

Cotefield Farm

Bodicote, Oxfordshire

Phase 1 Habitat Survey

Prepared by
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Contents

	Page Number
S Summary	iii
1 Introduction	1
2 Methodology	2
3 Results	3
4 Conclusions	8
5 Recommendations	9
6 References	11

Figures & Appendices

Figures

Figure 1 Phase 1 Habitat Plan

Appendices

Appendix 1 Phase 1 Target Notes

Appendix 2 Species List

Appendix 3 Letter from Natural England

S Summary

- S 1 RPS has been instructed by Banner Homes Group to carry out a Phase 1 Habitat Survey of land at Cotefield Farm in Bodicote, Oxfordshire
- S 2 The specific objectives of the Phase 1 habitat survey were to
- a) Identify and map the habitats present,
 - b) Assess the potential for legally protected fauna, and
 - c) Assess the requirement for further ecological surveys
- S 3 The survey was carried out on 10th February 2010 by an experienced ecologist, Louisa Medland BSc AIEEM. The survey took account of the standard Phase 1 Habitat Survey methodology as set out by the Joint Nature Conservation Committee (JNCC) in the *Handbook for Phase 1 Habitat Survey: A technique for environmental audit* (JNCC, 2003)
- S 4 The Phase 1 Habitat Survey identified that the survey area at Cotefield Farm consists predominantly of arable farmland bordered by hawthorn dominated hedgerows and a mixed plantation woodland. A garden nursery lies in the northeast of the site with areas of amenity grassland, beech and conifer hedges, and immature trees around it.
- S 5 The individual trees, hedgerows and woodland were identified as the habitats of greatest ecological value on the site. They have the potential to support protected or notable species such as birds, invertebrates, bats and amphibians.
- S 6 It is recommended that further ecological surveys are carried out on the site in order to determine the extent to which legally protected bats and amphibians may be present. Measures are recommended to ensure that nesting birds are not harmed during clearance prior to construction at the site and valuable invertebrate habitat is conserved.

1 Introduction

- 1.1 RPS has been instructed by Banner Homes Group to carry out a Phase 1 Habitat Survey of land at Cotefield Farm in Bodicote, Oxfordshire. The plan at Figure 1 identifies the site.
- 1.2 Cotefield Farm is located to the south of Bodicote (centred on national OS grid reference SP466374). The survey area is bordered by houses and gardens to the north and west and by arable farmland to the south and east. Farm buildings, amenity vegetation and hardstanding are found beyond the north-east boundary of the survey area.
- 1.3 The survey area comprises a large arable field bordered by hedgerows and trees and a garden nursery comprising buildings, hard-standing and amenity vegetation.
- 1.4 The specific objectives of the Phase 1 Habitat Survey were to
- d) Identify and map the habitats present,
 - e) Assess the potential for legally protected fauna, and
 - f) Assess the requirement for further ecological surveys.
- 1.5 This report includes a description of the survey methods employed, results obtained, conclusions about the nature conservation value of the site, and makes recommendations where necessary for further ecological surveys.

2 Methodology

- 2.1 The Phase 1 Habitat Survey of land at Cotefield Farm was carried out on 10th February 2010 by a suitably experienced ecologist, Louisa Medland BSc AIEEM
- 2.2 The survey took account of the standard Phase 1 habitat survey methodology as set out by the Joint Nature Conservation Committee (JNCC) in the *Handbook for Phase 1 Habitat Survey A technique for environmental audit* (JNCC, 2003)
- 2.3 A walkover survey of all areas within the survey area was conducted by the ecologist and habitats were mapped onto Ordnance Survey base maps using the JNCC Phase 1 habitat categories. Typical plant species were recorded for each category of habitat, species names used follow Stace (1997). Target notes were made where appropriate.
- 2.4 Habitats potentially suitable for legally protected fauna were noted, and signs of such species, including sightings, tracks, droppings and burrows, were searched for. A record was made of all bird species seen.

Notes

- 2.5 The survey was conducted at a sub-optimal time for botanical surveys and hence a precautionary approach was taken. The optimal time for undertaking Phase 1 Habitat Surveys is between March and September, when most plant species are evident. However, many species can be identified during the winter months. If findings of the survey reported the potential for a more diverse floral assemblage to be present, further survey work would be recommended for more suitable times of the year.

3 Results

Site Overview

- 3 1 The development site lies within Cotefield Farm, between housing and arable farmland, to the south of Bodicote in Oxfordshire. The site covers an area of approximately 5 hectares.
- 3 2 The survey area contains a garden nursery in the north-east corner comprising buildings, hard-standing, amenity grassland and planted hedgerows and trees. The remainder of the survey area comprises an arable field with hedgerows and trees around the northern, southern and western boundaries. The arable field continues beyond the eastern boundary of the survey area.

Phase 1 Habitat Survey

- 3 3 A description of the habitats identified during the survey is given below. Their locations within the site are shown on the Phase 1 Habitat Plan (Figure 1) and associated target notes (TN) provided at Appendix 1. Typical plant species were also recorded for each category of habitat, and the species names used followed Stace (1997) and can be found at Appendix 2.

A1 3 2 Mixed plantation woodland

- 3 4 A strip of plantation woodland lines the southern boundary of the arable field and the western end of it lies within the red line boundary of the site (TN7). The woodland is immature and likely to be less than 20 years old. It comprises a mixture of oak *Quercus rober*, hazel *Corylus avellana*, beech *Fagus sylvatica*, hawthorn *Crataegus monogyna*, silver birch *Betula pendula*, alder *Alnus glutinosa*, rose *Rosa sp*, ash *Fraxinus excelsior*, cherry laurel *Prunus laurocerasus* and pine *Pinus sp*. The ground flora consists of sparsely distributed ivy *Hedera helix* and ground ivy *Glechoma hederacea* between dense leaf litter. There are numerous piles of brash and logs throughout the wood.

A2 1 Dense/continuous scrub

- 3 5 A small strip of dense scrub was found in the north-east corner of the site bordering the A4260 Oxford Road. It appears to have formally been a planted bed of shrubs which has become dominated by a few species such as rose, cherry laurel and maple *Acer sp*. Cocksfoot *Dactylis glomerata*, rosebay willowherb *Epilobium angustifolium* and creeping thistle *Cirsium arvense* grow below (TN3).

A3 1 Individual Broad-leaved trees

- 3 6 Broad-leaved trees were found growing within the area of amenity grassland in the north-east of the site, within the hedgerows along the northern and western boundaries and within the arable field (TN4)
- 3 7 A mature sycamore *Acer pseudoplatanus* tree stood towards the southern end of the arable field. Approximately 5m of its original trunk remained and semi-mature limbs had re-grown from its base. The remnant, dead, trunk was hollow and decaying with many splits and fissures. The limbs which had re-grown from the base were intact and formed a broad, dense canopy.
- 3 8 A semi-mature ash tree along the western boundary, and three semi-mature sycamore trees along the northern boundary, were intact and appeared to be in good condition.
- 3 9 A number of immature horse chestnut trees *Aesculus hippocastanum* and oak saplings had been planted within the areas of amenity grassland in the north-east of the site.
- 3 10 A line of immature beech trees formed a screen around the southern and eastern sides of the nursery (TN5). Silver birch trees were found along a small section of the western boundary (TN5).

A3 2 Coniferous trees

- 3 11 A short line of conifer trees, approximately 5m long, were found along the western boundary interspersed with silver birch (TN5).

J1 1 Arable

- 3 12 The majority of the site lies within a large arable field which extends beyond the eastern boundary of the site.

J1 2 Amenity grassland

- 3 13 Amenity grassland is found in the north east of the site, around the nursery and access roads, and also along the northern and western perimeters of the arable field (TN2). The sward is short and evidently regularly mown. It contains few herb species such as daisy *Bellis perennis*, creeping buttercup *Ranunculus repens*, white clover *Trifolium repens* and dandelion *Taraxacum officinale*.

J2 1 2 Intact species-poor hedge

- 3 14 Intact species-poor hedgerows were found along the northern and western boundaries and around the nursery in the north-east of the site (TN1). Well maintained beech hedges were found within and along the area of amenity grassland to the north-east of the site. A well-maintained coniferous hedge was found along part of the northern boundary behind the nursery.

3 15 The hedgerow along the northern boundary was dominated by hawthorn but also contained occasional bramble *Rubus fruticosus*, holly *Ilex aquifolium*, privet *Ligustrum vulgare* and rose Beech, ivy and conifer were locally dominant within small sections of the hedge The hedge separates the site from the residential gardens behind and its height and width varied depending on the level of management undertaken by different residents It was generally well maintained and measured approximately 1m-2m in height and 1.5m wide Cleavers *Galium aparine*, ivy, stinging nettle *Urtica dioica*, cow parsley *Anthriscus sylvestris* and primrose *Primula vulgaris* var grew below the hedge

3 16 The hedgerow along the western boundary was also dominated by hawthorn with holly, bramble, beech, ash and sycamore occasionally present This hedge also bordered residential gardens and varied in nature depending on how it was managed by the residents Some sections were tall and bushy whereas others were short and well maintained

3 17 Well maintained hawthorn dominated hedgerows lined each side of the plantation woodland Each hedge measured approximately 3m high and 1m wide

J5 Other habitat

3 18 Two debris piles were located around the nursery (TN6) A small pile in the south east corner of the nursery contained soil and concrete blocks, posts and slabs A larger pile to the west of the nursery contained branches from conifers and holly, cardboard boxes and wooden planks

Habitats outside of the survey area

3 19 Residential gardens lay beyond the northern and western boundaries and these typically comprised amenity grassland and ornamental planting Amenity grassland, immature planted trees, hard-standing and farm buildings lie to the north east of the site The arable field and plantation woodland continue beyond the eastern boundary of the site and another arable field lies to the south of the plantation woodland A small reservoir lies within 500m of the site to the south

Potential for Protected or Otherwise Notable Fauna

Plants and habitats

3 20 No habitats covered by Annex I of the European Habitats Directive were recorded from within the study area All hedgerows are a UK Biodiversity Action Plan Priority Habitat

Amphibians

3 21 There are no water bodies within the site to support amphibians but the site does provide areas of suitable terrestrial habitat The plantation woodland and the hedgerow along the western boundary provide suitable terrestrial habitat for amphibians, including great crested

newts, and are within 500m of a reservoir to the south of the site. The debris piles are slightly further away but could also be utilised by amphibians if they are present in the area.

- 3 22 The great crested newt is protected under the Habitats Directive and under the Wildlife and Countryside Act 1981 (as amended) which prohibits the intentional killing, injuring or taking, the possession and the trade in great crested newts. In addition, places used for shelter and protection are safeguarded against intentional damage, destruction and obstruction and GCNs must not intentionally be disturbed whilst occupying those places.

Badger

- 3 23 No signs of badger *Meles meles* activity, such as prints, tracks or latrines, were identified during the survey. Boundary features with potential to support badger setts, such as the hedgerows and plantation woodland, were searched but no badger setts were identified.

- 3 24 Badgers and their setts are protected under the Protection of Badgers Act 1992 which makes it illegal to kill, injure or take badgers or to interfere with a badger sett. Interference with a sett includes blocking tunnels or damaging the sett in any way.

Bats

- 3 25 The mature sycamore tree within the arable field was categorised as having MEDIUM/HIGH (BCT, 2007) bat roost potential (TN4). The remnant 5m high, dead trunk is hollow and contains a number of cracks and fissures which could be utilised by bats for roosting. None of the other trees within the site were found to have any bat roost potential. The hedgerows along the northern and southern boundaries, and the plantation woodland along the southern boundary, provide suitable foraging areas and commuting routes for bats.

- 3 26 All species of bat in the UK are fully protected under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended), and Schedule 2 of the Conservation (Natural Habitats, &c) Regulations 1994. The Regulations implement the European Habitats and Species Directive (EC Directive 92/43/EEC).

- 3 27 The Act and Regulations give full protection to bats from intentional or deliberate killing, injuring, taking, and reckless or intentional disturbance. In addition, bat breeding and resting places (i.e. bat roosts) are also protected from damage, destruction and reckless or intentional obstruction of access to such places.

- 3 28 Some species of bat (namely, soprano pipistrelle, brown long-eared bat, noctule, barbastelle bat, Bechstein's bat, greater horseshoe bat and lesser horseshoe bat) are also UK Biodiversity Action Plan Priority Species.

Birds

3 29 Common bird species such as blackbird *Turdus merula*, robin *Erithacus rubecula*, house sparrow *Passer domesticus* and blue tit *Cyanistes caeruleus* were observed within the hedgerows along the northern and western boundaries. Feral pigeon *Columba livia (domest)* and carrion crow *Corvus corone* were also recorded within the site. No specially protected bird species were recorded during the survey.

3 30 All of the trees on the site, with the exception of the planted oak saplings in the north east of the site, provide suitable nesting habitat for breeding birds. Bird boxes have been attached to the ash tree in the south west of the site and a sycamore in the north west of the site. The hawthorn dominated hedgerows along the northern and western boundaries, the beech and conifer hedges in the north east of the site, and the plantation woodland in the south of the site also provide suitable nesting habitat for breeding birds. A number of disused nests from previous breeding seasons were evident during the survey within hedgerows and trees.

3 31 Under the Wildlife and Countryside Act 1981 (as amended) it is an offence to kill, injure or take any wild bird or to take damage or destroy the nest of any bird whilst it is in use or being constructed.

Invertebrates

3 32 The majority of the site is arable farmland which will not support a diverse or important assemblage of invertebrates in itself, but the hedgerows and trees provide nectar, pollen, seeds and berries which can be utilised by invertebrates and these features are likely to support a variety of common invertebrates.

3 33 The mature sycamore tree in the arable field contains a large amount of deadwood which is an important feature and resource for invertebrates and invertebrates listed as UKBAP priority species may be found there.

3 34 There are also a number of log and brash piles within the plantation woodland which are likely to be a valuable resource to invertebrates.

Reptiles

3 35 Areas of suitable habitat for common reptiles are limited to the hedgerows along the northern and western hedgerows and these areas are considered to be of relatively low value because they are well maintained and provide a relatively small area of habitat in an otherwise unsuitable landscape. Reptiles are therefore not likely to be present within the site.

3 36 The four common reptile species native to Britain are partially protected under the Wildlife and Countryside Act 1981 (as amended) which makes it an offence to intentionally kill or injure any of these species. In addition, the legislation places an obligation on developers to take reasonable precautions to avoid incidental mortality or injury of reptiles during site works.

4 Conclusions

- 4 1 The Phase 1 Habitat Survey identified that the survey area at Cotefield Farm consists predominantly of arable farmland bordered by hawthorn dominated hedgerows and a mixed plantation woodland. A garden nursery lies in the northeast of the site with areas of amenity grassland, beech and conifer hedges, and immature trees around it.
- 4 2 A variety of trees and shrubs are present on the site within hedgerows, woodland and as individual specimens. Many are immature but there are several semi-mature trees and one mature tree present.
- 4 3 All of the trees and shrubs on the site, with the exception of a small number of oak saplings, provide suitable nesting habitat for breeding birds and disused birds' nests from previous breeding seasons were evident within several of them.
- 4 4 The trees and shrubs, and the herb species growing below them, provide pollen, nectar, seeds and berries which are a food source for invertebrates and birds and the invertebrates in turn provide a food source for insectivorous birds and bats.
- 4 5 The hedgerows along the northern and southern boundaries, and the woodland in the south of the site, provide suitable terrestrial habitat for amphibians, including great crested newts and provide suitable foraging areas and commuting routes for bats.
- 4 6 A mature sycamore tree within the arable field has MEDIUM/HIGH bat roost potential and provides suitable habitat for less common invertebrate species.
- 4 7 The arable farmland and amenity grassland are of less ecological value and are unlikely to support any protected or notable species.
- 4 8 There was little floristic diversity on the site and no rare or protected plants were identified or likely to be present within the habitats present.

5 Recommendations

5 1 It is recommended that further ecological surveys are carried out on site in order to determine the extent to which legally protected fauna are present. These recommended surveys are discussed further in the paragraphs below. The recommendations are also endorsed in a letter dated 30 April 2010 from Natural England to Cherwell DC in response to consultation on the April 2010 planning application. This is reproduced as Appendix 3.

Amphibians

5 2 A preliminary survey should be undertaken at the reservoir to the south of the site to determine its suitability for great crested newts and to determine whether newts using the reservoir are likely to utilise terrestrial habitat within the site. Suitable terrestrial habitat within the site includes the plantation woodland and the hedgerow along the western boundary and these features will be retained in the future plans for the site.

5 3 If the reservoir is found to be unsuitable for great crested newts no further action will be required.

5 4 If the reservoir is deemed suitable for great crested newts, and it is likely that newts will be utilising terrestrial habitat within the site, temporary amphibian fencing should be erected between the terrestrial habitat and the development area. This will ensure that if newts are utilising the plantation woodland or hedgerows they can not move into the development area where they would be at risk from harm.

5 5 The amphibian fencing should be installed before work on the site commences and should be installed between mid-March and mid-June. The guidelines outlined by English Nature's (2001) Great Crested Newt Mitigation Guidelines should be followed and the fencing should be installed under the supervision of a suitably qualified ecologist.

Bats

5 6 A mature sycamore tree in the arable field was identified as having MEDIUM/HIGH bat roost potential. It is therefore recommended that evening emergence and dawn swarming surveys are conducted to identify whether the tree is being used by bats as a roost. The site also provides suitable foraging areas for bats and an activity survey should be undertaken to gain an understanding of how bats are using the site.

5 7 The results of the bat surveys will be used to design appropriate mitigation measures to ensure that bats are not disturbed or harmed by the proposed development. The results would also be used in an application for a Natural England license if one was required. It is recommended that the mature sycamore tree, plantation woodland and boundary hedgerows are retained as part of the future plans for the site to reduce any potential impacts on bats.

- 5 8 The surveys should follow the guidelines outlined in the Bat Conservation Trust's Bat Survey Good Practice Guidelines (2007) and can be undertaken from May to September when bats are active

Birds

- 5 9 Any vegetation which provides suitable nesting habitat for birds, such as scrub, trees and hedgerows, should be cleared outside of the bird nesting season which is generally accepted as running from mid-February to mid-September inclusive. Vegetation can be cleared during the bird nesting period if it has been checked immediately prior by an Ecologist and confirmed clear of nesting birds. If nesting birds are present the vegetation the nest is in, and a 5m area around it, must not be disturbed until the young birds have fledged. An Ecologist will need to check the vegetation to confirm when the nest is no longer in use
- 5 10 Nest boxes were identified on several trees and these should not be removed during the bird nesting season unless checked and declared empty by a suitably qualified ecologist

Invertebrates

- 5 11 Where practicable, valuable invertebrate habitat should be conserved within the proposals for the site. The mature sycamore tree is a feature of particular value for invertebrates and this should be retained within the site. The log and brash piles within the plantation woodland, and the other trees and hedgerows, are also a valuable resource and these should be retained or recreated on the site

6 References

Bat Conservation Trust (2007) *Bat Surveys Good Practice Guidelines* Bat Conservation Trust London

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Wildlife and Countryside Act (1981) as amended

Figures

6 References

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