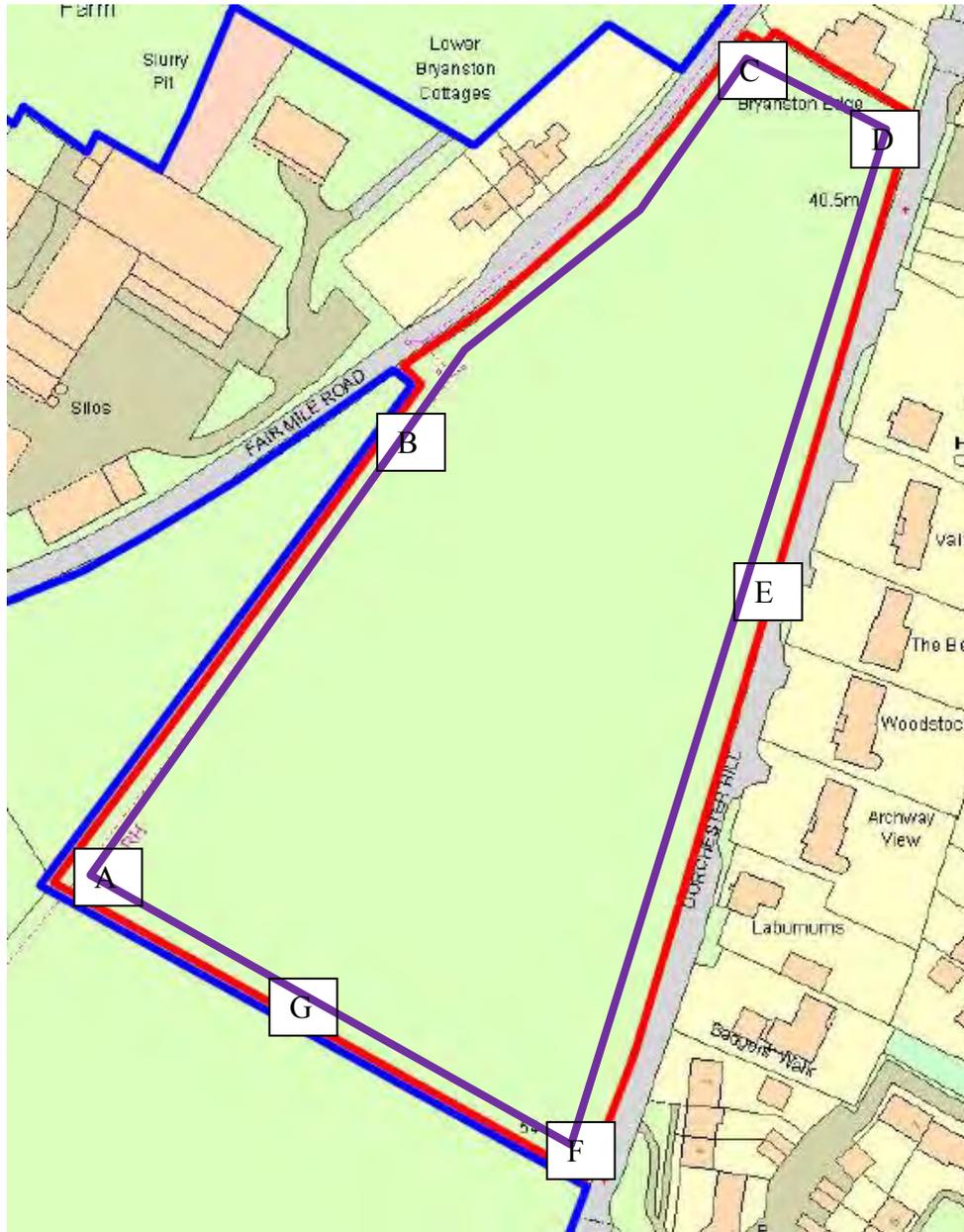
Target Note	Description
T1	Improved grassland with a short sward height. Species present are cock's foot (<i>Dactylis glomerata</i>), perennial rye-grass (<i>Lolium perenne</i>), ribwort plantain (<i>Plantago lanceolata</i>), creeping thistle (<i>Cirsium arvense</i>), red dead-nettle (<i>Lamium purpureum</i>), common nettle (<i>Urtica dioica</i>), spear thistle (<i>Cirsium vulgare</i>), white clover (<i>Trifolium repens</i>) and dandelion (<i>Taraxacum agg.</i>).
T2	Semi-improved grassland at the base of the hedgerows and tree line. Species present include Yorkshire fog (<i>Holcus lanatus</i>), lesser burdock (<i>Arctium minus</i>), hemlock (<i>Conium maculatum</i>), creeping thistle (<i>Cirsium arvense</i>), shepherd's-purse (<i>Capsella bursa-pastoris</i>), Dock species (<i>Rumex sp.</i>), white dead-nettle (<i>Lamium album</i>), common nettle, creeping buttercup (<i>Ranunculus repens</i>), germander speedwell (<i>Veronica chamaedrys</i>), ribwort plantain (<i>Plantago lanceolata</i>).
T3	Mature ash (<i>Fraxinus excelsior</i>) and horse chestnut (<i>Aesculus hippocastanum</i>) trees are present in the centre of the site.
T4	Manure pile
T5	A managed hedgerow with hawthorn, spindle, holly, ivy and bramble present within it.
T6	A part-managed species rich hedgerow with sycamore, blackthorn, elder, spindle, elm, rose, hawthorn, nettles, lords and ladies, bramble, dock species and ivy.
T7	A tree line is present along the southern boundary of the site with hornbeam (<i>Carpinus betulus</i>), beech (<i>Fagus sylvatica</i>), and ash present.

APPENDIX II: Proposed development

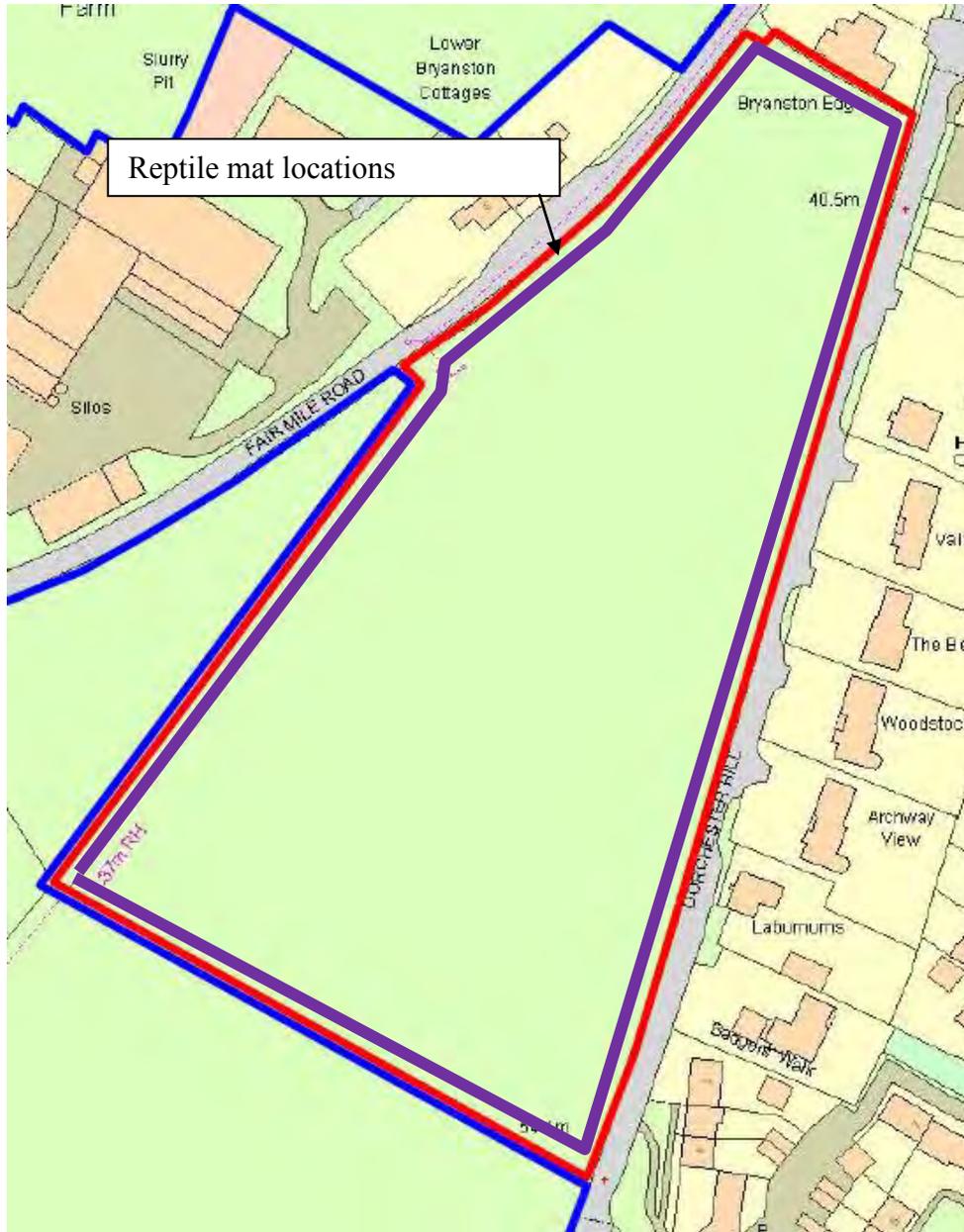


g heights)
reas

APPENDIX III: Bat Transect route



APPENDIX IV: Reptile mat locations



APPENDIX V: Ecological enhancements/mitigation



APPENDIX VI: Full bat results

Dusk – 2nd June 2014

BAT DETECTOR / EMERGENCE & ACTIVITY SURVEY					
SURVEY LOCATION:	Blandford	SURVEYORS:	Emma Pollard, Ros Sunley	DATE:	02/06/2014
TEMP AT START:	13.0°C	SUNSET:	20.50	START TIME:	20.50
TEMP AT END:	14.0 °C	CLOUD COVER (oktas):	8/8	END TIME:	23.08
WIND (bft):	0	RAINFALL:	0	WEATHER:	Overcast
TIME	SPECIES	NUMBER OF BATS	ACTIVITY (behaviour/ commuting/ direction/ foraging/ feeding/ feeding buzzes/ roost/ etc.		
21.31-21.35 Stop station- D	Serotine	1	Exiting roost in house, commuting south		
21.35	Serotine	1	Commuting west to east		
21.49	Soprano pipistrelle	1	Heard not seen commuting		
21.50-21.55 Stop station- A1	Common pipistrelle	1	Heard not seen Commuting		
21.59	Serotine	1	Heard not seen foraging tree line		
22.02-22.07 Stop station-A	Common and Soprano pipistrelle	2	Heard not seen foraging tree line		
22.07	Serotine	1	Heard not seen foraging tree line		
22.08-22.13 Stop station- F	Soprano pipistrelle and Serotine	2	Heard not seen foraging tree line		
22.15-22.23 Stop station	Common and	3	Heard not seen foraging tree line		

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-A	soprano pipistrelle, Serotine		
22.25-22.30 Stop station -A1	Common pipistrelle	1	Heard not seen foraging tree line
22.31	Serotine	1	Heard not seen foraging tree line
22.39	Serotine	1	Heard not seen foraging tree line
22.46	Common pipistrelle	1	Heard not seen foraging tree line
22.48	Common pipistrelle, Myotis sp	2	Heard not seen foraging tree line
23.01-23.06 Stop station -A1	Soprano pipistrelle	1	Heard not seen foraging tree line
23.08 - 23.13 Stop station -A	Common and soprano pipistrelle	2	Heard not seen foraging tree line

Dusk - 25th June 2014

BAT DETECTOR / EMERGENCE & ACTIVITY SURVEY					
SURVEY LOCATION:	Blandford	SURVEYORS:	Sophie Smith, Sophie Maxi	DATE:	25/06/14
TEMP AT START:	19.0 °C	SUNSET:	21.27	START TIME:	21.05
TEMP AT END:	14.0 °C	CLOUD COVER (oktas):	1/8	END TIME:	23.15
WIND (bft):	0-1/12	RAINFALL:	0	WEATHER:	Warm/dry
TIME	SPECIES	NUMBER OF BATS	ACTIVITY (behaviour/ commuting/ direction/ foraging/ feeding/ feeding buzzes/ roost/ etc.		
21.43 Stop station-F	Common pipistrelle	1	Heard not seen		

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21.50 G-A	Common pipistrelle	2	Foraging between points G and A along hedge
21.53 G-A	Noctule	1	Heard not seen
21.55 Stop station -A	Common pipistrelle	1	Foraging along hedge (feed buzz)
21.57 Stop station-A	Noctule	1	Faint call Commuting from direction of stables west to east
21.58 A-G	Common pipistrelle	1	Foraging between points A and G (feeding buzz)
22.00 A-B	Common pipistrelle	1	Foraging between points A and B (feeding buzz)
22.11 Stop station-E	Soprano pipistrelle	1	Foraging around point E
22.18 Stop station-E	Common pipistrelle	1	Heard not seen
22.20-22.22 Stop station- E	Common pipistrelle, Soprano pipistrelle, Greater horseshoe	3	Heard not seen
22.23 Stop station-E	Soprano pipistrelle	1	Heard not seen
22.24 Stop station-E	Common pipistrelle, Soprano pipistrelle	2	Heard not seen
22.25 Stop	Soprano pipistrelle	1	Foraging overhead at point E

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station-E			
22.26 E-F	Soprano pipistrelle	1	Heard not seen
22.28 E-F	Soprano pipistrelle	1	Heard not seen
22.34 Stop station-F	Serotine	1	Heard not seen
22.35 Stop station-F	Soprano pipistrelle, Common pipistrelle	2	Heard not seen
22.47 Stop station-A	Long eared	1	Heard not seen faint call
22.57 Stop station-B	Leisler's	1	Heard not seen loud but brief call
23.10 C-B	Noctule	1	Heard not seen

Dusk - 23rd July 2014

BAT DETECTOR / EMERGENCE & ACTIVITY SURVEY					
SURVEY LOCATION:	Blandford	SURVEYORS:	Sophie smith, Aeve Ribbons	DATE:	23/07/14
TEMP AT START:	26.0 °C	SUNSET:	21.08	START TIME:	21.00
TEMP AT END:	23.0 °C	CLOUD COVER (oktas):	4/8	END TIME:	23.00
WIND (bft):	0	RAINFALL:	0	WEATHER:	Hot/dry
TIME	SPECIES	NUMBER OF BATS	ACTIVITY (behaviour/ commuting/ direction/ foraging/ feeding/ feeding buzzes/ roost/ etc.		

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21.36 Stop station-F	Common pipistrelle	1	Heard not seen
21.37 Stop station-F	Soprano pipistrelle	1	Heard not seen (feeding buzz)
21.40 Stop station-F	Common pipistrelle	1	Heard not seen
21.43 A-F	Common pipistrelle	1	Foraging along tree line between points A and F
21.47 Stop station-G	Greater horseshoe	1	Heard not seen
21.48-21.49 G-F	Whiskered	1	Foraging along tree line
21.49 G-F	Common pipistrelle	1	Heard not seen
21.51 Stop station-G	Serotine	1	Foraging over field
21.52 A-G	Common pipistrelle	1	Commuting along tree line From Point A toward point G (feeding buzz)
21.53 Stop station-A	Common pipistrelle	1	Foraging Trees Around point A (feeding buzz)
21.54 Stop station-A	Common pipistrelle	1	Foraging between points A and F along tree line
21.56 Stop station-A	Common pipistrelle, Soprano pipistrelle	2	Foraging between points A and F along tree line (feeding buzz)

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22.00 A-B	Common pipistrelle	1	Foraging along hedge between points C and A (feeding buzz)
22.03 Stop station-B	Greater horseshoe	1	Heard not seen
22.16 Stop station-C	Greater horseshoe	1	Heard not seen
22.21 Stop station-D	Soprano pipistrelle	1	Heard not seen (feeding buzz)
22.22 Stop station-D	Soprano pipistrelle, Common pipistrelle	2	Heard not seen
22.40 E-F	Serotine	1	Heard not seen brief call
22.42 Stop station-F	Common pipistrelle	1	Heard not seen
22.51 G-A	Greater horseshoe	1	Foraging along tree line between points G and A

Dusk - 21st August 2014

BAT DETECTOR / EMERGENCE & ACTIVITY SURVEY					
SURVEY LOCATION:	Blandford	SURVEYORS:	Sophie Smith Louisa Jones	DATE:	21/08/2014
TEMP AT START:	16.5 °C	SUNSET:	20.18	START TIME:	20.09
TEMP AT END:	16.0 °C	CLOUD COVER (oktas):	8/8	END TIME:	22.09
WIND (bft):	1/2	RAINFALL:	0	WEATHER:	Dry cool breeze

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TIME	SPECIES	NUMBER OF BATS	ACTIVITY (behaviour/ commuting/ direction/ foraging/ feeding/ feeding buzzes/ roost/ etc.
20.39-20.42 Stop station-E	Common pipistrelle, Soprano pipistrelle and Serotine	4	Multiple Passes, and feeding buzzes foraging along hedge
20.43 E-F	Soprano pipistrelle	1	Foraging along hedge
20.44-20.45 E-F	Soprano pipistrelle	2	Fighting or mating Feeding buzz
20.46-20.47 Stop station-F	Common pipistrelle, Soprano pipistrelle and Greater horseshoe	3	Foraging along hedges (feeding buzz)
20.48-20.49 F-G	Common pipistrelle, Soprano pipistrelle	3	Fighting
20.50-20.51 Stop station-G	Common pipistrelle, Soprano pipistrelle, Greater horseshoe and Serotine	4	Foraging along hedge between Stop A and stop F
20.52 G-A	Common pipistrelle	1	Feed buzz foraging hedge
20.53 G-A	Greater horseshoe	1	Heard Not Seen brief call
20.55-20.56 Stop station-A	Soprano pipistrelle	1	Foraging along hedge towards Stop G
20.57-20.58 A-B	Common pipistrelle, Soprano	2	Heard not seen Foraging

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	pipistrelle		
21.00 A-B	Common pipistrelle, Soprano pipistrelle	2	Foraging towards up and down towards B (feeding buzz)
21.05-21.06 Stop station-C	Common pipistrelle,	1	Heard not seen (feeding buzz)
21.07-21.08 D-E	Greater Horseshoe	1	Heard not seen brief call
21.23 Stop station-F	Common pipistrelle	1	Heard not seen Multiple passes (feeding buzz)
21.26 F-G	Common pipistrelle, Greater horseshoe	2	Heard not seen Foraging
21.28 Stop station-G	Common pipistrelle	1	Heard not seen Foraging
21.31 G-A	Whiskered	1	Heard not seen Commuting
21.32 Stop station-A	Common pipistrelle, Soprano pipistrelle	2	Heard not seen Foraging (feeding buzz)
21.34 A-B	Greater horseshoe	1	Foraging up and down hedge
21.35	Noctule	1	Heard not seen Brief call
21.39 A-B	Common pipistrelle	1	Heard not seen Brief call
21.45 Stop station-B	Common pipistrelle	1	Heard not seen
21.50 Stop station-A	Common pipistrelle	1	Heard not seen

Dusk – 18th September 2014

BAT DETECTOR / EMERGENCE & ACTIVITY SURVEY					
SURVEY LOCATION:	Blandford	SURVEYORS:	Louisa Jones, Hannah Stebbings	DATE:	18/09/2014
TEMP AT START:	22.0 °C	SUNSET:	19.17	START TIME:	19.10
TEMP AT END:	21.5 °C	CLOUD COVER (oktas):	4/8	END TIME:	21.17
WIND (bft):	0	RAINFALL:	0	WEATHER:	Warn/dry
TIME	SPECIES	NUMBER OF BATS	ACTIVITY (behaviour/ commuting/ direction/ foraging/ feeding/ feeding buzzes/ roost/ etc.		
19.35-19.42 Stop station-E	Serotine	2	Flew from north ,then foraging around field at point E		
19.45-19.46 Stop station-F	Serotine, Common pipistrelle, Soprano pipistrelle	3	Commuting ,flew by several times		
19.48 F-A	Soprano pipistrelle	1	Heard not seen brief call		
19.54-19.55 Stop station-A	Common pipistrelle, Soprano pipistrelle, Greater horse shoe	3	Foraging along hedge around point A		
19.57-19.58 Stop station-B	Serotine, Common pipistrelle	2	Heard not seen Foraging around Point B		
20.00-20.01 Stop station -C	Serotine, Common pipistrelle	2	Heard not seen Foraging around Point C		

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20.05 C-D	Noctule	1	Heard not seen Commuting
2018 D-E	Whiskered	1	Heard not seen Commuting
20.21-20.23 Stop station-E	Common pipistrelle, Soprano pipistrelle	2	Heard not seen Foraging
20.28 E-F	Common pipistrelle	1	Heard not seen Foraging
20.31-20.34 Stop station-F	Common pipistrelle	1	Heard not seen Foraging around point F
20.37 Stop station-E	Common pipistrelle	1	Heard not seen Brief call
21.01 Stop station-D	Common pipistrelle	1	Heard not seen Brief call
21.04 Stop station-E	Whiskered	1	Heard not seen Brief call
21.05 E-F	Whiskered	1	Heard not seen Brief call
21.17	Soprano pipistrelle	1	Heard not seen Brief call

Dawn 19th September 2014

BAT DETECTOR / EMERGENCE & ACTIVITY SURVEY					
SURVEY LOCATION :	Blandford	SURVEYORS :	Louisa Jones, Hannah Stebbing s	DATE:	19/09/201 4

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TEMP AT START:	17.0 °C	SUNRISE:	6.50	START TIME:	4.50
TEMP AT END:	18.0 °C	CLOUD COVER (oktas):	8/8	END TIME:	6.50
WIND (bft):	1/12	RAINFALL:	0	WEATHER:	Dry but rained during the night
EDIROL NO:	EM3-3	EDIROL TIME:		ADDITIONAL INFO:	
TIME	SPECIES	NUMBER OF BATS	ACTIVITY (behaviour/ commuting/ direction/ foraging/ feeding/ feeding buzzes/ roost/ etc.		
5.10 Stop station-E	Soprano pipistrelle	1	Heard not seen Brief pass At point E		
05.43 Stop station-C	Myotis sp	1	Heard not seen Brief pass at point C		
5.50-5.52 C-D	Common pipistrelle, Soprano pipistrelle	2	Heard not seen Brief calls		
5.54 Stop station-D	Soprano pipistrelle	1	Foraging around point D		
5.57-5.58 D-E	Soprano pipistrelle, Daubenton's	2	Foraging (seen flying east to west towards point E) Social calls		
5.59-06.02 Stop station-E	Common pipistrelle, Soprano pipistrelle	2	Foraging around point E		
6.06 Stop station-F	Soprano pipistrelle	1	Foraging Over point F		
6.10 G-F	Soprano pipistrelle	1	Commuting between point G and F		
06.30 Stop station-D	Common pipistrelle	1	Commuting east to west toward houses at point D		

Appendix VII: Criteria for Importance under the Hedgerow Regulations 1997

An 'Important' hedge under wildlife and landscape criteria either supports Wildlife and Countryside Act 1981 (as amended) Sch 1 birds, Sch 5 species or Birds of Conservation Concern Red list species or rare plants or inverts.

Or the hedgerow in a 30 m stretch (*) includes—

- (a) at least 7 woody species;
- (b) at least 6 woody species, and has associated with it at least 3 of the features specified in sub-paragraph (4);
- (c) at least 6 woody species, including one of the following—
black-poplar tree (*Populus nigra* ssp *betulifolia*);
large-leaved lime (*Tilia platyphyllos*);
small-leaved lime (*Tilia cordata*);
wild service-tree (*Sorbus torminalis*); or
- (d) at least 5 woody species, and has associated with it at least 4 of the features specified in sub-paragraph

Associated features

- (a) a bank or wall which supports the hedgerow along at least one half of its length;
- (b) gaps which in aggregate do not exceed 10% of the length of the hedgerow;
- (c) where the length of the hedgerow does not exceed 50 metres, at least one standard tree;
- (d) where the length of the hedgerow exceeds 50 metres but does not exceed 100 metres, at least 2 standard trees;
- (e) where the length of the hedgerow exceeds 100 metres, such number of standard trees (within any part of its length) as would when averaged over its total length amount to at least one for each 50 metres;
- (f) at least 3 woodland species within one metre, in any direction, of the outermost edges of the hedgerow;
- (g) a ditch along at least one half of the length of the hedgerow;
- (h) connections scoring 4 points or more in accordance with sub-paragraph (5);
- (i) a parallel hedge within 15 metres of the hedgerow.

connection with another hedgerow scores one point and a connection with a pond or a woodland in which the majority of trees are broad-leaved trees scores 2 points

The hedgerow—

- (a) is adjacent to a bridleway or footpath, within the meaning of the Highways Act 1980(15), a road used as a public path, within the meaning of section 54 (duty to reclassify roads used as public paths) of the Wildlife and Countryside Act 1981(16), or a byway open to all traffic, within the meaning of Part III of the Wildlife and Countryside Act 1981(17), and
- (b) includes at least 4 woody species.

- * For the purposes of calculations within a 30 m stretch —
- (a) where the length of the hedgerow does not exceed 30 metres, count the number of woody species present in the hedgerow;
 - (b) where the length of the hedgerow exceeds 30 metres, but does not exceed 100 metres, count the number of woody species present in the central stretch of 30 metres;
 - (c) where the length of the hedgerow exceeds 100 metres, but does not exceed 200 metres, count the number of woody species present in the central stretch of 30 metres within each half of the hedgerow and divide the aggregate by two;
 - (d) where the length of the hedgerow exceeds 200 metres, count the number of woody species present in the central stretch of 30 metres within each third of the hedgerow and divide the aggregate by three.

Appendix VIII: Hedgerow Assessment Forms

General Details:

Project Number: Blandford, St Mary

Date: 11.12.2014

Surveyor: Edward Parrott

Site Address: Dorchester Hill, Blandford, St Mary

Hedge Number: West hedgerow

Not Important (delete)

Field Based Study:

Walk the hedge on one or (where access is available) both sides and for each hedge record the following information:

Section A:

- | | |
|--|---|
| 1. Hedge Length | 230 |
| 2. Number of standard trees (20cm diam. at 1.3m
(or single stemmed, 15cm diam. for multi stemmed) | 0 |
| 3. Is there a bank or wall which supports the
hedgerow, along at least one half of its length? | Yes <input type="radio"/> No <input checked="" type="radio"/> |
| 4. Are there gaps in aggregate $\leq 10\%$ of the length
of the hedgerow? | Yes <input type="radio"/> No <input checked="" type="radio"/> |
| 5. Is there at least one standard tree per 50m
of hedge? | Yes <input type="radio"/> No <input checked="" type="radio"/> |
| 6. Is there a ditch along at least one half of the length
of the hedgerow? | Yes <input type="radio"/> No <input checked="" type="radio"/> |
| 7. Is a parallel hedge present within 15m? | Yes <input type="radio"/> No <input checked="" type="radio"/> |
| 8. Are there three or more woodland species?
(see table below) | Yes <input type="radio"/> No <input checked="" type="radio"/> |
| 9. Are there connections scoring at least 4 points
in total? | Yes <input type="radio"/> No <input checked="" type="radio"/> |
- Connections to be scored as follows:
- Connections with another hedgerow score 1 point
 - Connections with a pond or woodland in which the majority of trees is broad-leaved scores 2 point
 - A hedgerow is considered 'connected' not only if it meets it but also if it has a point within 10 metres of it which would meet it if the line of the hedgerow continued.
- Total number of additional features (3-9) = 1
- | | |
|---|---|
| 10. Is the hedge either adjacent to bridleway or footway, a road
used as a public footpath or a byway open to traffic? | Yes <input type="radio"/> No <input checked="" type="radio"/> |
|---|---|

Section B:

For all woody species, undertake woody species counts as follows:

- i). For Hedges up to 30m long, count total number of woody species and tick off the species in column one.
- ii). For hedges over 30m but not exceeding 100m long, count the number of woody species in the central 30m stretch of each half of the hedge and tick species off in column 1.
- iii). For hedges over 100m but not exceeding 200m long, do two woody species counts: one in the central 30m stretch of each half of the hedge, tick the species off in columns 1 and 2, and calculate the mean count (i.e. divide the total count by two).
- iv). For hedges exceeding 200m in length, do 3 woody species counts: one in the central 30m stretch of each third of the hedge, tick the species off in columns 1,2 and 3 and calculate the mean count (i.e. divide the total count by three).
- v). In addition, ring all woody species recorded in the hedge for a total species list.

CSa Environmental Planning – Hedgerow survey sheet (Hedgerows Regulations 1997)

lder amp Field maple			Cory dusk Hazel	x	x	x	Spice and Spindle tree			x	Jun carron Juniper			Spice Auk Wild Cherry			Spice carr Common buckthorn			Gal ash	x		Oil oil Large leaved lime			
lder glr Alder			Cory ash				Spice ash Beech				Upr vlg Privet			Spice ash Bird Cherry			Spice ash Alpha currant			Gal ing Blder- berry	x	x	Upr and Gorse			
Spice ash Silver Birch			Cory Lark Midland Hawthorn				Spice ash Alder buckthorn				Upr ash Crab apple			Spice ash Sloe	x	x	x	Spice ash Nordic currant			Spice ash Mountain ash			Upr ash		
Spice ash White birch			Cory Mono Hawthorn				Spice ash ash				Spice ash White Roglar			Spice ash Plymouth Pear			Spice ash Globe- berry			Spice ash Wild ash ice tree			Upr ash			
Spice ash Broom			Cory ash Broom				Spice ash Sea buckthorn				Px can Canadian Roglar			Spice ash Rose ash			Rose ash			Spice ash	x		Upr ash elm			
Cory ash Horn- beam		x	Spice ash Large Laurel				Spice ash Holly				Spice ash Rog bar			Spice ash Seaside Oak			Spice ash Butcher's broom			Spice ash			Upr ash			
Cory ash Dog- wood		x	Spice ash Maple				Spice ash Walnut				Spice ash			Spice ash Redpoll Oak			Spice ash			Spice ash			Upr ash Guelder Rose			

Woody species counts: Count 1 = 4 Count 2 = 5 Count 3 = 5 Mean count = 4.7

Section C

All woodland species within 1m of the outermost edges of the hedgerow (see list below):

Upr ash Woodspice	Spice ash Hairy broom	Upr ash Male eye	Spice ash Wood avens	Upr ash Wood spurge	Poly vlg Milwort	Vil ash Sweet violet
Upr ash Bugle	Cory ash Nettle-leaved bell-flower	Spice ash Broad-leaved helianthus	Upr ash Bluebell	Upr ash Dog's mercury	Spice ash Tormentil	Vil ash Early dog violet
Upr ash Ryegrass	Cory ash Great bell-flower	Spice ash Wood horsetail	Upr ash Yellow archangel	Upr ash Wood millet	Spice ash Common dog violet	
Spice ash Wood anemone	Cory ash Wood sedge	Spice ash Wood spurge	Upr ash Toothwort	Spice ash Early purple orchid	Prim ash Cudg	
Arum ash Lords- and-ladies	Cory ash Enchanter's nightshade	Spice ash Giant fescue	Upr ash Hairy woodrush	Spice ash Wood sorrel	Prim ash Primrose	
Upr ash Hart's tongue	Cory ash Pig nut	Spice ash Wild strawberry	Upr ash Great woodrush	Spice ash Herb Paris	Spice ash Goldlocks buttercup	
Upr ash Lady fern	Upr ash Scaly male-fern	Spice ash Woodruff	Upr ash Yellow pimpernel	Spice ash Wood meadow-grass	Spice ash Wood spurge	
Spice ash Hard fern	Upr ash Narrow buckler fern	Spice ash Heath bedstraw	Upr ash Common cow-wheat	Poly ash Cypripedium fern	Spice ash Wood sage	
Spice ash Wood false- broom	Upr ash Broad buckler fern	Spice ash Herb spurge	Upr ash Small cow-wheat	Poly ash Soft shield fern	Vil ash Woodspice	

Total Number of woodland species: 0

Desk Based Study:

CSa Environmental Planning – Hedgesow survey sheet (Hedgerows Regulations 1997)

Is the hedge known to any of the following categories of species?

Yes / No

- Those listed in Part 1 of Schedule 1 (birds protected by special penalties) of the Wildlife and Countryside Act 1981
- Those listed in Schedule 5 (animals which are protected) of the Wildlife and Countryside Act 1981
- Those listed in schedule 8 (plants which are protected) of the Wildlife and Countryside Act 1981
- Categorized as a declining breeder (category 3) in 'Red Data Birds in Britain'
- Categorized as 'endangered', 'extinct', 'rare' or 'vulnerable' in one of the Red Data books (see regulations for details)

If yes state which:

Evaluation:

		Adjacent to bridleway, road used as a public path or a byway open to all traffic?															
		No							Yes								
≥ 7 6 5 4 3 2 1	7																
	6																
	5																
	4																
	3																
	2																
	1																
		Number of additional features							Number of additional features								
		0	1	2	3	4	5	6	7	0	1	2	3	4	5	6	7

Table for identifying 'important' hedges not qualifying on the basis of the species listed in the 'dark band study' section above. Hedges falling within dark shaded and crossed boxes are important. Those falling within other shaded boxes would qualify as important if the number of additional features or woody species count were to increase by one. They are therefore considered to be borderline (in such cases there is a reasonable likelihood that a different surveyor or survey at a different season would result in the hedge being judged important).

The Y axis = the number of species, The X axis = number of additional features

Map / Notes:

General Details:

Project Number: Blandford St Mary

Date: 11.12.2014

Surveyor: Edward Parrott

Site Address: Dorchester Hill, Blandford St Mary

Hedge Number: East hedgerow

Not Important (delete)

Field Based Study:

Walk the hedge on one or (where access is available) both sides and for each hedge record the following information:

Section A:

- | | |
|---|---|
| 1. Hedge Length | 240 |
| 2. Number of standard trees (20cm diam. at 1.3m
for single stemmed, 15cm diam. for multi stemmed) | 2 |
| 3. Is there a bank or wall which supports the
hedgerow along at least one half of its length? | Yes <input checked="" type="radio"/> No |
| 4. Are there gaps in aggregate \leq 10% of the length
of the hedgerow? | <input checked="" type="radio"/> Yes / No |
| 5. Is there at least one standard tree per 50m
of hedge? | Yes <input checked="" type="radio"/> No |
| 6. Is there a ditch along at least one half of the length
of the hedgerow? | Yes <input checked="" type="radio"/> No |
| 7. Is a parallel hedge present within 15m? | <input checked="" type="radio"/> Yes / No |
| 8. Are there three or more woodland species?
(see table below) | Yes <input checked="" type="radio"/> No |
| 9. Are there connections scoring at least 4 points
in total? | Yes <input checked="" type="radio"/> No |
- Connections to be scored as follows:
- Connections with another hedgerow score 1 point
 - Connections with a pond or woodland in which the majority of trees is broad-leaved scores 2 point
 - A hedgerow is considered 'connected' not only if it ~~appears~~ it but also if it has a point within 10 metres of it ~~and~~ would meet it if the line of the hedgerow continued.
- Total number of additional features (3-9) = 2
- | | |
|--|---|
| 10. Is the hedge either adjacent to bridleway or footway, a road
used as a public footpath or a byway open to traffic? | <input checked="" type="radio"/> Yes / No |
|--|---|

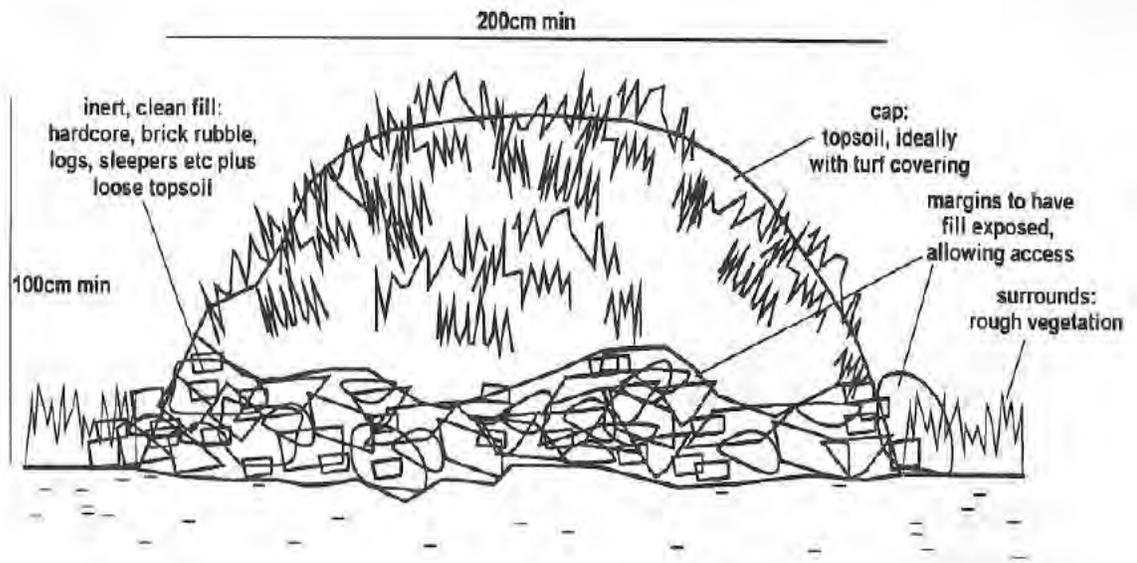
Section B:

For all woody species, undertake woody species counts as follows:

- i). For Hedges up to 30m long, count total number of woody species and tick off the species in column one.
- ii). For hedges over 30m but not exceeding 100m long, count the number of woody species in the central 30m stretch of each half of the hedge and tick species off in column 1.
- iii). For hedges over 100m but not exceeding 200m long, do two woody species counts: one in the central 30m stretch of each half of the hedge, tick the species off in columns 1 and 2, and calculate the mean count (i.e. divide the total count by two).
- iv). For hedges exceeding 200m in length, do 3 woody species counts: one in the central 30m stretch of each third of the hedge, tick the species off in columns 1, 2 and 3 and calculate the mean count (i.e. divide the total count by three).
- v). In addition, ring all woody species recorded in the hedge for a total species list.

APPENDIX IX: Reptile hibernacula and fencing design

Hibernacula design



Fence design

