BOVIS HOMES



LAND SOUTH OF CHAPEL LANE, BODENHAM MOOR

Ecological Assessment

ecology solutions for planners and developers October 2014 6252.EcAs.vf

COPYRIGHT

The copyright of this document remains with Ecology Solutions. The contents of this document therefore must not be copied or reproduced in whole or in part for any purpose without the written consent of Ecology Solutions.

CONTENTS

1	INTRODUCTION	1
2	SURVEY METHODOLOGY	2
3	ECOLOGICAL FEATURES	6
4	WILDLIFE USE OF THE SITE	8
5	ECOLOGICAL EVALUATION	14
6	PLANNING POLICY CONTEXT	23
7	SUMMARY AND CONCLUSIONS	27

PLANS

PLAN ECO1	Site Location and Ecological Designations
PLAN ECO2	Ecological Features
PLAN ECO3	Protected Species Plan
PLAN ECO4	Breeding Bird Surveys

PHOTOGRAPHS

PHOTOGRAPH 1	Arable Field and Hedgerows H2 and H3
--------------	--------------------------------------

- PHOTOGRAPH 2 Arable Field and Hedgerow H4
- PHOTOGRAPH 3 Hedgerow H1 and Northern Field Margin
- PHOTOGRAPH 4 Tall Ruderal Area

APPENDICES

APPENDIX 1	Information downloaded from Multi-Agency Geographic Information for the Countryside (MAGIC) website
APPENDIX 2	Breeding Bird Survey Species List
APPENDIX 3	Hibernaculum Specification

1. INTRODUCTION

1.1. Background and Proposals

- 1.1.1. Ecology Solutions was instructed by Bovis Homes in April 2014 to undertake an ecological assessment of land south of Chapel Lane, Bodenham Moor (see Plan ECO1), hereafter referred to as the site.
- 1.1.2. The proposals for the site comprise a new residential development with associated gardens and landscape planting.

1.2. Site Characteristics

- 1.2.1. The site is located south-east of the village of Bodenham Moor, Herefordshire. It is adjoined by roads and residential development to the north and west. To the east a dry ditch is present with an orchard beyond. A small pumping station and a residential garden lie to the south of the site (see Plan ECO2). In a wider landscape context the site is set within large areas of agricultural land across undulating topography.
- 1.2.2. In summary the site consists of a large arable field, sown with Potato *Solanum tuberosum* at the time of survey, and bound by mature and amenity hedgerows along the majority of boundaries. Occasional standard trees are present in the mature hedgerows. Strips of field margin vegetation are present at the northern and southern ends of the field, with a small patch of tall ruderal vegetation in the south-east of the site beyond the southern field margin.

1.3. Ecological Assessment

- 1.3.1. This document assesses the ecological interest of the site. The importance of the habitats within the site are evaluated with due consideration given to the guidance published by the Chartered Institute of Ecology and Environmental Management (CIEEM)¹.
- 1.3.2. Where necessary, mitigation measures are recommended so as to safeguard any significant existing ecological interest within the site and, where appropriate, potential enhancement measures are put forward and reference made to both national and local biodiversity priorities.

¹ Institute of Ecology and Environmental Management (2006) *Guidelines for Ecological Impact Assessment in the United Kingdom* (version 7 July 2006). http://www.cieem.net/ecia-guidelines-terrestrial-freshwater-and-coastal-

2. SURVEY METHODOLOGY

2.1. The methodology utilised for the survey work can be split into three areas, namely desk study, habitat survey and faunal survey. These are discussed in more detail below.

2.2. Desk Study

- 2.2.1. In order to compile background information on the site and the surrounding area, Ecology Solutions contacted Herefordshire Biological Records Centre (HBRC).
- 2.2.2. Further information on designated sites from a wider search area was obtained from the online Multi-Agency Geographic Information for the Countryside (MAGIC)² database, which uses information held by Natural England and other organisations. This information is reproduced at Appendix 1 and where appropriate on Plan ECO1.

2.3. Habitat Survey Methodology

- 2.3.1. Habitat surveys were carried out by Ecology Solutions in April 2014 in order to ascertain the general ecological value of the site and to identify the main habitats and associated plant species.
- 2.3.2. The site was surveyed based around extended Phase 1 survey methodology³, as recommended by Natural England, whereby the habitat types present are identified and mapped, together with an assessment of the species composition of each habitat. This technique provides an inventory of the basic habitat types present and allows identification of areas of greater potential which require further survey. Any such areas identified can then be examined in more detail.
- 2.3.3. Using the above method, the site was classified into areas of similar botanical community types, with a representative species list compiled for each habitat identified.
- 2.3.4. All the species that occur in each habitat would not necessarily be detectable during survey work carried out at any given time of the year, since different species are apparent in different seasons. Nonetheless, given the habitats present it is considered an accurate and robust assessment has been made of the botanical interest.

2.4. Faunal Survey

2.4.1. Obvious faunal activity, such as birds or mammals observed visually or by call during the course of the surveys, was recorded. Specific attention was paid to any potential use of the site by protected species, priority species, or other notable species.

² http://www.magic.gov.uk

³ Joint Nature Conservation Committee (2010). *Handbook for Phase 1 Habitat Survey – a Technique for Environmental Audit*. England Field Unit, Nature Conservancy Council, reprinted JNCC, Peterborough.

2.4.2. In addition, specific surveys were undertaken in respect of Badger *Meles meles*, bats, breeding birds and common reptiles. All surveys were led by a licensed bat worker and experienced badger, bird and reptile surveyors respectively.

<u>Badger</u>

- 2.4.3. Ecology Solutions undertook a check survey of Badger activity across the site and adjacent areas in April 2014, with a subsequent check completed in August 2014.
- 2.4.4. The survey was also extended to cover adjacent land of up to 30 metres away from the site within habitat considered suitable for Badgers. This was considered necessary as any potential impacts which the development may have upon Badger setts located within adjacent habitat would also have to be considered.
- 2.4.5. Evidence of any Badger activity was identified in the following ways:
 - Identification of Badger setts on the basis of their size and location;
 - Inspection of spoil heaps for footprints or discarded hair;
 - Presence of dung pits or latrines;
 - Presence of well-used mammal pathways; and
 - Presence of other indications of Badger activity including signs of foraging or hair caught in fences.

Bats

- 2.4.6. Surveyors undertook activity surveys on 27 May, 25 June, and 19 August 2014 using EM3 and EM3+ bat detectors.
- 2.4.7. The surveys were undertaken across a set route (transect) which covers the majority of the site with the aim of identifying any bats using the site for foraging. Surveys were undertaken with regard to the guidelines issued by the Bat Conservation Trust (2012⁴).
- 2.4.8. The transects commenced at sunset and continued for approximately two hours in order to maximise the encounter rate of bats (i.e. both earlyand late-emerging species).
- 2.4.9. Surveyors observed the behaviour of any bat recorded (i.e. foraging or commuting) together with noting the species and number of bats present at each location.
- 2.4.10. Surveys were conducted when the night-time temperature was at least 10°C. The insectivorous diet of bats means there is little or no food available when temperature falls below this level and consequently bat activity levels are low and may not accurately reflect the value of the site for bats. The weather conditions for the surveys were recorded and any limitations noted.

⁴ Hundt, L. (2012). *Bat Surveys – Good Practice Guidelines*. 2nd Edition. Bat Conservation Trust, London.

- 2.4.11. Static SM2BAT+ detectors were placed on the field / hedgerow boundaries in the north and west of the site for one night each in May and August and in the south-west of the site for one night in June. These detectors were programmed to record from half an hour before sunset to half an hour after sunrise.
- 2.4.12. All of the bat data recorded either via EM3 or SM2BAT+ detectors were subsequently analysed at the office via Analook software.
- 2.4.13. All trees within the site were assessed for their potential to support roosting bats. Features typically favoured by bats or evidence of past use by bats were searched for, including:
 - Obvious holes, e.g. rot holes and old Woodpecker holes;
 - Dark staining on the tree, below the hole;
 - Tiny scratch marks around a hole from bats' claws;
 - Cavities, splits and or loose bark from broken or fallen branches, lightning strikes etc.; and
 - Very dense covering of mature Ivy over trunk.

Breeding Birds

- 2.4.14. Breeding bird surveys are carried out in the early mornings after sunrise. Three visits were carried out, one in each of April, May and June 2014. Each survey lasted around an hour.
- 2.4.15. The surveys were based on the Common Bird Census (CBC) technique. The CBC involves walking transects routes through the area being studied and recording and plotting all bird species observed or heard and their behaviour.
- 2.4.16. The transect route is chosen so that the entire site is covered and all features likely to support breeding birds are surveyed. Routes and directions should be varied between visits so that there is no tendency to visit a particular part of the plot later or earlier in the day.

Reptiles

2.4.17. Specific surveys for reptiles were carried out between May and August 2014. The methodology utilised principally derived from guidance given in Froglife Advice Sheet 10⁵, the *Herpetofauna Workers' Manual*⁶, the Herpetofauna Groups of Britain and Ireland's (HGBI) advisory note⁷ and Natural England's Standing Advice for Reptiles⁸.

⁵ Froglife (1999) *Reptile Survey: an introduction to planning, conducting and interpreting surveys for snake and lizard conservation.* Froglife Advice Sheet 10. Froglife, Halesworth.

⁶ Gent, T and Gibson, S. (2003). *Herpetofauna Workers' Manual*. JNCC, Peterborough.

⁷ Herpetofauna Groups of Britain and Ireland (HGBI). (1998). *Evaluating Local Mitigation / Translocation Programmes: Maintaining Best Practice and Lawful Standards*.

⁸ Natural England (2011). Standing Advice for Reptiles.

http://www.naturalengland.org.uk/Images/Reptile%20feb11_tcm6-21712.pdf

- 2.4.18. Areas of suitable habitat were surveyed for the presence of reptiles using artificial refugia ("tins"). Thirty-four 0.5m x 0.5m roofing felt tins were placed within areas of suitable reptile habitat in the site.
- 2.4.19. The tins provide shelter and heat up quicker than the surroundings in the morning and can remain warmer than the surroundings in the late afternoon. Being ectothermic (cold-blooded), reptiles use them to bask under and raise their body temperature which allows them to forage earlier and later in the day.
- 2.4.20. To determine presence / absence the tins are checked for reptile activity over seven visits at appropriate times of the day (avoiding the middle of the day when the ambient air temperature is at its highest) in accordance with Natural England guidance. Optimum weather conditions for reptile surveying are temperatures between 10°C and 17°C, intermittent or hazy sunshine and little or no wind.

3. ECOLOGICAL FEATURES

- 3.1. A habitat survey was undertaken within the site by Ecology Solutions in April 2014, with subsequent checks completed in June and August 2014.
- 3.2. The following main habitat / vegetation types were identified within the site during the survey undertaken:
 - Arable;
 - Field Margin;
 - Tall Ruderal Vegetation;
 - Native Hedgerow with Standards; and
 - Amenity Hedgerow.
- 3.3. The location of these habitats is shown on Plan ECO2 and described individually below.

3.4. Arable

3.4.1. At the time of initial surveys, the field covering the majority of the site had recently been ploughed (see Photographs 1 and 2). A Potato crop was sown and continued to be cultivated as subsequent surveys progressed.

3.5. Field Margin

3.5.1. At the field's edges, rough grassy verges are present (see Photograph 3). These contain a number of typical arable-edge species together with a number of opportunistic species. Species present include Creeping Thistle Cirsium arvense, Cleavers Galium aparine, Teasel Dipsacus sylvestris, Broad-leaved Dock Rumex obtusifolius, Curled Dock Rumex crispus, Cow Parsley Anthriscus sylvestris, Red Dead-nettle Lamium purpureum. White Dead-Nettle Lamium album. Yorkshire Fog Holcus lanatus, Bittercress Cardamine sp., Dandelion Taraxacum spp., Common Urtica dioica, Bramble Rubus fruticosus, Goat's-Beard Nettle Tragopogon pratensis, Cut-leaved Cranesbill Geranium dissectum, Field Forget-me-not Myosotis arvensis, Herb Robert Geranium robertianum, Tufted Vetch Vicia cracca, Field Bindweed Convolvulus arvensis, Ivy Hedera helix, Greater Plantain Plantago major, Creeping Buttercup Ranunculus repens, Clover Trifolium sp., Ivy-leaved Speedwell Veronica hederifolia, Daffodil Narcissus sp., Spanish Bluebell Hyacinthoides hispanica, Hogweed Heracleum sphondylium, Cocksfoot Dactylis glomerata, False Oat-grass Arrhenatherum elatius, Black Horehound Ballota nigra, Lords-and-ladies Arum maculatum, Colts-foot Tussilago farfara, Chickweed Stellaria sp., Spear Thistle Cirsium vulgare and Willow Salix sp.

3.6. Tall Ruderal

3.6.1. The field margin grades into tall ruderal vegetation in a raised area in the south-east of the site beyond the southern edge of the field (see Photograph 4). Together with the tall ruderal vegetation piles of brash were present as a result of the management (pruning) of the orchard. The area contains Common Nettle, Broad-leaved Dock, White Dead-Nettle, Cow Parsley, Cleavers, Creeping Buttercup, Creeping Thistle,

Hogweed, False Oat-grass, Yorkshire Fog, Cocksfoot, Dandelion, Lesser Burdock *Arctium minus*, Hemlock *Conium* sp. and Ground Elder *Aegopodium podagraria*. In addition to the piles of brash, a disused irrigation reel and other dumped materials such as slate and plastic were noted.

3.7. Native Hedgerow with Standards

3.7.1. Native hedgerows bound the site to the north, east and west. The two such hedgerows on site are shown on Plan ECO2, and are considered individually below:

H1

3.7.2. H1 runs along the field's western (Millcroft Road) and northern (Chapel Lane) boundaries, briefly interrupted along the northern boundary to allow access from Chapel Lane (see Photograph 3). Approximately 4m in height, it is made up of Elm *Ulmus* sp., Hawthorn *Crataegus monogyna*, Hazel *Corylus avellana*, Ash *Fraxinus excelsior*, Bramble, Elder *Sambucus nigra* and occasional Holly *Ilex aquifolium*, with Lords-and-ladies, Ivy and Geranium *Geranium* sp. noted within its ground-flora. There are some semi-mature Sycamore *Acer pseudoplatanus* standards present within the hedgerow.

H2

3.7.3. H2 borders the orchard east of site (see Photograph 1). H2 is approximately 2.5m in height, managed, and comprises Elm, Hawthorn, Ivy, Elder and very occasional Field Maple *Acer campestre*. Field Rose *Rosa arvensis* is associated with the recently-cleared dry ditch on the orchard side of the hedgerow. Cleavers, Lords-and-ladies and White Bryony *Bryonia dioica* are present within the ground-flora.

3.8. Amenity Hedgerow

3.8.1. Amenity hedgerows form the site's north-eastern boundary with a single residential property (Olanstan) and its garden, as follows:

НЗ

3.8.2. The shorter section, H3, is a well-maintained Beech *Fagus sylvatica* hedgerow approximately 2m in height (see Photograph 1). It runs east-west for around 16m.

H4

3.8.3. The longer section, H4, is a Leyland Cypress *Cupressus x leylandii* hedge approximately 2m in height (see Photograph 2). It runs north-south for around 60m.

3.9. Background Records

3.9.1. No records of notable plant species were returned from within the site. The closest notable plant record returned by HBRC was of Bluebell Hyacinthoides non-scripta recorded as present in the same $2\text{km} \times 2\text{km}$ grid square as the site in 1981.

4. WILDLIFE USE OF THE SITE

4.1. General observations were made during the surveys of any faunal use of the site, with specific attention paid to the potential presence of protected species.

4.2. Bats

Activity Survey 27.05.14 (EM3)

- 4.2.1. The results of the activity survey completed on the evening of 27 May are summarised below, and illustrated on Plan ECO3.
- 4.2.2. The survey was undertaken in favourable weather conditions. The temperature was fairly mild and there was no precipitation or wind during the survey.
- 4.2.3. The survey recorded a moderate level of bat activity, with Common Pipistrelle *Pipistrellus pipistrellus* and at least two Soprano Pipistrelle *Pipistrellus pygmaeus* bats foraging along and in the area of H1 and H4 where these hedgerows join. Further Common Pipistrelle foraging was recorded on the tall ruderal stand's eastern boundary with the orchard and also south towards The Brook, where a *Myotis* sp. bat was also recorded at 22:05. Similar results were obtained from the static SM2BAT+ recordings. The first Common Pipistrelle was heard at 21:29, some 13 minutes after sunset. The first Soprano Pipistrelle was heard at 21:35, 19 minutes after sunset. The final bat recorded was a Common Pipistrelle at 03:42, one hour and 16 minutes before sunrise.
- 4.2.4. Table 1 summarises the data obtained during the survey undertaken on 27 May.

	Species	Total Passes	
	Myotis sp.	1	
	Pipistrelle sp.	8	
	Common Pipistrelle 46		
	Soprano Pipistrelle 45		
Total	4 100		
Weather	Dry, still, 10°C		
Sunset	21:16		
Sunrise (28 May)	04:58		

Table 1 Summary of 27 May transect.

Activity Survey 25.06.14 (EM3+)

- 4.2.5. The results of the activity survey completed on the evening of 25 June are summarised below and on Plan ECO3.
- 4.2.6. The survey was undertaken in favourable weather conditions. The temperature was mild and there was no precipitation or wind during the survey.

- 4.2.7. The survey recorded a moderate level of bat activity, with Common and Soprano Pipistrelle foraging activity in similar areas to May's survey. The first bats recorded were a Soprano Pipistrelle at 21:50 and a Common Pipistrelle at 21:51, some 15 and 16 minutes after sunset respectively. A Noctule *Nyctalus noctula* was recorded along H1 at the site's western boundary at 21:55, while in the north-west of the site five Common Pipistrelles were seen foraging together at 22:06 where the field and its margin meet H1. Similar results were obtained from the static SM2BAT+ recording. The last bat was a Soprano Pipistrelle at 04:27, 24 minutes before sunrise.
- 4.2.8. Table 2 summarises the data obtained during the survey undertaken on 25 June.

	Species	Total Passes	
	Pipistrelle sp.	13	
	Common Pipistrelle	149	
	Soprano Pipistrelle	39	
	Noctule	16	
Total	4	217	
Weather	Dry, still, 16°C		
Sunset	21:35		
Sunrise (28 May)	04:31		

 Table 2 Summary of 25 June transect.

Activity Survey 19.08.14 (EM3+)

- 4.2.9. The results of the activity survey completed on the evening of 19 August are summarised below and on Plan ECO3.
- 4.2.10. The survey was undertaken in favourable weather conditions. The temperature was mild and there was no precipitation or wind during the survey.
- 4.2.11. This survey again recorded a moderate level of bat activity, with Common and Soprano Pipistrelles foraging in similar areas to the May and June surveys. The first bats recorded were Soprano and Common Pipistrelles at 20:33, seven minutes after sunset. Noctule activity was recorded on a few occasions, beginning at 20:46 (20 minutes after sunset) and a Serotine *Eptesicus serotinus* was recorded in the south-west of the site near Newton House at 21:05. A low level of *Myotis* sp. activity was recorded from 21:54 onwards. Static SM2BAT+ recordings again obtained similar results to the activity transects. The last registration made by the static detectors was of a Pipistrelle species bat at 00:52, over five hours before sunrise.
- 4.2.12. Table 3 summarises the data obtained during the survey undertaken on 19 August.

	Species	Total Passes	
	Myotis sp.	5	
	Pipistrelle sp.	21	
	Common Pipistrelle	65	
	Soprano Pipistrelle	137	
	Noctule	6	
	Serotine	1	
Total	6 235		
Weather	Dry, still, $14^{\circ}C \rightarrow 12^{\circ}C$		
Sunset	20:26		
Sunrise (28 May)	06:03		

Table 3 Summary of 19 August transect.

- 4.2.13. None of the trees present are mature or possess features of which bats could make use for roosting purposes.
- 4.2.14. HBRC returned a handful of bat records. The closest of these was of several juvenile female Common Pipistrelle bats recorded approximately 0.2km to the north of the site in 1986. The most recent records all date from 2008, and are of ten unidentified bats recorded in flight approximately 0.9km north-west of the site and of a Noctule present and a Common Pipistrelle feeding approximately 0.7km north of the site.

4.3. Badgers

- 4.3.1. No evidence of the presence of Badger was observed during survey work undertaken.
- 4.3.2. Records of Badgers were returned from the local area as part of the desk study.

4.4. Other Mammals

- 4.4.1. A dead Mole *Talpa europaea* was recorded on site during the reptile survey on 2 June.
- 4.4.2. Records returned by HBRC include a single Otter *Lutra lutra* (a UK priority species) recorded as present in a residential garden approximately 20m east of the site in 2006. The garden is close to the (currently dry) ditch slightly further east, and as there appears to be no other suitable Otter habitat in the garden's immediate vicinity the ditch may perhaps have been wet at the time of the sighting, with the animal dispersing towards The Brook to the south. The Brook is a minor watercourse separated from the site by copses associated with the pumping station and a (different) residential garden.
- 4.4.3. Several adult and juvenile Water Vole *Arvicola amphibius* (a UK and Herefordshire priority species) were also recorded nearby from the area of The Brook, approximately 0.1km south of the site in 2011.

4.4.4. As the habitats within the site are unsuitable for both these species, it is considered unlikely that either would be present, or detrimentally affected, and shall not be considered further as part of this assessment.

4.5. Birds

- 4.5.1. The results of the breeding bird surveys are illustrated on Plans ECO4. A full species list, together with British Trust for Ornithology (BTO) codes, is included at Appendix 2.
- 4.5.2. The survey of 25 April (between 06:00 and 07:10) recorded six species using the site and a further two close to site boundaries or flying over the site without using its habitats. Species recorded include Blackbird *Turdus merula*, House Sparrow *Passer domesticus*, Goldfinch *Carduelis carduelis*, Robin *Erithacus rubecula*, Great Tit *Parus major*, Carrion Crow *Corvus corone*, Dunnock *Prunella modularis*, and Song Thrush *Turdus philomelos*.
- 4.5.3. The survey of 28 May (between 05:45 and 06:55) recorded four species using habitats within the site boundary and a further eleven close to site boundaries or flying over site. A Buzzard *Buteo buteo* was seen hunting over the site on a reptile survey later the same day, and two Tawny Owls *Strix aluco* were heard calling from the adjacent orchard the previous night during a bat survey.
- 4.5.4. The survey of 26 June (06:10 to 07:20) recorded ten species using habitats within the site boundary and a further five close to boundaries or flying over site.
- 4.5.5. Blue Tit *Cyanistes caeruleus*, Robin, Dunnock, Blackbird and Goldfinch were noted as probable breeding on site, with Song Thrush and Starling *Sturnus vulgaris* probably breeding close to site.
- 4.5.6. The HBRC data search returned records of notable bird species, though none of these were from within the site. Much the closest record was one of a single Barn Owl *Tyto alba* (a Herefordshire priority species also listed on Schedule 1 of the Wildlife & Countryside Act 1981) approximately 0.2km east of the site in 2003. The most recent record of Barn Owl was of one 1.2km north-west of the site in 2009.

4.6. Reptiles

4.6.1. As the initial surveys identified suitable, albeit isolated and largely suboptimal, habitats to support common reptiles Ecology Solutions conducted presence / absence reptile surveys at the site following the standard guidelines and during suitable weather conditions. A summary of results is shown in Table 4 below.

Survey	Date	Time	Cloud Cover (%)	Temp. (°C)	Reptiles Recorded
1	27.05.14	18.00	95	15	0
2	28.05.14	11.15	100	17	0
3	02.06.14	15.10	80	18	1 juvenile Grass Snake

4	25.06.14	19.45	20	16	0
5	26.06.14	9.15	70	15.5	0
6	19.08.14	17.00	50	18	0
7	20.08.14	10.00	10-15	16	0

Table 4. Reptile Survey Results 2014

- 4.6.2. The 2014 surveys recorded only a single juvenile Grass Snake *Natrix natrix* in the northern field margin on 2 June (see Plan ECO3). Froglife's Advice Sheet 10 provides guidance on classifying reptile population size according to the numbers observed during a survey. While this relies on the number of adult reptiles observed, a single juvenile found in the 0.2ha of suitable reptile habitat surveyed would suggest a low Grass Snake population size.
- 4.6.3. No records of any reptile species were returned by HBRC during the desk study undertaken.

4.7. Amphibians

- 4.7.1. There are no waterbodies on site or in the immediate locality that could support Great Crested Newts *Triturus cristatus* or other amphibians. Minor roads between the site and all potentially suitable waterbodies in the area form effective dispersal barriers to any newts present.
- 4.7.2. Great Crested Newt (two adults), Smooth Newt Lissotriton vulgaris (four adults and three larvae), Palmate Newt Lissotriton helveticus (two adults) and Common Frog Rana temporaria (three adults) were all recorded from the current Potato field in 2002. Two Great Crested Newt adults and 15 eggs were recorded from a residential garden approximately 30m north of the site in 2004. The desk study also returned records of Common Toad Bufo bufo, a species of principal importance in England and a UK priority species (closest record from approximately 0.2 km south-west of the site in 2003).

4.8. Invertebrates

- 4.8.1. Given the habitats present it is likely that an assemblage of common invertebrate species is present within the site. There is no reason to suspect that the site would support an elevated entomological value.
- 4.8.2. No records of any invertebrate species were returned by HBRC during the desk study undertaken.

5. ECOLOGICAL EVALUATION

5.1. The Principles of Ecological Evaluation

- 5.1.1. The guidelines for ecological evaluation produced by CIEEM propose an approach that involves professional judgement, but makes use of available guidance and information, such as the distribution and status of the species or features within the locality of the project.
- 5.1.2. The methods and standards for site evaluation within the British Isles have remained those defined by Ratcliffe⁹. These are broadly used across the United Kingdom to rank sites so priorities for nature conservation can be attained. For example, current sites of Special Scientific Interest (SSSI) designation maintains a system of data analysis that is roughly tested against Ratcliffe's criteria.
- 5.1.3. In general terms, these criteria are size, diversity, naturalness, rarity and fragility, while additional secondary criteria of typicalness, potential value, intrinsic appeal, recorded history and the position within the ecological / geographical units are also incorporated into the ranking procedure.
- 5.1.4. Any assessment should not judge sites in isolation from others, since several habitats may combine to make it worthy of importance to nature conservation.
- 5.1.5. Further, relying on the national criteria would undoubtedly distort the local variation in assessment and therefore additional factors need to be taken into account, e.g. a woodland type with comparatively poor species diversity, common in the south of England, may be of importance at its northern limits, say in the border country.
- 5.1.6. In addition, habitats of local importance are often highlighted within a local Biodiversity Action Plan (BAP). The Herefordshire BAP has been considered as part of this assessment where relevant.
- 5.1.7. Levels of importance can be determined within a defined geographical context from the immediate site or locality through to the international level.
- 5.1.8. The legislative and planning policy context are also important considerations and have been given due regard throughout this assessment.

5.2. Habitat Evaluation

Designated Sites

5.2.1. **Statutory Sites.** There are no statutory designated sites within or directly adjacent to the site. The closest such site is the River Lugg Site of Special Scientific Interest (SSSI) which is approximately 0.9km north-

⁹ Ratcliffe, D. A. (1977). A Nature Conservation Review: the Selection of Study areas of Biological National Importance to Nature Conservation in Britain. Two Volumes. Cambridge University Press, Cambridge.

west of the site at its closest point, beyond existing farmland and development (see Plan ECO1). The River Lugg SSSI is a largely unpolluted natural river which, as a tributary of the River Wye, is also part of the River Wye Special Area of Conservation (SAC). The River Lugg is designated as a SSSI on account of being one of the best British mainland examples of both a clay river and a river which transitions from nutrient-poor to naturally nutrient-rich water, as well as for its Otter populations. Development of the site is not likely to have any significant direct effect on the SSSI.

- 5.2.2. The River Wye SAC is designated as a water course of plain to montane levels with *Ranunculion fluitantis* and *Callitricho-Batrachion* vegetation, as well as for its populations of important freshwater species such as White-Clawed Crayfish *Austropotamobius pallipes* and Otter.
- 5.2.3. The Brook, lying approximately 30m south of the proposed development site at its closest point, drains into the River Lugg, a tributary of the River Wye. To ensure the quality of water in The Brook is protected during and following construction, a detailed construction method statement shall be provided and strictly adhered to so that potential deleterious effects such as surface run-off (contaminated with chemicals or a high silt level) are avoided.
- 5.2.4. In keeping with best-practice methodologies, the construction method statement shall set out the specific safeguards to be employed to limit any likely pollution event.
- 5.2.5. The construction method statement shall include provisions to perform the following in relation to the protection of the watercourse and marginal vegetation:
 - Establish a works site compound well away from the watercourse present south of the site, and ensure that run-off from the compound cannot enter the watercourse. Use temporary bunding to control run off and plan for exceptionally wet weather occurring during the works.
 - Any fuel or oil storage shall be kept well away from standing water and all tanks and storage containers shall be fully bunded over an impermeable base. Waste shall be managed to ensure that it remains contained at all times. Waste shall be regularly collected / removed from the development site to ensure that capacity remains available at all works times.
 - Materials for the works including cements, mortars, chemicals and solvents shall be stored securely in dry conditions at all times and away from the watercourse margins and river banks.
 - Refuelling of vehicles and plant shall be restricted to a designated location with impermeable base, well away from the southern boundary of the site. A spill kit with dry sand, earth or commercial products shall be kept at all times at the refuelling location for immediate use if a spillage occurs.

- Operations that create dust shall be undertaken using machinery, equipment and techniques that minimise emissions at all times. During dry periods, works areas and roads shall be dampened down to reduce dust arising from site works and vehicle movements. Damping down shall be undertaken carefully and in a controlled manner to ensure that no run off occurs into adjoining standing water.
- To maximise the retention of existing desirable watercourse vegetation, areas immediately adjoining approved areas of development will be managed to limit the extent of disturbance by development operations. Prior to development operations commencing, temporary fencing shall be erected to protect areas falling beyond the actual development area and adjoining area necessary for safe undertaking of building operations. Building operations will be controlled to ensure that subsequent disturbance is limited to the unprotected areas. This will allow greater areas of existing habitat to be conserved, reducing the impact of new development.
- Installation of a temporary silt barrier as required between the works area and the watercourse margin. To prevent silt dispersal into the river, a temporary bund of straw bales or similar shall be used to collect and trap surface run-off as required to avoid siltation of the watercourse.
- 5.2.6. Concerns have been raised in relation to the River Wye SAC regarding loss of riparian habitat, water quality impacts arising from changing agricultural land-use within the catchment, and increased abstraction from the River Wye for agriculture and potable water. As the proposals relate to a residential development connected to the water supply grid which will not seek to abstract additional water from the river's tributaries, they will not impact on the SAC in any such regard.
- 5.2.7. Through the adoption of these avoidance measures and safeguards, development of the site is not likely to have any significant effect on the integrity of the River Wye SAC, with any effect considered to be *de minimis* at worst.
- 5.2.8. The River Wye and the River Lugg are popular for recreational activities such as salmon fishing and recreational boating. Fishing activities are implicated in the decline of Atlantic Salmon *Salmo salar*, another species contributing to the SAC's designation, and the citation for the River Wye SAC notes a demand for increased recreational activities as a source of potential concern. Initiatives such as the River Wye Salmon Action Plan are seeking to address these issues. The Salmon Action Plan has introduced a number of measures to counter overexploitation, including changes to licensing, a voluntary catch and release scheme, high impact enforcement work against illegal fishing / poaching, and the closure of fisheries.
- 5.2.9. Given the existence of these initiatives, the development of the site is not likely to have significant indirect impacts on the River Wye SAC through increased recreational pressure. Much of the area also already has

public access, for instance through a network of public footpaths, which is subject to regular management.

- 5.2.10. Dinmore Hill Woods SSSI is located approximately 2.3km north-west of the site (see Plan ECO1) and is an extensive area of mixed native broadleaved woodlands overlying red sandstone. It is designated because it forms one of the largest continuous blocks of woodland in the Leominster / South Herefordshire area and harbours a rich fauna and diverse flora including the locally rare Wild Service Tree *Sorbus torminalis.* Development of the site is not likely to have any significant effect on the SSSI.
- 5.2.11. Hill Hole Dingle SSSI is located approximately 3.2km north of the site (see Plan ECO1). It is an area of ancient natural woodland with associated grassland and scrub, designated as an example of a rich, mixed deciduous woodland of a type characteristic of this part of the Welsh Borderlands. Development of the site is not likely to have any significant effect on the SSSI.
- 5.2.12. **Non-statutory Sites.** There are no non-statutory designated sites within or directly adjacent to the site. Roadside Verge Nature Reserve 25 lies approximately 0.7km west of the site (see Plan ECO1). It is designated for Meadow Cranesbill *Geranium pratense*. It is unlikely that there would be any significant adverse effects on this non-statutory site as a result of the development of the site, whilst landscape planting could seek to include Meadow Cranesbill within the scheme.

Habitats

- 5.2.13. Overall the majority of the habitats present are of negligible ecological interest and their loss to the proposed development would be of no significance.
- 5.2.14. The hedgerows within the site are typically species-poor and accordingly would not meet the criteria of 'important' hedgerows on account of ecology detailed within the Hedgerows Regulations 1997. While it is proposed to remove short lengths of hedgerow H1 to facilitate access to the proposed development, enhancements are proposed to all existing hedgerows.
- 5.2.15. A buffer should, if possible, be provided between retained hedgerows and rear gardens to avoid the likely degradation issues that commonly occur in the absence of a buffer (encroachment / deposition of garden waste).
- 5.2.16. It is recommended that new planting be focused on native species and those of benefit to native wildlife. An attenuation pond and new areas of amenity / landscape planting where previously the majority was arable land will also create new wildlife opportunities, as will proposed biodiversity enhancements to the current tall ruderal habitat. It is recommended that a hibernaculum (see Appendix 3) be constructed in the south-eastern area to offer refuge and hibernation opportunities for reptile species, together with offering further biodiversity gains such as a dead-wood resource for saproxylic organisms. This would further benefit

reptile species through the provision of prey species. The south-eastern area could also be scarified / over-sown to increase the diversity of the sward and thereby its invertebrate assemblage, producing yet more benefits for reptiles through the same principle. The area in the south-east of the site shall be dedicated to ecology and biodiversity and subject to a management regime to maximise opportunities.

5.3. Faunal Evaluation

Bats

- 5.3.1. **Legislation.** All bats are protected under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) and included on Schedule 2 of the Conservation of Habitats and Species Regulations 2010 ("the Habitats Regulations"). These include provisions making it an offence:
 - Deliberately to kill, injure or take (capture) bats;
 - Deliberately to disturb bats in such a way as to:-
 - (i) be likely to impair their ability to survive, to breed or rear or nurture their young; or to hibernate or migrate; or
 - (ii) affect significantly the local distribution or abundance of the species to which they belong;
 - To damage or destroy any breeding or resting place used by bats;
 - Intentionally or recklessly to obstruct access to any place used by bats for shelter or protection (even if bats are not in residence).
- 5.3.2. The words deliberately and intentionally include actions where a court can infer that the defendant knew that the action taken would almost inevitably result in an offence, even if that was not the primary purpose of the act.
- 5.3.3. The offence of damaging (making worse for the bat) or destroying a breeding site or resting place is an absolute offence. Such actions do not have to be deliberate for an offence to be committed.
- 5.3.4. In accordance with the Habitats Regulations the licensing authority (Natural England) must apply the three derogation tests as part of the process of considering a licence application. These tests are that:
 - 1. the activity to be licensed must be for imperative reasons of overriding public interest or for public health and safety;
 - 2. there must be no satisfactory alternative; and
 - 3. the favourable conservation status of the species concerned must be maintained.
- 5.3.5. Licences can usually only be granted if the development is in receipt of full planning permission.
- 5.3.6. **Site Usage.** The results of the bat survey work undertaken found moderate levels of bat activity centred across the hedgerows and also in the south-east adjacent to the off-site orchard. Several Common Pipistrelles and Soprano Pipistrelles were recorded commuting and / or foraging, as were smaller numbers of Noctule, *Myotis* sp. bats and a single Serotine. The presence of various copses, hedgerows and The

Brook in the immediate locality means that there are good foraging resources in the immediate area, as well as those afforded by the hedgerows that are present on site.

- 5.3.7. Given the timings of first registrations it is considered highly likely that a bat roost is present in the local area and in close proximity to the site.
- 5.3.8. Mitigation and Enhancements. There is no requirement for a Natural England European Protected Species licence. The development is not likely to have any significant effects on bat species, with all species to be retained at a favourable conservation status. A landscape strategy based on native species could encourage greater use of the site by foraging bats whilst the provision of a wet attenuation feature would provide a new habitat of interest. Furthermore, the proposals shall increase the total length of mature hedgerows within the site through a new hedgerow along the south-eastern boundary.
- 5.3.9. As an enhancement in roosting terms one or more Schwegler 1FF bat boxes could be attached to suitable trees or new buildings within the site to offer new roosting opportunities for bats.

<u>Birds</u>

- 5.3.10. Legislation. Section 1 of the Wildlife and Countryside Act 1981 (as amended) is concerned with the protection of wild birds, whilst Schedule 1 lists species that are protected by special penalties. All species of birds receive general protection whilst nesting.
- 5.3.11. Site Usage. No Schedule 1 species were recorded, and generally the assemblage observed during the breeding bird surveys consists of frequently encountered species, through some have undergone national declines in recent years largely as a result of changes in agricultural practice.
- 5.3.12. **Mitigation and Enhancements.** It is recommended that a check survey for nesting bird species be undertaken prior to any hedgerow removal, or that this be done outside of the nesting bird season (typically March to July inclusive). No further survey work is required for birds provided the vegetation is cleared outside of the nesting season.
- 5.3.13. New planting undertaken as part of the proposed development should include native species, including fruit-bearing species. This would offer new foraging and nesting habitats for a variety of species. The inclusion of bird boxes on suitable trees would offer new nesting opportunities and provide some ecological gains.

<u>Reptiles</u>

- 5.3.14. **Legislation.** All six British reptile species receive a degree of legislative protection that varies depending on their conservation importance.
- 5.3.15. Rare, endangered or declining species receive 'full protection' under the Wildlife and Countryside Act 1981 as well as protection under the Conservation (Natural Habitats &c.) Regulations 2010 (as amended),

which transposed into UK law the European Community Directive on the Conservation of Natural Habitats and of Wild Fauna and Flora, more commonly known as the Habitats Directive. Species that are fully protected include Smooth Snake *Coronella austriaca* and Sand Lizard *Lacerta agilis*. These receive the following protection from:

- killing, injuring, taking;
- possession or control (of live or dead animals, their parts or derivatives);
- damage to, destruction of, obstruction of access to any structure or place used for shelter or protection;
- disturbance of any animal occupying such a structure or place; and
- selling, offering for sale, possession or transport for purposes of sale (live or dead animal, part or derivative).
- 5.3.16. Owing to their abundance in Britain, Common Lizard *Zootoca vivipara*, Slow-worm *Anguis fragilis*, Grass Snake and Adder *Vipera berus* are only 'partially protected' under the Wildlife and Countryside Act 1981 (as amended) and as such only receive protection from:
 - deliberate killing and injuring;
 - being sold or other forms of trading.
- 5.3.17. **Site Usage.** The reptile survey work undertaken found a low population of Grass Snake using the northern field margin.
- 5.3.18. Mitigation and Enhancements. A habitat manipulation exercise, undertaken in advance of development to avoid the killing or injuring of any common reptile species, should ensure that an offence is avoided. It will be important to persuade reptiles to disperse from areas to be affected by the development during the reptile active season (April to September), and only during this period in favourable weather conditions. This would encourage any Grass Snake population to disperse naturally. The area in which the Grass Snake was found is linked to other suitable habitat within the site (the tall ruderal area proposed for biodiversity enhancement) by suitable connecting habitat in the form of hedgerow H1 and the field margins. The tall ruderal area is in turn connected to suitable off-site habitat, namely the dry ditch to the east.
- 5.3.19. The proposed attenuation pond and the area of biodiversity enhancement in the south-east of the site could create new opportunities for common reptiles including Grass Snakes. The pond would be adjacent to hedgerow H1 and connected to the south-eastern area by suitable connecting habitat in the form of landscape planting (provided this is made up of suitable species) and the off-site copse to the south. Although it may not be permanently wet, a seasonally wet pond would still attract amphibian populations, providing prey items for Grass Snakes. It is recommended that a hibernaculum (see Appendix 3) be constructed in the south-eastern area to offer refuge and hibernation opportunities for reptile species, together with offering further biodiversity gains (such as offering a dead-wood resource for saproxylic organisms). If the area were also scarified / over-sown with a native wildflower grassland mix to increase the diversity of the sward, this would diversify

the invertebrate assemblage in this area. Increased invertebrate populations would benefit reptile species by providing prey items.

Amphibians

- 5.3.20. Legislation. All British amphibian species receive a degree of protection under the Wildlife and Countryside Act 1981 (as amended). The level of protection varies from protection from sale or trade only, as is the case with species such as Smooth Newt *Lissotriton vulgaris* and Common Toad *Bufo bufo*, to the more rigorous protection afforded to the Great Crested Newt.
- 5.3.21. Although Great Crested Newts are regularly encountered locally and throughout much of England, the UK holds a large percentage of the world population of the species. The UK has an international obligation to conserve the species; it receives full protection under domestic and European legislation.
- 5.3.22. Great Crested Newts are protected under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) and included on Schedule 2 of the Conservation of Habitats and Species Regulations 2010 (as amended; "the Habitats Regulations"). These include provisions making it an offence:
 - Deliberately to kill, injure or take (capture) Great Crested Newts;
 - Deliberately to disturb Great Crested Newts in such a way as to:-
 - (i) be likely to impair their ability to survive, to breed or reproduce, or to rear or nurture their young, or to hibernate or migrate; or
 - (ii) affect significantly the local distribution or abundance of the species to which they belong;
 - To damage or destroy any breeding or resting place used by Great Crested Newts;
 - Intentionally or recklessly to obstruct access to any place used by Great Crested Newts for shelter or protection.
- 5.3.23. European Protected Species licences are available from Natural England in certain circumstances, and permit activities that would otherwise be considered an offence.
- 5.3.24. **Site Usage.** No newts or other amphibians were recorded during the course of the reptile surveys at the site, which surveyed areas of terrestrial habitat suitable both for common reptiles and amphibians.
- 5.3.25. While a number of wells are present in the local area of the site, the nearest pond is situated approximately 0.6km south-east of the site beyond a minor road. Roads within 0.5km of the site enclose the area of land in which the site is located, acting as effective dispersal barriers to any newts present further afield. Ordnance Survey maps and aerial imagery were used to identify any waterbodies that could support Great Crested Newts or other amphibians either on site or in any other part of the area enclosed by these roads. A single such waterbody was found, namely a dammed section of The Brook approximately 0.2km south-east of the site.

- 5.3.26. Historical aerial photographs dating from 1999 and 2006 were inspected for any signs of previously existing waterbodies in the immediate area of the background record, but no additional waterbodies were detected using this technique. The Great Crested Newt records from the site may relate to terrestrial rather than aquatic (breeding) habitat, but in all likelihood, given the paucity of habitats on site for nets, this record is from a residential garden in to the north of Chapel Lane and its reference to within the site is a recording error. The record of Great Crested Newt eggs in a residential garden approximately 30m north of the site in 2004 suggests the garden may contain a very small garden pond supporting amphibians including Great Crested Newts.
- 5.3.27. Irrespective of the location of the records of Great Crested Newts the proposals are restricted to the heavily managed potato field, which would only offer sub-optimal dispersal opportunities for any locally present newt populations. The habitats of an elevated value are to be largely retained and enhanced for ecology and biodiversity. Whilst through the provision of an attenuation pond, which is recommended to be designed to hold water, shall potentially offer a new suitable breeding site for amphibians with the site. The informal management of any wildflower grassland to be created shall offer suitable terrestrial opportunities for amphibians, whilst the proposed hibernaculum shall provide refuge and hibernation opportunities.

6. PLANNING POLICY CONTEXT

6.1. The site is wholly situated in the County of Herefordshire District. The planning policy framework that relates to nature conservation at the site is issued at two main administrative levels: nationally through the National Planning Policy Framework (NPPF) and locally through the planning policies of Herefordshire Council. Any proposed development will be judged in relation to the policies contained within these documents.

6.2. National Policy

National Planning Policy Framework

- 6.2.1. Guidance on national policy for biodiversity and geological conservation is provided by the NPPF, published in March 2012. It is noted that the NPPF continues to refer to further guidance in respect of statutory obligations for biodiversity and geological conservation and their impact within the planning system provided by Circular 06/05 (DEFRA / ODPM, 2005) accompanying the now-defunct Planning Policy Statement 9 (PPS9).
- 6.2.2. The key element of the NPPF is that there should be "a presumption in favour of sustainable development, which should be seen as a golden thread running through both plan-making and decision-taking" (paragraph 14). It is important to note that this presumption 'does not apply where development requiring Appropriate Assessment under the Birds or Habitats Directives is being considered, planned or determined" (paragraph 119).
- 6.2.3. A number of policies in the NPPF are comparable to those in PPS9, including reference to minimisation of impacts to biodiversity and provision of net gains to biodiversity where possible (paragraph 109) and ensuring that Local Authorities place appropriate weight to statutory and non-statutory nature conservation designations, protected species and biodiversity.
- 6.2.4. The NPPF also considers the strategic approach which Local Authorities should adopt with regard to the protection, enhancement and management of green infrastructure, priority habitats and ecological networks, and the recovery of priority species.
- 6.2.5. Paragraph 118 of the NPPF comprises of a number of principles which Local Authorities should apply, including encouraging opportunities to incorporate biodiversity in and around developments; provision for refusal of planning applications if significant harm cannot be avoided, mitigated or compensated for; applying the protection given to European sites to potential SPAs, possible SACs, listed or proposed Ramsar sites and sites identified (or required) as compensatory measures for adverse effects on European sites; and the provision for the refusal for developments resulting in the loss or deterioration of 'irreplaceable' habitats unless the need for, and benefits of, the development in that location clearly outweigh the loss.
- 6.2.6. National policy therefore implicitly recognises the importance of biodiversity and that with sensitive planning and design, development and

conservation of the natural heritage can co-exist and benefits can, in certain circumstances, be obtained.

6.3. Local Policy

Unitary Development Plan – Saved Policies

- 6.3.1. The Herefordshire Unitary Development Plan (UDP) was adopted in March 2007 and guides development within the county. Most of its policies were 'saved' by Direction of the Secretary of State in February 2010 and thereby remain operative until they are superseded by other Development Plan Documents in the Local Plan.
- 6.3.2. The UDP contains seven policies of particular relevance to nature conservation issues in the area in question, these being *Policy NC1 Biodiversity and development, Policy NC3 Sites of national importance, Policy NC4 Sites of local importance, Policy NC6 Biodiversity, Policy NC7 Compensation for loss of biodiversity, Policy NC8 Habitat creation, restoration and enhancement,* and *Policy NC9 Management of features of the landscape important for flora and fauna.*
- 6.3.3. Policy NC1 states that the effects of development proposals on biodiversity will be taken fully into consideration. Proposals should seek to retain existing semi-natural habitat, wildlife corridors and species within their layouts and design, and demonstrate that proposals will have no adverse effects on adjacent biodiversity or lead to the fragmentation, further isolation or damage of protected or priority habitats or species.
- 6.3.4. Policy NC3 concerns the special scrutiny applied to development which may affect an SSSI or a National Nature Reserve. A development likely to have direct or indirect effects on such sites may be denied planning permission, and where permission is granted proposals should make provision for the nature conservation enhancement of any sites of national importance impacted.
- 6.3.5. Policy NC4 applies similar provisions to proposed development which could affect sites protected at the local level. Development in such cases is only permitted where it can be demonstrated that no harm will result to the substantive nature conservation value of local sites, where appropriate enhancement or mitigation measures can be taken, or where there is a clear overriding reason for allowing the development.
- 6.3.6. Policy NC6 requires developments to take into account the UK and Herefordshire Biodiversity Action Plans. Proposals threatening species and habitats listed in these plans may not be permitted.
- 6.3.7. Policy NC7 specifies the use of conditions and / or planning obligations to ensure appropriate mitigation and compensation measures in line with the above policies.
- 6.3.8. Policy NC8 encourages developments to *enhance existing wildlife habitats and provide new habitats for wildlife as opportunities arise.* Where enhancement is proposed, consideration should be given to targets in the

UK and Herefordshire BAPs and the retention, safeguarding and restoration of existing features of biodiversity value.

6.3.9. Policy NC9 requires development proposals providing for the creation, restoration, enhancement or protection of biodiversity features also to provide for the monitoring and management of these features.

Core Strategy

- 6.3.10. The Core Strategy was released as a Pre-submission Publication in May 2014 and submitted to the Secretary of State in September 2014. Once adopted, it will be central to Herefordshire's Local Plan, which shapes future development and sets the overall strategic planning framework for the county. It contains five policies of particular relevance to nature conservation issues in the area in question, these being *Policy SS6 Environmental quality and local distinctiveness, Policy LD1 Landscape and townscape, Policy LD2 Biodiversity and geodiversity, Policy LD3 Green infrastructure and Policy SD3 Sustainable water management and water resources.*
- 6.3.11. Policy SS6 aims to conserve and enhance the environmental assets that contribute towards the county's distinctiveness. It states that development proposals should be shaped through an integrated approach to planning environmental components, including biodiversity and the green infrastructure network, from the outset, and based upon sufficient information to determine the effect upon them.
- 6.3.12. Policy LD1 concerns the accordance of development proposals with landscape management objectives, including the conservation and enhancement of nationally and locally designated conservation areas through protection of an area's character.
- 6.3.13. Policy LD2 enjoins that development proposals should conserve, restore and enhance Herefordshire's biodiversity assets. This is to be delivered by retaining and protecting sites, habitats, networks and species of European, national and local importance and those identified within biodiversity action plans; by restoring and enhancing existing biodiversity features on site and connectivity to wider ecological networks; and by creating new biodiversity features and wildlife habitats. It also states that the council may work with developers to agree a management strategy in this connection.
- 6.3.14. Policy LD3 concerns the identification and protection of existing green infrastructure, the provision of new on-site green infrastructure, and the connection of both to surrounding green infrastructure networks. Among other points, development proposals should incorporate the retention and enhancement of features such as trees and hedgerows, together with long term management. They should also ensure that landscaping features planting of appropriate native species wherever possible, ensuring there is sufficient space for plants to grow to maturity.
- 6.3.15. Policy SD3 requires new development to deliver sustainable water management for reasons including the provision of opportunities to enhance biodiversity. In all instances it is to be demonstrated that water

management mechanisms will have no significant adverse biodiversity impact.

Local Plan – Evidence Base

6.3.16. The Core Strategy also refers to *Building Biodiversity into Herefordshire's Local Development Framework*, produced in December 2009 to provide evidence so as to inform the Core Strategy. Relevant clauses within the evidence base document state that *protection measures as well as enhancement opportunities for [BAP] species should be incorporated where possible*; that careful consideration is required when siting new roosting provision for bats; and that *where there are known reptile populations, accommodating reptile habitat within development schemes is the most desirable outcome. Translocation schemes should be undertaken as a last resort.*

Supplementary Planning Documents

6.3.17. The Core Strategy also references *Biodiversity: Supplementary Planning Guidance 2004*, which supports the Unitary Development Plan. The guidance adverts to requirements such as field evaluations to assess the effects of proposed developments on potential features of biodiversity importance, the potential preparation of a management plan for any biodiversity enhancement features, and the standard provision of habitat creation, restoration or enhancement with major residential developments where a site is more than 0.5 hectares or ten houses in extent.

6.4. Discussion

6.4.1. The development proposals for the site would be judged against the policies summarised above. It is considered that the development site is of intrinsically low ecological interest. Safeguard, mitigation and enhancement measures have been recommended to offset any potential adverse impacts whilst seeking to provide net biodiversity gains. Taking these recommendations on board it is considered that the relevant policy requirements will be met.

7. SUMMARY AND CONCLUSIONS

- 7.1. Ecology Solutions was instructed by Bovis Homes in April 2014 to undertake an ecological assessment of land south of Chapel Lane, Bodenham Moor.
- 7.2. The proposals for the site comprise a new residential development with associated gardens and landscape planting.
- 7.3. The site was subject to an extended Phase 1 habitat survey in April 2014, bat activity surveys in May, June and August 2014, breeding bird surveys in April, May and June 2014 and a reptile survey between May and August 2014. A desk-based study was also undertaken to place the site within the local context.
- 7.4. Statutory Sites. There are no statutory designated sites within or directly adjacent to the site. The closest such site is the River Lugg Site of Special Scientific Interest (SSSI) which is approximately 0.9km north-west of the site at its closest point, beyond existing farmland and development. The River Lugg SSSI is a largely unpolluted natural river which is also part of the River Wye Special Area of Conservation (SAC). It is designated as a SSSI on account of being one of the best British mainland examples of both a clay river and a river which transitions from nutrient-poor to naturally nutrient-rich water, as well as for its Otter *Lutra lutra* populations. Development of the site is not likely to have any significant effect on the SSSI.
- 7.5. The River Wye SAC is designated as a water course of plain to montane levels with *Ranunculion fluitantis* and *Callitricho-Batrachion* vegetation, as well as for its populations of important freshwater species such as White-Clawed Crayfish *Austropotamobius pallipes* and Otter.
- 7.6. The Brook, lying approximately 30m south of the proposed development site at its closest point, drains into the River Lugg, a tributary of the River Wye. To ensure the quality of water in The Brook is protected during and following construction, a detailed construction method statement shall be provided and strictly adhered to so that potential deleterious effects are avoided. Through the adoption of these avoidance measures and safeguards, the development of the site is not likely to have any significant effect on the integrity of the River Wye SAC, with any effect considered to be *de minimis* at worst.
- 7.7. **Non-statutory Sites.** There are no non-statutory designated sites within or directly adjacent to the site. Roadside Verge Nature Reserve 25 lies approximately 0.7km west of the site. It is designated for Meadow Cranesbill *Geranium pratense*. It is unlikely that there would be any significant adverse effects on this non-statutory site as a result of the development of the site.
- 7.8. **Habitats.** Overall the majority of the habitats present are of negligible ecological interest and their loss to the proposed development would be of no significance.
- 7.9. A buffer should, if possible, be provided between retained hedgerows and rear gardens to avoid the likely degradation issues that commonly occur in the absence of one.

- 7.10. It is recommended that new planting be focused on a diverse mixture of native species, and those of benefit to native wildlife. An attenuation pond and new areas of amenity / landscape planting where previously the majority was arable land will also create new wildlife opportunities, as will proposed enhancements to the current tall ruderal habitat. It is recommended that a hibernaculum be constructed in this south-eastern area to offer refuge and hibernation opportunities for reptiles and a dead-wood resource for saproxylic organisms. The south-eastern area could also be scarified / over-sown with a native wildflower grassland seed mix to increase the diversity of the sward and provide biodiversity gains.
- 7.11. **Protected Species.** None of the trees present possess features of which bats could make use for roosting purposes. There are areas of foraging habitat within the site and in the immediate vicinity, and activity surveys recorded moderate bat activity.
- 7.12. There is no requirement for a Natural England European Protected Species licence. The development is not likely to have any significant effects on bat species. A landscape strategy based on native species could encourage greater use of the site by foraging bats. As an enhancement one or more Schwegler 1FF bat boxes could be attached to suitable trees or new buildings within the site to offer new roosting opportunities for bats.
- 7.13. A moderate assemblage of breeding birds was recorded, though no species that would be classed as rare. It is not considered that the proposed development would detrimentally affect the current species noted as utilising the site.
- 7.14. It is recommended that a check survey for nesting bird species be undertaken prior to any demolition, or that this be done outside of the nesting bird season (typically March to July inclusive).
- 7.15. New planting undertaken as part of the proposed development should include native species. This would offer new foraging and nesting habitats for a variety of species. As an enhancement bird boxes could be installed on suitable trees within the site to offer new nesting opportunities.
- 7.16. The targeted reptile survey work found a low population of Grass Snakes *Natrix natrix* within the northern field margin.
- 7.17. A habitat manipulation exercise, undertaken during the reptile active season and in advance of development to avoid the killing or injuring of any common reptile species, should avoid any offence under legislation by encouraging the Grass Snake population to disperse naturally. The area in which the Grass Snake was found is linked to other suitable habitat within and beyond the site. The proposed attenuation pond and the area of biodiversity enhancement in the south-east of the site could create new opportunities for common reptiles. A hibernaculum could be constructed in the south-eastern area to offer refuge and hibernation opportunities for reptiles.
- 7.18. Amphibians including Great Crested Newts *Triturus cristatus* were recorded from the site in 2002. However, there are no recorded waterbodies on site or in the immediate locality that could support Great Crested Newts or other amphibians. it is possible that the records being attributed to the site is a

recording error with the records attributed to a garden pond in the local area. Nonetheless the proposals shall provide enhanced opportunities for amphibians, including Great Crested Newts through the provision of a new attenuation pond that should be designed to maintain water all year, and through enhanced terrestrial opportunities.

- 7.19. No evidence of the presence of other protected or notable species was recorded on site during survey work undertaken or from the background data search information received.
- 7.20. In conclusion, it is considered that there is no overriding ecological constraint to the development of the site and it is considered that the relevant policy requirements will be met. The proposals accord with planning policy with regard to nature conservation at all administrative levels.

PLANS

Site Location & Ecological Designations



Ecological Features



Protected Species Plan



Breeding Bird Surveys



PHOTOGRAPHS

PHOTOGRAPH 1: Arable Field and Hedgerows H2 and H3



PHOTOGRAPH 2: Arable Field and Hedgerow H4



PHOTOGRAPH 3: Hedgerow H1 and Northern Field Margin



PHOTOGRAPH 4: Tall Ruderal Area



APPENDICES

APPENDIX 1

Information downloaded from Multi-Agency Geographic Information for the Countryside (MAGIC)

MAgic

Magic Map



📉 Local Nature Reserves (England)
National Nature Reserves (England)
📉 Ramsar Sites (England)
Sites of Special Scientific Interest (England)
Special Areas of Conservation (England)
Special Protection Areas (England)
Ancient and Semi-Natural Woodland
Ancient Replanted Woodland
Projection = OSGB36 xmin = 343900 ymin = 246100 xmax = 364100 ymax = 256000
Map produced by MAGIC on 3 October, 2014. Copyright resides with the data suppliers and the map must not be reproduced without their permission. Some information in MAGIC is a snapshot of the information that is being maintained or continually updated by the originating organisation. Please refer to the metadata for details as information may be illustrative or representative
lather than definitive at this stage.

Legend

APPENDIX 2

Breeding Bird Survey Species List

APPENDIX 2 – BREEDING BIRD SURVEY SPECIES LIST

Site species list (with BTO codes):

- B. Blackbird *Turdus merula*
- BT Blue Tit Cyanistes caeruleus
- D. Dunnock Prunella modularis
- GO Goldfinch Carduelis carduelis
- GT Great Tit Parus major
- BZ Buzzard Buteo buteo
- HS House Sparrow Passer domesticus
- WH Whitethroat Sylvia communis

Species recorded outside site, or flying over without using habitats:

- CH Chaffinch Fringilla coelebs
- CD Collared Dove Streptopelia decaocto
- R. European Robin Erithacus rubecula
- GC Goldcrest Regulus regulus
- GR Greenfinch Carduelis chloris
- JD Jackdaw Corvus monedula
- RO Rook Corvus frugilegus
- ST Song Thrush Turdus philomelos
- SG Starling Sturnus vulgaris
- TO Tawny Owl Strix aluco
- WP Woodpigeon Columba palumbus
- WR Wren Troglodytes troglodytes

APPENDIX 3

Hibernaculum Specification





ecology solutions (east) ltd • cokenach estate • barkway • royston • hertfordshire • SG8 8DL t 01763 848084 e info@ecologysolutions.co.uk w www.ecologysolutions.co.uk