



AEWC Ltd

Animal Ecology & Wildlife Consultants

Butler's House
North Street
Petworth
West Sussex
GU28 0DP



Extended Phase 1 and Animal Walkover Survey

Land at

**Burndell Road,
Yapton, West Sussex**

Prepared by:
Jacqueline Thompson BSc (Hons) MSc AIEEM
January 2014

Registered Office: Butlers House, North Street, Petworth, West Sussex, GU28 0DP
Registered in England and Wales No. 06527840

CONTENTS

1 SUMMARY	4
2 INTRODUCTION	6
2.1 PURPOSE OF THIS REPORT	6
2.2 BACKGROUND	6
3 METHODS	8
3.1 HABITAT SURVEY	8
3.1.1 General	8
3.2 PROTECTED VERTEBRATES	9
3.2.1 General	9
3.2.2 Bats	9
3.2.3 Badger	10
3.2.4 Biodiversity Action Plan Species	10
3.2.5 Breeding Birds	10
3.2.6 Dormice	10
3.2.7 Great Crested Newt	10
3.2.8 Reptiles	10
3.2.9 Water Vole	10
3.3 CONSTRAINTS	11
4 RESULTS	12
4.1 HABITATS	12
4.1.1 Habitats and Features	12
4.1.2 Grassland	12
4.1.3 Rough grassland	12
4.1.4 Ruderals and scrub	12
4.1.5 Scattered trees, hedges and shrubs	13
4.1.6 Wet ditches	13
4.1.7 Species of note	13
4.2 PROTECTED VERTEBRATES	13
4.2.1 Bats	13
4.2.2 Biodiversity Action Plan Species	14
4.2.3 Breeding Birds	14
4.2.4 Dormice	14
4.2.5 Great Crested Newts	15
4.2.6 Reptiles	15
4.2.7 Water Vole	16
5 EVALUATION AND CONCLUSIONS	17
5.1 HABITATS	17
5.1.1 Grassland	17
5.1.2 Rough grassland	17
5.1.3 Ruderals and scrub	17
5.1.4 Scattered trees, hedges and shrubs	17
5.1.5 Wet ditches	17
5.1.6 Plant species of note	18
5.2 PROTECTED VERTEBRATES	18
5.2.1 Badger	18
5.2.2 Bats	18
5.2.3 Biodiversity Action Plan Species	18
5.2.4 Breeding Birds	18
5.2.5 Dormice	19

5.2.6	Great Crested Newt.....	19
5.2.7	Reptiles.....	19
5.2.8	Water Vole.....	19
6	REFERENCES.....	20
7	APPENDIX I – PHASE 1 MAP.....	21
8	APPENDIX II – TARGET NOTES.....	22
9	APPENDIX III – PLANT SPECIES LISTS.....	23
10	APPENDIX IV – LEGISLATION.....	24
10.1	GENERAL.....	24
10.2	BATS.....	24
10.3	BIRDS.....	25
10.3.1	Birds (General Protection).....	25
10.3.2	Birds (Specially Protected Species).....	25
10.4	GREAT CRESTED NEWT.....	25
10.5	REPTILES.....	26

SUMMARY

- The site was surveyed on 2nd January 2014 to assess the potential presence of protected species, priority habitat and plant species of note.
- No priority habitats or plant species of note were found at the proposed development site at Burndell Road, Yapton.
- Should ditch enhancement and re-profiling occur, then this should be carried out in sections leaving parts of the ditch undisturbed to ensure some refuge habitat is kept, enabling aquatic vegetation and wildlife to re-colonise areas disturbed through management.
- The ditch banks lack any signs of burrow entrances that would indicate the presence of Water Voles, and therefore no further surveys are required for this species.
- No evidence of Badgers, such as setts or evidence of foraging, was found within the site boundary (or within 30 metres of the site boundary) and, therefore, no further Badger surveys are required.
- There is suitable habitat for reptiles such as Slow-worm (*Anguis fragilis*) and Grass Snake (*Natrix natrix*). Further surveys are recommended to ascertain whether reptiles are present.
- A Habitat Suitability Index should be carried out on the pond adjacent to the site in order to ascertain the likely presence of Great Crested Newt and thereby informing whether further survey work is required for this species.
- It is the intention of the developers to retain the trees, shrubs and hedgerow along the boundary, however, should this objective change, then action regarding protected species would be required.
- The Ivy-covered trees and possibly an Ash tree have low bat roost potential. Should these trees need to be removed during construction, it is recommended that a suitably licensed surveyor should carry out an inspection prior to this.
- There is the potential for breeding birds to occur within woody species along the site boundary. If any work involving the trimming back of hedges and the removal of trees and scrub were scheduled to take place between the beginning of March and the end of August, a survey to check for nesting birds would be required.

- The hedgerow and tree lines offer sub-optimal habitat for Dormice, and although connected to similar such features adjacent to the site, there is no connectivity to woodland. Given this and the lack of records for this species within 2 km, further surveys would not be considered necessary with any tree/hedgerow removal.
- There is the potential for Western European Hedgehog to forage within this site, particularly along the edges, and so it is recommended that the grass be cut short in order to discourage any Hedgehogs prior to site clearance for development, and that the site be cleared during the hibernation season (November to March). If this were carried out, no further surveys would be required for this species.

2**INTRODUCTION****2.1*****Purpose of this Report***

The purpose of this report is to identify the potential presence of any protected species or habitat under the Wildlife and Countryside Act (1982) and European protected Species and Habitats of Conservation Importance, and to evaluate whether these protected species and habitats represent a constraint to the proposed development.

The survey comprised a modified Phase 1 Habitat Survey protocol (based on Joint Nature Conservation Committee, 1993 methodology), and an animal walkover survey. The survey was completed on 2nd January 2014 by a suitably qualified ecologist, Jacqueline Thompson BSc (Hons), MSc, AIEEM.

This report gives the results of the above survey, carried out at Bumdell Road, Yapton, West Sussex. The Grid Reference for the site centre is SU 98485 02779.

2.2***Background***

Bumdell Road is the part of the B2233 road that passes through the village of Yapton in the Arun district of West Sussex. The site is located towards the south-east edge of Yapton at the southern edge of housing. Yapton is 4.8 km to the north-east of Bognor Regis and 5 km to the south-west of Arundel. The village is surrounded by an arable landscape characterised by fields surrounded by hedgerows and tree lines with drainage ditches in places.

The proposed development site is a field with housing to the north and to the east, and arable fields to the south and west. The site is immediately surrounded by hedgerows, scrub and scattered trees with a fence-line to the north. A wet ditch runs along the west and south-east edges. The majority of the site is dominated by species-poor grassland dominated by *Holcus lanatus* (Yorkshire-fog) with scattered ruderals.

It is the intention of the developers to maintain all boundary features, such as the trees shrubs and the hedgerow, and to enhance the drainage ditches surrounding the site.

Photograph 1: Looking north-east across the site showing grassland dominated by *Holcus lanatus* (Yorkshire-fog)



3**METHODS****3.1****Habitat Survey****3.1.1****General**

The botanical surveys in this report centre on the Phase 1 Habitat Survey approach (Joint Nature Conservation Committee 2003) as extended for use in Environmental Impact Assessment (Institute of Environmental Assessment 1995). This involves the following elements.

- Habitat mapping using a set of standard colour codes to indicate habitat types on a Phase 1 Habitat Map.
- Description of features of ecological or nature conservation interest in notes relating to numbered locations on the Phase 1 Habitat Map, called *Target Notes* (for habitat and possible presence of protected species, and features of possible botanical interest).

Basic Phase 1 Habitat Survey methods are described in detail in Joint Nature Conservation Committee (JNCC), 2003. Limits to the achievable reliability of the method are discussed in Cherrill & McClean (1999). There are no firm guidelines to specify what extended Phase 1 Habitat Survey involves, but the Institute of Environmental Assessment (1995) suggests that it simply involves more extensive and detailed target notes.

Subjective estimates of the relative abundance of species in selected habitat parcels were added to the plant species list using a modified DAFOR scale. The DAFOR scale ranks species according to their relative abundance in a given parcel of land as follows: d – dominant, a – abundant, f – frequent, o – occasional, r – rare. In addition, the following prefixes are used: l – locally, v – very.

Plant nomenclature in this report follows Stace (2010) for native and naturalised species of vascular plant. Introduced species and garden varieties were identified using the relevant texts. Plant names in the text are given with scientific names first, followed by the English name in brackets. Doubtful identifications are preceded by 'cf.' placed before the specific epithet where the plant is very probably the species indicated, but it is impossible to distinguish it from similar members of the genus with certainty.

3.2 **Protected Vertebrates**

3.2.1 *General*

An assessment was made of habitat suitability for those protected vertebrates that occur in the region and for habitats likely to support protected or notable invertebrate species. Obvious signs and incidental sightings of protected species would have been noted had they been encountered, but walkover surveys do not usually confirm species presence or absence.

Taking into consideration the geographical region and habitat type, species and groups that might be encountered and should be considered are:

- bats;
- badger;
- biodiversity action plan species;
- breeding birds;
- Dormice;
- Great Crested Newt;
- Water Vole; and
- Reptiles.

3.2.2 *Bats*

Foraging

Habitats were assessed for their suitability for foraging or commuting bats. Areas of particular interest vary between species, but generally include sheltered areas and those habitats with good numbers of insects, such as woodland, scrub, hedges, watercourses, ponds, lakes and more species-rich or rough grassland.

Roosting

Trees, walls, and other structures were identified if they obviously had potential to house roosting bats. This involved consideration of the age and condition of the structure, and identifying features that roosting bats may favour (e.g. holes, cracks and cavities that might be used as bat-entrance points or roost sites). For trees, features with potential for roosting bats include woodpecker holes, rot cavities, splits, cracks, flaking bark and thick-stemmed or matted climbing plants.

If any definite signs of bats or other evidence had been found (such as actual sightings, droppings, urine stains, odour, scratch marks, grease stains and

feeding remains), they would have been recorded; though finding such evidence is highly unlikely at this level of survey.

3.2.3 *Badger*

Badger - An initial assessment was carried out to identify areas that might be used by Badgers (*Meles meles*). Signs of Badgers including setts, incidental foraging signs, runs and latrines, are recorded if encountered during the survey.

3.2.4 *Biodiversity Action Plan Species*

The habitats present on the site were assessed for the likelihood of presence of species of regional and national importance.

3.2.5 *Breeding Birds*

Habitats were assessed for their suitability for breeding birds giving consideration to factors such as cover, food, disturbance and habitat requirements.

3.2.6 *Dormice*

Habitats, such as shrubs and trees, are assessed for the potential to support Dormice (*Muscardinus avellanarius*). Connectivity to woodland and habitat hedgerow quality (such as the likely availability of flowers and fruit to provide food) is taken into account in order to consider whether further surveys are deemed necessary.

3.2.7 *Great Crested Newt*

Consideration was given to suitable terrestrial habitat that may be used by Great Crested Newt (*Triturus cristatus*) breeding in ponds within 500 m of the site, and not isolated from the site by unsuitable habitat or physical barriers.

3.2.8 *Reptiles*

The site was assessed for reptiles, with particular attention paid to those features that could be used as basking areas (e.g. south-facing slopes), hibernation sites (e.g. banks and walls) and opportunities for foraging (rough grassland and scrub).

3.2.9 *Water Vole*

The site was assessed for watercourses with the potential to support Water Vole (*Arvicola amphibious*). A dense riparian habitat consisting of robust

emergent and water-margin species such as grasses, rushes and sedges provide both food and shelter for water voles. Steep bank profiles in soft substrates are favoured allowing a network of tunnels and entrances below and above water to be created and at times of flooding provides a refuge.

3.3

Constraints

Animal walkover surveys are not designed to prove presence or absence of protected species; they are used to highlight habitat that is suitable and where further work to show presence or absence is required. However, in some circumstances species can be ruled out because there is wholly unsuitable habitat or where there are barriers to inward migration.

January is a sub-optimal time of year for vegetation surveys as some plants, such as spring-flowering annuals, are not visible during the winter. However, should a site have the potential to support any such plants, then further surveys are recommended.

4 RESULTS

4.1 Habitats

4.1.1 Habitats and Features

The following habitats and features are present on the site:

- grassland;
- rough grassland;
- ruderals and scrub;
- scattered trees, hedges and shrubs; and
- wet ditches.

Habitats are shown on a Phase 1 habitat map in *Appendix I*. *Target Notes* referred to on the map are provided in *Appendix II* and plant species lists are given in *Appendix III*.

4.1.2 Grassland

The majority of the site is damp grassland dominated by grasses, particularly *Holcus lanatus* (Yorkshire-fog), with localised areas of *Agrostis stolonifera* (Creeping Bent) and with *Cynosurus cristatus* (Crested Dog's-tail) and *Lolium perenne* (Perennial Rye-grass) becoming frequent in drier areas. Ruderals are scattered at mostly a low density throughout, though there are a couple of stands of *Rumex obtusifolius* (Broad-leaved Dock). Grassland forbs are extremely infrequent and limited to very common species such as *Ranunculus repens* (Creeping Buttercup), *Trifolium pratense* (Red Clover), *Geranium dissectum* (Cut-leaved Crane's-bill) and *Cerastium fontanum* (Common Mouse-ear).

4.1.3 Rough grassland

The damp grassland gives way to rough grassland along the field edges, which is quite different. Here, robust grasses such as *Arrhenatherum elatius* (False Oat-grass), *Dactylis glomerata* (Cock's-foot), *Elytrigia repens* (Common Couch) and *Poa trivialis* (Rough Meadow-grass) grow with tall umbellifers such as *Anthriscus sylvestris* (Cow Parsley) and *Heracleum sphondylium* (Hogweed). Ruderals are scattered throughout.

4.1.4 Ruderals and scrub

Ruderals occur throughout the field and in the rough grassland at the field edges. They are mostly scattered, though do form small stands in places. The most frequently occurring species are *Rumex obtusifolius* (Broad-leaved

Dock), *Senecio jacobaea* (Common Ragwort) and *Urtica dioica* (Common Nettle).

Scrub, in the form of *Rubus fruticosus* agg. (Bramble), occurs towards the edges of the field. It is mostly growing rather weakly, though it does form small stands in places.

4.1.5 *Scattered trees, hedges and shrubs*

Trees are scattered along the south and west margins of the field. A row of *Populus x canadensis* (Hybrid Black-poplar) are along the western edge and covered in dense *Hedera helix* (Ivy). The south-east edge has a mixture of smaller trees such as *Quercus robur* (Pedunculate Oak), *Fraxinus excelsior* (Ash) and *Quercus ilex* (Evergreen Oak) as well as shrubs such as *Sambucus nigra* (Elder) and old coppice stools of *Corylus avellana* (Hazel).

A species-poor hedgerow almost entirely dominated by *Crataegus monogyna* (Hawthorn) bounds the field to the east.

4.1.6 *Wet ditches*

Wet ditches are adjacent to the field along the south-east and west margins. They hold water that varies in width from 0.5 m to 2.0 m and with a depth of up to 0.5 m. The banks are approximately 1.5 m high and steep and are mostly devoid of vegetation apart from common bryophytes such as *Brachythecium rutabulum*. There is little evidence of emergent or water-margin wetland vegetation.

4.1.7 *Species of note*

No plant species of note were recorded from the site.

4.2 *Protected Vertebrates*

4.2.1 *Bats*

The trees that are covered in dense Ivy growth have the potential to be used for occasional bat roosts (Target Note 2). Additionally, an Ash tree (Target Note 3) appears to have holes and possible splits in the bark that also have the potential to be used as bat roosts.

Photographs 2 & 3: Potential bat roosts along site boundary**4.2.2 Biodiversity Action Plan Species**

The Western European Hedgehog (*Erinaceus europaeus*) is a UK BAP priority species. There is some suitable foraging habitat, though the site lacks the dense shrubby edge areas that are important for protection. Additionally, hibernation sites are limited to the adjacent gardens.

4.2.3 Breeding Birds

The ivy-covered trees, some of the shrubs and the hedgerow could potentially support breeding birds of conservation importance. The grassland is unlikely to support ground-nesting birds for a number of reasons such as the nature and structure of the grass and the presence of cats and dog walkers. Birds recorded at the site during the survey were limited to common species such as Blackbird (*Turdus merula*), Robin (*Erithacus rubecula*) and Great Tit (*Parus Major*).

4.2.4 Dormice

The section of hedgerow is species-poor and therefore, with just one food source, has limited potential to support Dormice. It is, however, connected to a line of trees and shrubs that support a slightly greater variety of species (Target Note 3), and does have limited connectivity with further hedgerows and tree lines adjacent to the development site.

4.2.5

Great Crested Newts

A review of the Ordinance Survey Map 1:25000 showed no water bodies within 500 m of the site. However, there is a large garden pond adjacent to the site at the southern end of the hedgerow (Photograph 4). There is suitable terrestrial foraging habitat within the site boundary for GCN and features in the surrounding gardens provide suitable refuges for this species.

Photograph 4: Pond adjacent to the site at the southern end of the hedgerow



4.2.6

Reptiles

The majority of the site is covered in long grass that is suitable for foraging reptiles such as Slow-worm and Grass Snake. The tops of the ditch banks are suitable, in places, for basking reptiles, and the ditches are suitable for Grass Snake. Rotting vegetation piles in the adjacent gardens are ideal for hibernation sites and for breeding.

Photograph 5: Foraging habitat and cover for reptiles



4.2.7

Water Vole

It is not clear whether the drainage ditches always hold water, or whether the depth of water (over 50 cm) was due to the extremely wet weather (experienced in winter 2013 – 2014). However, due to the amount of standing water they were surveyed for Water Voles. The ditches had the ideal bank profile for this species, though there were no signs of entrances to burrows anywhere along any of the banks. The banks were also devoid of the dense vegetation that is favoured for shelter and a food source.

5 EVALUATION AND CONCLUSIONS

5.1 Habitats

5.1.1 Grassland

This is species-poor grassland typical of wet and fertile soils that does not readily fit any NVC community. It is typical of damp and improved pasture and abandoned arable land. As such, no further surveys are considered necessary.

5.1.2 Rough grassland

This grassland is most similar to the National Vegetation Classification (NVC) type MG1b *Arrhenatherum elatius* grassland, *Urtica dioica* sub-community. It is a rather species-poor representation of this community, and is extremely common being typical of places where cutting is infrequent or has ceased altogether, such as abandoned pasture, road verges and field edges.

5.1.3 Ruderals and scrub

Ruderals and scrub tend to appear fairly rapidly once there is a relaxation in farming activity. These habitats, together with the associated species, are widespread and common throughout the British Isles and are therefore of little conservation concern.

5.1.4 Scattered trees, hedges and shrubs

The trees and shrubs comprise a mixture of native and non-native widespread and common species. The hedgerow is species-poor and therefore does not qualify as 'important' under the 1997 Hedgerow Regulations. No mitigation would therefore be required for the loss of the trees or hedgerow.

5.1.5 Wet ditches

There is little evidence of emergent or water-margin wetland vegetation in the two ditches. However, it is the intention of the developers to undertake enhancement of the ditches. When vegetation clearing or de-silting, it is vital to leave parts of the ditch undisturbed to ensure some refuge habitat is kept, enabling wildlife to re-colonise areas disturbed through management. Additionally, if removing any aquatic vegetation, leave cut material adjacent to the watercourse for several hours so wildlife can return to the water.

5.1.6 *Plant species of note*

Of the plant species mapped and recorded on site, none are of conservation importance. No Nationally Rare or Nationally Scarce plants were recorded on site, nor were any plants being at risk of extinction found (JNCC 2014). In addition, no plant species listed as being of principal conservation concern in Section 74 of the CROW Act (2000) were found on site.

5.2 *Protected Vertebrates*

5.2.1 *Badger*

No evidence of Badgers, such as setts or evidence of foraging, was found within the site boundary (or within 30 metres of the site boundary) and, therefore no further Badger surveys are required.

5.2.2 *Bats*

The ivy-covered trees and possibly an Ash tree have low bat roost potential. Should any of these need to be removed during construction, it is recommended that a suitably licensed surveyor should visit to investigate the trees identified as having the potential to be used as a bat roost. The trees should be surveyed from the ground or from ladders where possible, with an endoscope, binoculars and a torch to inspect cavities and gaps for bats.

5.2.3 *Biodiversity Action Plan Species*

There is some potential for the Western European Hedgehog to forage, particularly along the field edges, and the National Biodiversity Network returned records for this species within 2 km of the site. It is therefore recommended that the grass be cut short in order to discourage any Hedgehogs prior to site clearance, and that the site be cleared (prior to development) during the hibernation season (November to March). Should this be achievable then further surveys are not considered to be necessary for this species.

5.2.4 *Breeding Birds*

Although there may be some UKBAP/BoCC red/amber list species within and around the site, populations are likely to be mostly limited to the trees, shrubs and hedgerow at the boundary of the site and therefore the long-term impacts would not be significant. However, if any work involving clearance of boundary vegetation and woody species is to go ahead (such as clearance of the dense woody vegetation adjacent to the entrance) and if it were scheduled to take

Barnack Road, Yarnold

place between the beginning of March and the end of August, a survey to check for nesting birds would be required.

5.2.5 *Dormice*

The hedgerows and tree lines could potentially provide a sub-optimal habitat for Dormice. However, a search on the National Biodiversity Network revealed no records for this species within 2 km of the site. Moreover, despite there being connectivity with tree lines and hedgerows in the greater landscape, these are not linked to any area of woodland. It is therefore considered that the presence of this species is most improbable, and as such, further surveys are not considered to be necessary.

5.2.6 *Great Crested Newt*

Although this is a part of Sussex that is largely devoid of this species and no records were returned from the National Biodiversity Network, it is recommended that the owners be asked if this species is present. Should they be uncertain, then a Habitat Suitability Index should be carried out on this pond in order to ascertain the likely presence of this species and whether further survey work is required.

5.2.7 *Reptiles*

Given the suitable habitat and the fact that there are records for both Grass Snake and Slow-worm within 2 km of the site, further surveys are recommended to ascertain whether reptiles are present. Surveys for reptiles should preferably be carried out in April-June and/or September. These surveys involve the placement of 'refugia' in the suitable habitat. Refugia are sheets of roofing felt and corrugated metal that are used by reptiles for basking and sheltering under. The refugia are usually checked seven times on different days in suitable weather conditions.

5.2.8 *Water Vole*

Had Water Voles been occupying the site, burrow entrances would have been evident in the banks of the ditches. Given this, and the lack of any records for this species within 2 km of the site, further surveys are not considered to be necessary.

REFERENCES

Beebee, T. & Griffith, R. (2000) *Amphibians and reptiles*. HarperCollins, London.

Gregory, RD, NI Wilkinson, DG Noble, JA Robinson, AF Brown, J Hughes, D Procter, DW Gibbons and CA Galbraith (2002) *The population status of birds in the United Kingdom, Channel Islands and Isle of Man: an analysis of conservation concern 2002-2007*. British Birds, 95: 410-448.

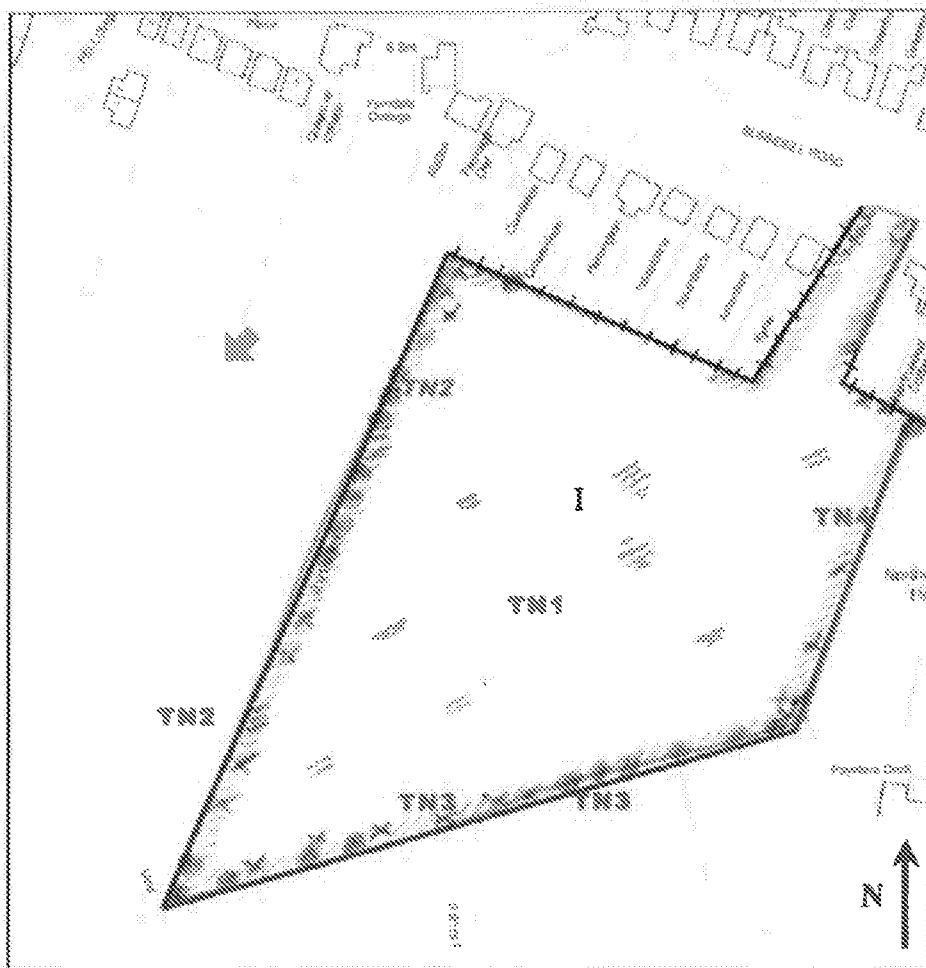
Institute of Environmental Assessment (1995). *Guidelines for Baseline Ecological Assessment*. Spon, London.

Joint Nature Conservation Committee (2003). *Handbook for Phase 1 Habitat Survey - a Technique for Environmental Audit* (revised reprint). Joint Nature Conservation Committee, Peterborough.

Rodwell, J.S. (1992). *British Plant Communities 3: Grasslands and Montane Communities*. Cambridge University Press, Cambridge.

Smith, A.J.E. (2004). *The Moss Flora of Britain and Ireland*, 2nd edition. Cambridge University Press, Cambridge.

Stace, C.A. (2010). *A New Flora of the British Isles*, 3rd edition. Cambridge University Press, Cambridge.

APPENDIX I – PHASE 1 MAP**KEY**

Improved grassland



Rough grassland



Ditches



Ruderals



Species-poor hedgerow



Scattered scrub



Scattered trees



Fence-line



Wall



APPENDIX II – TARGET NOTES

Target Note 1. A very damp field that is dominated by grasses, particularly *Holcus lanatus* (Yorkshire-fog), with localised areas of *Agrostis stolonifera* (Creeping Bent) and with *Cynosurus cristatus* (Crested Dog's-tail) and *Lolium perenne* (Perennial Rye-grass) becoming frequent in drier areas. Ruderals are scattered at mostly a low density throughout, though there are a couple of stands of *Rumex obtusifolius* (Broad-leaved Dock). Grassland forbs are extremely infrequent and limited to very common species such as *Ranunculus repens* (Creeping Buttercup), *Trifolium pratense* (Red Clover), *Geranium dissectum* (Cut-leaved Crane's-bill) and *Cerastium fontanum* (Common Mouse-ear).

Target Note 2. A field edge along the side of a ditch with robust grasses variously dominated by *Dactylis glomerata* (Cock's-foot), *Arrhenatherum elatius* (False Oat-grass) and *Elytrigia repens* (Common Couch). The large umbellifers *Anthriscus sylvestris* (Cow Parsley) and *Heracleum sphondylium* (Hogweed) are frequent as are ruderals such as *Urtica dioica* (Common Nettle). Occasionally, there are areas of mostly weak growth of *Rubus fruticosus* agg. (Bramble). There is a line of *Populus x canadensis* (Hybrid Black-poplar) with dense growth of *Hedera helix* (Ivy) on the trunks. This may be suitable for occasional bat roosts.

The ditch has banks that are approximately 1.5 m high and steep. It is holding water (0.5 m deep) and the width here is approximately 0.5 m to 0.75 m. The banks are mostly bare, but in places covered with common mosses such as *Brachythecium rutabulum*. Wetland species were not apparent.

Target Note 3. A field edge along a ditch similar to that described in *Target Note 2*, with a line of small trees and shrubs such as *Quercus robur* (Pedunculate Oak), *Fraxinus excelsior* (Ash), *Acer campestre* (Field Maple) and old coppice stools of *Corylus avellana* (Hazel). There is a tree of *Fraxinus excelsior* (Ash) with holes and splits in the bark that may have the potential to support roosting bats.

The ditch is similar to that described in *Target Note 2*, though with water up to 2 m wide in places. The banks are mostly bare mud grading into rough grassland with burrow entrances in places belonging to rabbits.

Target Note 4. A species-poor hedgerow dominated by *Crataegus monogyna* (Hawthorn).

APPENDIX III – PLANT SPECIES LISTS

Latin Name	English Name	Abundance	
		grassland	field edges
Grasses			
<i>Agrostis stolonifera</i>	Creeping Bent	la	
<i>Arrhenatherum elatius</i>	False Oat-grass	o	f / la
<i>Cynosurus cristatus</i>	Crested Dog's-tail	la	
<i>Dactylis glomerata</i>	Cock's-foot	o	f
<i>Elytrigia repens</i>	Common Couch	o	f
<i>Festuca rubra</i>	Red Fescue	o	
<i>Holcus lanatus</i>	Yorkshire-fog	d	ff
<i>Lolium perenne</i>	Perennial Rye-grass	ff	o
<i>Poa trivialis</i>	Rough Meadow-grass		o
Flowering Plants			
<i>Anthriscus sylvestris</i>	Cow Parsley		ff
<i>Bellis perennis</i>	Daisy	vr	
<i>Cerastium fontanum</i>	Common Mouse-ear	o	
<i>Cirsium arvense</i>	Creeping Thistle	ff	
<i>Cirsium vulgare</i>	Spear Thistle	o	
<i>Epilobium</i> sp.	a willowherb	o	o
<i>Galium aparine</i>	Cleavers		ff
<i>Geranium dissectum</i>	Cut-leaved Crane's-bill	o	
<i>Heracleum sphondylium</i>	Hogweed		ff
<i>Lamium album</i>	White Dead-nettle		ff
<i>Lamium purpureum</i>	Red Dead-nettle		o
<i>Leontodon hispidus</i>	Rough Hawkbit	vr	
<i>Medicago lupulina</i>	Black Medick	r	
<i>Picris echioides</i>	Bristly Ox-tongue	o	
<i>Plantago lanceolata</i>	Ribwort Plantain	vr	
<i>Ranunculus repens</i>	Creeping Buttercup	la	o
<i>Rumex crispus</i>	Curled Dock		o
<i>Rumex obtusifolius</i>	Broad-leaved Dock	ff	ff
<i>Senecio jacobaea</i>	Common Ragwort	ff	o
<i>Silene dioica</i>	Red Campion		o
<i>Trifolium pratense</i>	Red Clover	o	
<i>Urtica dioica</i>	Common Nettle		la
<i>Veronica</i> sp.	a Speedwell	o	
<i>Vicia sepium</i>	Bush Vetch		r
Woody Species			
<i>Acer campestre</i>	Field Maple		o
<i>Cornus sanguinea</i>	Dogwood		vr
<i>Corylus avellana</i>	Hazel		ff
<i>Crataegus monogyna</i>	Hawthorn		ld
<i>Fraxinus excelsior</i>	Ash		o
<i>Hedera helix</i>	Ivy		ld
<i>Populus</i> x cf. <i>canadensis</i>	Hybrid Black-poplar		o
<i>Quercus ilex</i>	Evergreen Oak		r
<i>Quercus robur</i>	Pedunculate Oak		r
<i>Rosa canina</i>	Dog-rose		r
<i>Rubus fruticosus</i> agg.	Bramble		f
<i>Sambucus nigra</i>	Elder		o
Bryophytes			
<i>Brachythecium rutabulum</i>		la	la
<i>Kindbergia praelonga</i>		la	

10**APPENDIX IV – LEGISLATION****10.1****General**

This section briefly describes the legal protection afforded to the protected species mentioned in this report. It is for information only and is not intended to be comprehensive or to replace specialised legal advice.

10.2**Bats**

All species of British bat are listed on *Schedule 5 of the Wildlife and Countryside Act 1981* (as amended), and receive full protection under *Section 9*. These species are also all listed as European Protected Species on *Schedule 2 of the Conservation (Natural Habitats, etc.) Regulations 1994* which gives them full protection under *Regulation 39*. Protection was extended by the *Countryside and Rights of Way Act 2000* (the CRow Act).

Under the above legislation it is an offence to:

- kill, injure or take an individual of such a species;
- possess any part of such species either alive or dead;
- intentionally or recklessly damage, destroy or obstruct access to any place or structure used by such species for shelter, rest, protection or breeding;
- intentionally or recklessly disturb such a species whilst using any place of shelter or protection;
- sell or attempt to sell any such species; or
- set and use articles capable of catching, injuring or killing a bat (for example a trap or poison), or knowingly cause or permit such an action.

Several species of bat are included as a Priority Species in the UK Biodiversity Action Plan (UKBAP - JNCC (2003) and also as species of principal importance for the conservation of biological diversity in England under *Section 74 of the CRow Act*.

All species of British bat are also protected under *Schedule 6 of the Wildlife and Countryside Act 1981* (as amended). This protection relates specifically to trapping and direct pursuit of the species.

10.3 Birds

10.3.1 Birds (General Protection)

All species of bird are protected under *Section 1* of the *Wildlife and Countryside Act 1981* (as amended). The protection was extended by the CRow Act.

The legislation makes it an offence to intentionally:

- kill, injure or take any wild bird;
- take, damage or destroy the nest of any wild bird while that nest is in use or being built; or
- take or destroy an egg of any wild bird.

10.3.2 Birds (Specially Protected Species)

Certain species of bird are listed on *Schedule 1* of the *Wildlife and Countryside Act 1981* (as amended) and receive protection under *Sections 1(4) and 1(5)* of the Act. The protection was extended by the CRow Act. The legislation confers special penalties where the above mentioned offences are committed for any such bird and also make it an offence to intentionally or recklessly:

- disturb any such bird, whilst building its nest or it is in or near a nest containing dependant young; or
- disturb the dependant young of such a bird.

10.4 Great Crested Newt

Triturus cristatus (Great Crested Newt) is listed on *Schedule 5* of the *Wildlife and Countryside Act 1981* (as amended), and receives full protection under *Section 9*. This species is also listed as a European Protected Species on *Schedule 2* of the *Conservation (Natural Habitats, etc.) Regulations 1994* which gives it full protection under *Regulation 39*. Protection was extended by the *Countryside and Rights of Way Act 2000* (the CRow Act).

Under the above legislation it is an offence to:

- kill, injure or take an individual of such a species;
- possess any part of such species either alive or dead;
- intentionally or recklessly damage, destroy or obstruct access to any place or structure used by such species for shelter, rest, protection or breeding;
- intentionally or recklessly disturb such a species whilst using any place of shelter or protection; or
- sell or attempt to sell any such species.

The Great Crested Newt is included as a Priority Species in the UK Biodiversity Action Plan (UKBAP) and also as a species of principal importance for the conservation of biological diversity in England under Section 74 of the CRow Act.

10.5

Reptiles

Lacerta vivipara (Common Lizard), *Natrix natrix* (Grass Snake), *Anguis fragilis* (Slow-worm), and *Vipera berus* (Adder) are listed under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended), in respect of Section 9(5) and part of Section 9(1). This protection was extended by the CRow Act.

Under the above legislation it is an offence to:

- intentionally or deliberately kill or injure any individual of such a species; or
- sell or attempt to sell any part of the species alive or dead.