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ECOLOGICAL SURVEY OF LAND AT FIELDS END, HEMEL HEMPSTEAD, HERTFORDSHIRE

FINAL

MAY 2011

DOCUMENT CONTROL

TITLE:	Ecological Survey of Land at Fields End, Hemel Hampstead, Hertfordshire
VERSION:	Final
DATE:	May 2011
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CONTENTS

ECOLOGICAL SURVEY OF LAND AT FIELDS END, HEMEL HEMPSTEAD, HERTFORDSHIRE

1 INTRODUCTION

1.1 ESL (Ecological Services) Ltd has been commissioned by Vincent and Gorbing on behalf of Taylor Wimpey UK Ltd to carry out an ecological survey of land at Fields End, Hemel Hempstead, Hertfordshire. The approximate central NGR for the site is TL 030 075. A residential development is proposed for the site as part of Dacorum Borough Council's Local Development Framework.

1.2 This report describes the methods used and provides the findings of the survey together with recommendations for further work where appropriate. For plant species recorded on the site and for bird, mammal and invertebrate species recorded both on the site and in the wider area, English names are used throughout the text with a full species list including scientific names given in Appendix 1. Where plants and animals not recorded are referred to, the scientific name is also given in the text. Both English and scientific names of higher plants are given according to Stace (2010). A summary of the statutory protection afforded to the species known or potentially using the site is given in Appendix 2.

2 METHODS

2.1 DESK STUDY

2.1.1 The Natural England website was consulted for the locations of the internationally protected sites, including Special Areas for Conservation (SACs), Special Protection Areas (SPAs) and Ramsar Sites, closest to the study site. The Hertfordshire Biological Records Centre (HBRC) was asked to provide locations of Sites of Special Scientific Interest (SSSIs), National Nature Reserves (NNRs) and Local Nature Reserves (LNRs) within a 2km radius of the study site.

2.1.2 HBRC was also asked to provide records for statutorily protected, Biodiversity Action Plan (BAP) and other important species for Hertfordshire within a 2km radius of the site boundary, and information on local wildlife sites within the same area. The National Biodiversity Network (NBN) Gateway website was also consulted for protected species records in the area.

2.1.3 The UK and Hertfordshire BAP websites were consulted to identify the species and habitats included in these plans. Ordnance survey maps and aerial photographs of the site and surrounding area were examined in order to identify any potentially important habitats which might not be visible from the site itself.

2.2 FIELD SURVEY

2.2.1 A walkover survey of the site and adjacent habitats was carried out by an experienced ecologist on 4 May 2011. A risk assessment was undertaken in order to evaluate any specific risks and implement safe-working procedures, and the following surveys were completed.

Habitats, Plant Communities and Plant Species

2.2.2 All habitats and plant communities on the site were mapped and characterised by identifying the dominant and typical species. All hedgerows present on the site were assessed against the criteria for importance set out in the Hedgerow Regulations (1997). Notes were also made on land adjacent to the site.

Amphibians and Reptiles

2.2.3 Apart from a dry balancing pond in the south-east corner of the site no waterbodies are shown on OS maps and aerial photographs of the area, but a search was made for any recent or smaller pools on the site or visible on adjacent land which might have potential to support breeding amphibian populations, in particular great crested newts.

2.2.4 All habitats were assessed for their potential for use by reptiles, looking particularly for more open vegetation that would provide suitable areas for basking, close to areas of more dense vegetation which would provide protection from predators. Additionally, a 'direct observation survey' (HGBI, 1998), was undertaken which involves walking slowly and quietly through such habitats watching and listening for animals. Animals were also looked by turning over potential refuges such as logs.

Mammals

2.2.5 An assessment was made of trees on site for their potential to support roosting bats. Suitable features include disused woodpecker holes, rot holes, cracks and splits in trunks and limbs, delaminating bark and ivy cladding. There were no buildings on the site.

2.2.6 A search was made for signs of use by badgers. Such signs include setts, dung pits, pathways, paw prints, hairs and feeding signs such as snuffle holes and scratched logs.

2.2.7 A search was made for habitat which might be used by water voles *Arvicola terrestris* such as a dry ditch and the balancing pond. The hedgerows and woodland on site were also assessed for their potential to support dormice *Muscardinus avellanarius*. Searching for dormice signs such as nibbled hazel nuts was not undertaken due to the earliness of season. Sightings and signs of other mammal species were also recorded.

Birds

2.2.8 All birds seen and heard on and immediately adjacent to the site were recorded. An assessment was made of the habitats on site for their potential to support breeding birds listed on Schedule 1 of the Wildlife and Countryside Act (1981 and as amended).

Invertebrates

2.2.9 All readily identifiable invertebrate species using the site were recorded. Notes were made on particular habitats thought to be good for invertebrates.

3 RESULTS

3.1 DESK STUDY

3.1.1 The nearest site of international importance is the Chilterns Beechwoods SAC which is approximately 3.5km to the north-west of the site and is designated for calcareous grassland and beech woodland habitats. The nearest SSSI is Little Heath Pit, a geological site approximately 1.2km to the north-west of the site. The nearest biological SSSI is Roughdown Common, approximately 2.5km south-east of the site, which is designated for its calcareous grassland habitats.

3.1.2 The nearest Local Nature Reserve (LNR) is Shrubhill Common which is approximately 340m to the south-east of the site and supports calcareous grassland and woodland habitats. HBRC provided details of 15 County Wildlife Sites (CWS) situated within 2km of the site; details of these and their locations are given in Appendix 3. The citations cover a wide range of sites and include ancient woodland, calcareous grassland, neutral grassland, a churchyard and watercress beds. The Shrubhill Common LNR site mentioned above is also a CWS and is the nearest one to the site.

3.1.3 HBRC provided numerous protected species records within 2km of the site (see Appendix 3). The only records from the actual site are for badger from 2000 and 2004 (no specific details given). A further 11 badger records are given for the surrounding land. There are 24 bat records listed mainly from the housing estates to the east of the site. Seven water vole records are listed but none close to the site. Two great crested newt records are given, the closest being over 1km from the site at Boxmoor Common. A very old otter record was also cited but some distance from the site. No records for any reptiles or dormice were provided by HBRC but the NBN Gateway website provided records of dormice in the wider area to the north and various reptile records (adder *Vipera berus*, common lizard *Zootoca vivipara* and slow-worm *Anguis fragilis*) to the north and south.

3.1.4 The HBRC also provided location details for several ancient woodland sites and veteran trees but none of these are within the site.

3.2 SITE DESCRIPTION

3.2.1 A habitat map, which also incorporates potential ecological constraints, is given as Figure 1. The site is located on the western edge of Hemel Hempstead just to the south of the hamlet of Fields End. Photographs 1 and 2 give general views. The northern boundary (western half) consists of a partly managed roadside hedge (Hedgerow 1) which is approximately 2m wide and 3-4m high and comprises field maple, blackthorn, hawthorn, dogwood, field-rose, hazel and holly with occasional standards of ash and pedunculate oak. The ground flora is dominated by barren brome, dog's mercury and common nettle with occasional greater stitchwort and bush vetch. A gated entrance to the site separates this hedge from another hedge leading eastwards alongside a footpath. This hedge (Hedgerow 2) is partly managed, approximately 2.5m wide and 5-6m high and comprises mainly hawthorn and blackthorn with hazel, holly, elder, pedunculate oak, ash, dog-rose and field-rose. The ground flora is dominated by bramble, cow parsley and common nettle with both black and white bryony.

Photograph 1 General view of west of site

Photograph 2 General view of centre of site

3.2.2 The eastern boundary is a partly managed hedge (Hedgerow 3) alongside a footpath. It is approximately 2m wide and 5-6m high, comprises mainly hawthorn and blackthorn with field maple, holly, apple, hazel, yew, elder, dog rose, field-rose and hybrid hawthorn, and two gaps are present. Standards of pedunculate oak, ash and field maple are frequent. The ground flora is dominated by cleavers, bramble, barren brome and cow parsley with occasional honeysuckle, greater stitchwort, traveller's-joy and bracken. The southern-most section of this boundary is formed by a line of hornbeams with occasional holly, field maple and dog-rose.

3.2.3 The south-eastern boundary is a roadside post-and-wire fence with frequent young ash trees and occasional young field maple over a ground flora dominated by bramble, cleavers and common nettle. Further south a small broadleaved woodland block abuts the site boundary beyond another post-and-wire fence. This woodland comprises pedunculate oak, ash and

hornbeam, with some very large specimens of all three species (see Photographs 3 and 4), over a fairly open under-storey of hawthorn, elder, holly, blackthorn, hazel, dog-rose and field-rose. The ground flora is dominated by cow parsley, bramble, cleavers, common nettle and bluebell with occasional garlic mustard, lesser celandine, common dog-violet, wood dock and wood melick.

Photograph 3 Large hornbeam in woodland

Photograph 4 Large ash in woodland

3.2.4 The central part of the southern boundary comprises an unmanaged hedge (Hedgerow 4), approximately 4-5m wide, 6-7m high with parts incorporated into back gardens. It comprises field maple (including standards), hazel, hawthorn and elder with a ground flora of bramble, cleavers, cow parsley and ivy. Further west there is another hedge (Hedgerow 5) which is unmanaged, 3-4m wide and 6-7m wide and comprises hawthorn with dog-rose, holly, elder, field maple, wild cherry, blackthorn and field-rose. Standards (some very large) of pedunculate oak, ash, field maple and hornbeam are frequent. The ground flora is dominated by cow parsley, ivy, bramble, rough meadow-grass and rough chervil with some bluebell and hop.

3.2.5 The western boundary is an unmanaged hedge (Hedgerow 6) which is approximately 3-4m wide and 5-6m high with only a small gap present. The hedge comprises mainly holly, blackthorn, hazel and field maple with wild cherry, wych elm, Midland hawthorn and hawthorn. Standards of pedunculate oak and ash are frequent. The ground flora is dominated by cow parsley, bramble, false oat-grass, ivy and common nettle with occasional bluebell, bracken and greater stitchwort.

3.2.6 Internally, the site is divided into four fields by post-and-wire fences, a central hedgerow (Hedgerow 7) and dry ditch. The largest field in the western part of the site is arable, currently under cereal. Frequent arable weeds within the crop and its 1.5-2m wide headlands include black-grass, curled dock, bristly oxtongue and barren brome. A lone pedunculate oak is present within the field in the west. To the south, west and north of this arable field is a belt of recently planted broadleaved woodland (<10 years old?) whose species include ash, silver birch, pedunculate oak, goat willow, alder, field maple and wild cherry. The ground flora of the plantation is dominated by barren brome, soft-brome, dandelion, creeping thistle, broad-leaved dock, creeping buttercup and great willowherb. The north-east field is also under cereal with similar weed species and headlands. A 2-4m wide grassy footpath to the north of this field supports perennial rye-grass, annual meadow-grass, dandelion, creeping buttercup and white clover (see Photograph 5). This path runs west towards a minor road.

Photograph 5 Footpath in north of site

Photograph 6 Rough grassland with bramble

3.2.7 South of the arable field there is a fenced area of rough grassland (ex-cattle/horse pasture?) with bramble areas near the eastern boundary (see Photograph 6). This grassland is dominated by false oat-grass, meadow foxtail, cock's-foot and Yorkshire-fog with cut-leaved crane's-bill, hogweed, broad-leaved dock, common mouse-ear and smooth meadow-grass. The field is slightly more species-rich in the south-east corner where red fescue, meadow buttercup, bulbous buttercup, agrimony and common bird's-foot-trefoil are present.

3.2.8 The south-east field is also rough grassland with a dry balancing pond which has no sign of holding water (see Photograph 7). The grassland is dominated by smooth meadow-grass, meadow foxtail and red fescue with cow parsley, bulbous buttercup, meadow buttercup, creeping thistle and hogweed. The grassland is more calcareous and species-rich on the northern slope of the pond with species such as agrimony, yarrow, common bird's-foot-trefoil, red clover, common vetch, oxeye daisy, wild carrot and common knapweed present (see Photograph 8). Small ant-hills are also present here. The field edges are dominated by common nettle, cow parsley and cleavers, especially where shaded by adjacent trees.

3.2.9 The central hedge (Hedgerow 7) is unmanaged and approximately 2-3m wide and 5-6m high. It comprises hawthorn and blackthorn with elder, dog-rose, hazel, spindle, wild cherry, holly, field-rose, yew and pear, frequent standard ash, field maple, and pedunculate oak, and has three gaps. The ground flora is dominated by common nettle, cleavers, cow parsley and bramble with false brome, wood dock, bluebell, wood avens and dog's mercury. A dry ditch supports dense bramble and common nettle where it runs beside the hedge; it then continues south beyond the hedge and has scattered scrub of wych elm, blackthorn, elder and dog-rose. The ditch is culverted into the balancing pond where further bramble scrub is present.

Photograph 7 Dry Balancing Pond

Photograph 8 Species-rich grassland on bank

3.3 ADJACENT LAND

3.3.1 Beyond the northern boundary is a minor road, several broadleaved plantation strips (including wild cherry, pedunculate oak, hazel and ash) and horse-pasture. To the east, beyond a footpath, is a large housing estate. To the south is the Long Chaulden road, houses and gardens, amenity grassland (part of Shrubhill Common Local Nature Reserve) and an arable field. To the west is species-poor pasture (currently ungrazed).

3.4 AMPHIBIANS AND REPTILES

3.4.1 No waterbodies were found on or adjacent to the site and thus no suitable habitat for use by breeding amphibians is present. No amphibians were recorded during the walkover.

3.4.2 Suitable habitat for reptiles on site or immediately adjacent is limited. The only areas that may support them are the two rough grassland fields in the south-east corner of the site, especially where scrub is also present. No reptiles were found during the walkover survey using 'cold-searching' methods and connectivity to areas from which they may spread is limited.

3.5 MAMMALS

3.5.1 In total, 14 trees were considered to have potential to support roosting bats. These are listed in Table 1 and their locations are given on Figure 1. Photograph 9 shows a typical example of a tree with potential for use by bats (B5). The large hedgerows and broadleaved plantation strips present on site offer good foraging and movement corridors for bats. The adjacent land, especially to the north and to the south-east also offer good bat foraging habitat.

TABLE 1 TREES WITH POTENTIAL TO SUPPORT ROOSTING BATS

Tree No	Species	Features
B1	Pedunculate oak	Rot hole, west facing, approx.5m.
B2	Dead pedunculate oak	Lifting bark.
B3	Dead pedunculate oak	Lifting bark.
B4	Ash	Rot hole, north facing, approx 4m. Ivy.
B5	Ash	Two rot holes, south and west facing, approx 4m.
B6	Pedunculate oak	Splits in branches and lifting bark.
B7	Pedunculate oak	Split in branch, west facing, approx 4m.
B8	Ash	Small holes in trunk and branch, south and west facing, approx 4m and 8m.
B9	Pedunculate oak	Lifting bark
B10	Pedunculate oak	Rot hole, east facing, approx.6m
B11	Pedunculate oak	Rot hole, north facing, approx 5m.
B12	Pedunculate oak	Lifting bark
B13	Pedunculate oak	Dead branch with hole.
B14	Ash	Rot hole, north facing, approx 4m plus various cracks and ivy

3.5.2 There are no habitats on or adjacent to the site suitable for use by water voles or otters.

Photograph 9 Rot holes in ash (B5)

Photograph 10 Active badger sett in central hedgerow

3.5.3 An active badger sett was found near the northern end of the central hedgerow (location given on Figure 1 and shown in Photograph 10). It had four entrances but only one was thought to be active, indicating that it is a 'minor' sett and there is likely to be a main sett somewhere in the land surrounding the site. A large dung pit was present outside the sett. Other areas of the site, particularly along the western site boundary where dense scrub is present, may conceal other badger setts. Three active fox earths were also found on site and a fallow deer was disturbed in the west. Large mammal runs/pathways, probably created by deer, foxes and badgers, were frequent throughout the site.

3.5.4 All the hedges on site, especially the boundary hedges, have the potential to support dormice due to their dense nature, connectivity with other hedges and general species composition (including hazel, bramble and honeysuckle).

3.6 BIRDS

3.6.1 In total, 28 bird species were recorded using the site during the survey including six UK BAP Priority Species. These were skylark, dunnock, song thrush, starling, bullfinch and yellowhammer. All habitats on site have the potential to support nesting birds, including BAP species, particularly the hedgerows, woodlands and rough grassland with scrub. No Schedule 1 species was noted on site or in adjacent land but there are habitats on site that could potentially support barn owl *Tyto alba*, hobby *Falco subbuteo* and quail *Coturnix coturnix*.

3.7 INVERTEBRATES

3.7.1 Seven common butterfly species were noted on site including several common blue butterflies in the balancing pond area where ant-hills are also present. The small number of other common invertebrates noted included mother shipton moth, which is generally associated with older grasslands and was recorded in the balancing pond area. The key site habitats for invertebrates are the hedgerows, the woodland block in the south and the rough grassland.

4 POTENTIAL CONSTRAINTS AND RECOMMENDATIONS

4.1 PLANT COMMUNITIES AND SPECIES

4.1.1 All habitats and plant communities recorded on the site are common and widespread in a local and national context. Five hedges, Nos 1, 2, 3, 6 and 7, met the Hedgerow Regulations (1997) criteria for 'Importance for Wildlife and Landscape'. Their locations are given on Figure 1. All were generally species-rich with frequent standards, had good connectivity with other hedges, some had a selection of ancient woodland indicator species present and others had footpaths

alongside. The small woodland block in the south of the site supported some very large trees and also several ground flora species indicative of ancient woodland.

4.1.2 No nationally rare or nationally scarce plant species, defined by Wigginton (1999) or Stewart, Pearman and Preston (1994) respectively and no UK BAP Priority Species were recorded from the survey area.

4.1.3 It is recommended that all the existing hedgerows on site, particularly those meeting Hedgerow Regulations standards, are incorporated into the design of the development with suitable buffer zones. This would retain important wildlife corridors on site. The woodland block, adjacent grassland and balancing pond should also be retained, providing good habitat connectivity with similar habitats to the south. No further botanical survey work is required.

4.1.4 Further measures to improve the existing habitats would be to plant-up the hedgerow gaps with native broadleaf trees and shrubs, instigate a mowing regime on any retained rough grassland in the south-east, and remove non-native species such as eucalyptus and cotoneaster from the recently planted broadleaf plantation strips. Access to the broadleaved woodland block in the south of the site should ideally be limited to protect the ground flora.

4.2 AMPHIBIANS AND REPTILES

4.2.1 No suitable aquatic habitat for great crested newts was found on or adjacent to the site during the walkover survey and therefore no further surveys are recommended for this species. Suitable reptile habitats are present in the south-east corner of the site. Given the desk study results, a survey involving at least seven visits during favourable conditions between April and September is recommended to establish whether reptiles are present on the site.

4.3 MAMMALS

4.3.1 At least 14 trees which could potentially support roosting bats are present on site. If any of these trees are due to be removed it is recommended that they are subjected to a bat roost survey involving up to three dusk/dawn visits (Natural England standing advice). Bat feeding transects using electronic detectors should also be carried out on these visits.

4.3.2 The active badger sett in the central hedgerow should ideally be left in-situ with a buffer zone of least 30m radius around it. Badger activity on the site and surrounding land should be monitored during the pre-development stage to see if the situation changes and also to locate the suspected main sett. If building works are to be undertaken within 30m of the sett then a Natural England disturbance licence would be needed. Activity at the sett could be monitored during any further visits to the site.

4.3.3 All the hedgerows, especially the boundary hedgerows, have the potential to support dormice, a European protected species. If any of these hedgerows are to be impacted upon by the development it is recommended that a presence/presumed absence survey be undertaken which involves placing at least 50 nest tubes or nest boxes in the hedgerows and checking them several times between April and November, with the optimal survey time in August and September (Natural England standing advice).

4.4 BREEDING BIRDS

4.4.1 As stated above, all habitats on the site are suitable for use by breeding birds, and since several UK BAP Priority Species were recorded on the visit, and others are known to be present in the area, the site is likely to have some local value for its breeding bird community.

4.4.2 In order to avoid damaging or destroying bird nests, site clearance should be undertaken outside the breeding season, which typically runs from the beginning of March to the end of August. If this is not possible then a check must be made for nests by a suitably experienced individual prior to any clearance works. Any nests thought to be active should be identified and protected until the eggs have hatched and young have fledged. Active nests can be present outside this time and any found at any stage should be protected in the same way.

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0 50 100
metres

Key

- Isolated tree
- Tree with potential to support roosting bats
- Scattered scrub
- Location of badger sett
- (A) Arable
- (HG) Houses and gardens
- Site boundary
- Hedge without trees
- Hedge with trees
- Dry ditch
- Fence
- Semi-improved pasture
- Improved pasture
- Rough grassland
- Amenity grassland
- Dry balancing pond
- Broadleaf woodland
- Broadleaf plantation
- Dense scrub

Hedge 1
Hedge 2
Hedge 2
B1
B2
B3
Hedge 3
Hedge 7
B4
B5
B6
B7
B8
Hedge 3
Hedge 6
B9
B10
B11
B12
Hedge 5
Hedge 5
B13
B14
Hedge 4

N

Scale: see map

SITE NAME:
Land at Fields End, Hemel Hempstead

DRAWING TITLE:
Habitat map

esl (ecological services) limited

Figure 1
FEH-1105-001
Date: May 2011

APPENDIX 1

Species Recorded on Land at Fields End, Hemel Hempstead on 4 May 2011

SPECIES RECORDED ON LAND AT FIELDS END, HEMEL HEMPSTEAD ON 4 MAY 2011

ENGLISH NAME	SCIENTIFIC NAME	DAFOR
PLANTS		
agrimony	*Agrimonia eupatoria*	R
alder	*Alnus glutinosa*	O
annual meadow-grass	*Poa annua*	O
ash	*Fraxinus excelsior*	F
barren brome	*Anisantha sterilis*	A
beaked hawk's-beard	*Crepis vesicaria*	R
beech	*Fagus sylvatica*	R
black bryony	*Tamus communis*	R
black-grass	*Alopecurus myosuroides*	F
blackthorn	*Prunus spinosa*	F
bluebell	*Hyacinthoides non-scripta*	F
bracken	*Pteridium aquilinum*	O
bramble	*Rubus fruticosus*	A
bristly oxtongue	*Helminthotheca echioides*	R
broad-leaved dock	*Rumex obtusifolius*	A
bulbous buttercup	*Ranunculus bulbosus*	O
bush vetch	*Vicia sepium*	R
Canadian goldenrod	*Solidago canadensis*	R
cleavers	*Galium aparine*	A
cock's-foot	*Dactylis glomerata*	F
common bird's-foot-trefoil	*Lotus corniculatus*	R
common chickweed	*Stellaria media*	O
common dog-violet	*Viola riviniana*	R
common knapweed	*Centaurea nigra*	R
common mouse-ear	*Cerastium fontanum*	O
common nettle	*Urtica dioica*	A
common ragwort	*Senecio jacobaea*	O
common vetch	*Vicia sativa*	O
cotoneaster	*Cotoneaster* sp	R
cow parsley	*Anthriscus sylvestris*	A
creeping bent	*Agrostis stolonifera*	R
creeping buttercup	*Ranunculus repens*	o
creeping cinquefoil	*Potentilla reptans*	O
creeping thistle	*Cirsium arvense*	F
curled dock	*Rumex crispus*	O
cut-leaved crane's-bill	*Geranium dissectum*	F
daisy	*Bellis perennis*	R
dandelion	*Taraxacum* sp	A
dog-rose	*Rosa canina*	F
dog's mercury	*Mercurialis perennis*	R
dogwood	*Cornus sanguinea*	R
elder	*Sambucus nigra*	F
eucalyptus	*Eucalyptus sp*	R
false oat-grass	*Arrhenatherum elatius*	F
false brome	*Brachypodium sylvaticum*	O
field bindweed	*Convolvulus arvensis*	O
field maple	*Acer campestre*	F
field-rose	*Rosa arvensis*	F
garlic mustard	*Alliaria petiolata*	O
germander speedwell	*Veronica chamaedrys*	R
goat willow	*Salix caprea*	O
goat's-beard	*Tragopogon pratensis*	R

ENGLISH NAME	SCIENTIFIC NAME	DAFOR
PLANTS continued		
great willowherb	*Epilobium hirsutum*	R
greater plantain	*Plantago major*	O
greater stitchwort	*Stellaria holostea*	O
groundsel	*Senecio vulgaris*	O
hairy-brome	*Bromopsis ramosa*	R
hawthorn	*Crataegus monogyna*	F
hazel	*Corylus avellana*	F
hedge mustard	*Sisymbrium officinale*	O
hedge woundwort	*Stachys sylvatica*	O
hoary ragwort	*Senecio erucifolius*	R
hoary willowherb	*Epilobium parviflorum*	R
hogweed	*Heracleum sphondylium*	F
holly	*Ilex aquifolium*	F
honeysuckle	*Lonicera periclymenum*	R
hop	*Humulus lupulus*	R
hornbeam	*Carpinus betulus*	O
hybrid hawthorn	*Crataegus* x *media*	R
ivy	*Hedera helix*	O
knotgrass	*Polygonum aviculare*	R
lesser celandine	*Ficaria verna*	O
lesser trefoil	*Trifolium dubium*	R
lords-and-ladies	*Arum maculatum*	O
meadow buttercup	*Ranunculus acris*	F
meadow foxtail	*Alopecurus pratensis*	F
Midland hawthorn	*Crataegus laevigata*	R
nipplewort	*Lapsana communis*	O
oxeye daisy	*Leucanthemum vulgare*	R
pear	*Pyrus* sp	R
pedunculate oak	*Quercus robur*	F
perennial rye-grass	*Lolium perenne*	O
prickly sow-thistle	*Sonchus asper*	R
red clover	*Trifolium pratense*	R
red dead-nettle	*Lamium purpureum*	R
red fescue	*Festuca rubra*	F
ribwort plantain	*Plantago lanceolata*	O
rosebay willowherb	*Chamerion angustifolium*	O
rough chervil	*Chaerophyllum temulum*	O
rough meadow-grass	*Poa trivialis*	O
rowan	*Sorbus aucuparia*	R
scentless mayweed	*Tripleurospermum inodorum*	O
silver birch	*Betula pendula*	O
smooth meadow-grass	*Poa pratensis*	O
soft-brome	*Bromus hordeaceus*	F
spear thistle	*Cirsium vulgare*	O
spindle	*Euonymus europaeus*	R
traveller's-joy	*Clematis vitalba*	O
wayfaring-tree	*Viburnum lantana*	R
white bryony	*Bryonia dioica*	R
white clover	*Trifolium repens*	O
wild cherry	*Prunus avium*	O
white dead-nettle	*Lamium album*	O
wild carrot	*Daucus carota*	R
wild-oat	*Avena fatua*	R
wood avens	*Geum urbanum*	O
wood dock	*Rumex sanguineus*	O

ENGLISH NAME	SCIENTIFIC NAME	DAFOR
PLANTS continued		
wood melick	*Melica uniflora*	R
wych elm	*Ulmus glabra*	O
yarrow	*Achillea millefolium*	R
yew	*Taxus baccata*	R
Yorkshire-fog	*Holcus lanatus*	O

KEY TO DAFOR
(An estimate of relative abundance at a site)

D Dominant
A Abundant
F Frequent
O Occasional
R Rare

ENGLISH NAME	SCIENTIFIC NAME	SITE	ADJACENT LAND
BIRDS			
buzzard	*Buteo buteo*		✓
kestrel	*Falco tinnunculus*	✓	✓
stock dove	*Columba oenas*		✓
woodpigeon	*Columba palumbus*	✓	✓
collared dove	*Streptopelia decaocto*	✓	✓
swift	*Apus apus*	✓	✓
green woodpecker	*Picus viridis*	✓	✓
skylark	*Alauda arvensis*	✓	✓
swallow	*Hirundo rustica*	✓	✓
wren	*Troglodytes troglodytes*	✓	
dunnock	*Prunella modularis*	✓	✓
robin	*Erithacus rubecula*	✓	
blackbird	*Turdus merula*	✓	✓
song thrush	*Turdus philomelos*	✓	✓
blackcap	*Sylvia atricapilla*	✓	✓
lesser whitethroat	*Sylvia curruca*	✓	✓
whitethroat	*Sylvia communis*	✓	✓
chiffchaff	*Phylloscopus collybita*	✓	✓
willow warbler	*Phylloscopus trochilus*	✓	✓
long-tailed tit	*Aegithalos caudatus*	✓	
blue tit	*Cyanistes caeruleus*	✓	✓
great tit	*Parus major*	✓	✓
coal tit	*Periparus ater*	✓	
magpie	*Pica pica*	✓	✓
carrion crow	*Corvus corone*	✓	✓
starling	*Sturnus vulgaris*	✓	✓
house sparrow	*Passer domesticus*		✓
chaffinch	*Fringilla coelebs*	✓	
greenfinch	*Carduelis chloris*	✓	✓
bullfinch	*Pyrrhula pyrrhula*	✓	✓
yellowhammer	*Emberiza citrinella*	✓	✓
MAMMALS			
grey squirrel	*Sciurus carolinensis*	✓	✓
fox	*Vulpes vulpes*	✓	✓
badger	*Meles meles*	✓	✓

ENGLISH NAME	SCIENTIFIC NAME	SITE	ADJACENT LAND
fallow deer	*Dama dama*	✓	✓
BUTTERFLIES			
brimstone	*Gonepteryx rhamni*	✓	✓
large white	*Pieris brassicae*	✓	
green veined white	*Pieris napi*	✓	
orange tip	*Anthocharis cardamines*	✓	
BUTTERFLIES continued			
common blue	*Polyommatus icarus*	✓	
holly blue	*Celastrina argiolus*	✓	
speckled wood	*Pararge aegeria*	✓	
OTHER INVERTEBRATES			
St Marks fly	*Bibio marci*	✓	
common carder bee	*Bombus pascuorum*	✓	
red-tailed bumble bee	*Bombus lapidarius*	✓	
Merveille du Jour moth (caterpillar)	*Dichonia aprilina*	✓	
mother shipton moth	*Callistege mi*	✓	
cinnabar moth	*Tyria jacobaeae*	✓	
forest bug	*Pentatoma fufipes*	✓	

APPENDIX 2

Summary of Statutory Protection for Selected Species

SUMMARY OF STATUTORY PROTECTION FOR SELECTED SPECIES

1 REPTILES

1.1 All four of the more widespread species of native reptiles, that is common lizard *Lacerta vivipara*, grass snake *Natrix natrix*, slow worm *Anguis fragilis* and adder *Vipera berus*, are given partial protection under the Wildlife and Countryside Act (1981 and as amended) which prohibits the intentional killing, injuring or taking of any of these species. There is no provision in the Act for licensing works which could give rise to an offence, but it does provide a defence where the otherwise unlawful act can be shown to be the incidental result of a lawful operation and could not reasonably have been avoided. Permitted development or a development which has received planning permission is clearly a lawful activity but the law thus requires that a reasonable effort be made to avoid killing or injuring protected animals in the course of implementing this permission.

1.2 The habitats of rare reptile species are also protected under this Act, but those of the common species listed above are not, and these animals are also not protected from disturbance whilst occupying their habitat.

2 BATS

2.1 In England, Scotland and Wales, all species of bats are fully protected under the Wildlife and Countryside Act 1981 and as amended, including by the Countryside and Rights of Way (CRoW) Act 2000. They are also protected by European legislation, being included on Schedule 2 of the Conservation (Natural Habitats, &c.) Regulations 1994. Taken together, this legislation makes it illegal, *inter alia* to:

- intentionally or recklessly kill, injure or capture a bat
- deliberately disturb a bat when it is occupying a roost
- damage, destroy or obstruct access to a bat roost

2.2 A bat roost is defined as being any structure or place that is used for shelter or protection, and since it may be in use only occasionally or at specific times of year, a roost retains such designation whether the bats are present or not

3 BADGERS

3.1 Badgers are fully protected by the Protection of Badger Act 1992, which subsumed all previous legislation covering this species. This Act makes it an offence *inter alia* to:

- wilfully kill, injure or take, or attempt to kill, injure or take, a badger
- interfere with a badger sett by doing any of the following things, intending to do any of these things or being reckless as to whether one's actions would have any of these consequences:
  - damaging a badger sett or any part of it;
  - destroying a badger sett;
  - obstructing access to, or any entrance of, a badger sett;
  - disturbing a badger when it is occupying a badger sett.

3.2 A badger sett is defined in the Act as any structure or place which displays signs indicating use by a badger. Although a sett may be empty at a certain time, it may be used as part of a regular cycle throughout the year, and may therefore be considered to be in use. Under certain conditions, activities which could otherwise give rise to an offence may be licensed by Natural England. A sett which can be shown to be obviously disused is considered to fall outside the Act.

4 DORMICE

4.1 Dormice are fully protected under the Wildlife and Countryside Act 1981 (and as amended). They are also protected by European legislation, being included on Schedule 2 of the Conservation (Natural Habitats, &c.) Regulations 1994. Taken together, this legislation makes it illegal, *inter alia* to:

- intentionally or recklessly kill, injure or capture a dormouse
- deliberately disturb a dormouse when it is occupying a nest
- damage, destroy or obstruct access to a dormouse nest

4.2 A dormouse nest is defined as being any structure or place that is used for shelter or protection.

5 BIRDS

5.1 The Wildlife and Countryside Act (1981 and as amended) protects all wild birds and their nests and eggs. Under this Act it is an offence to:

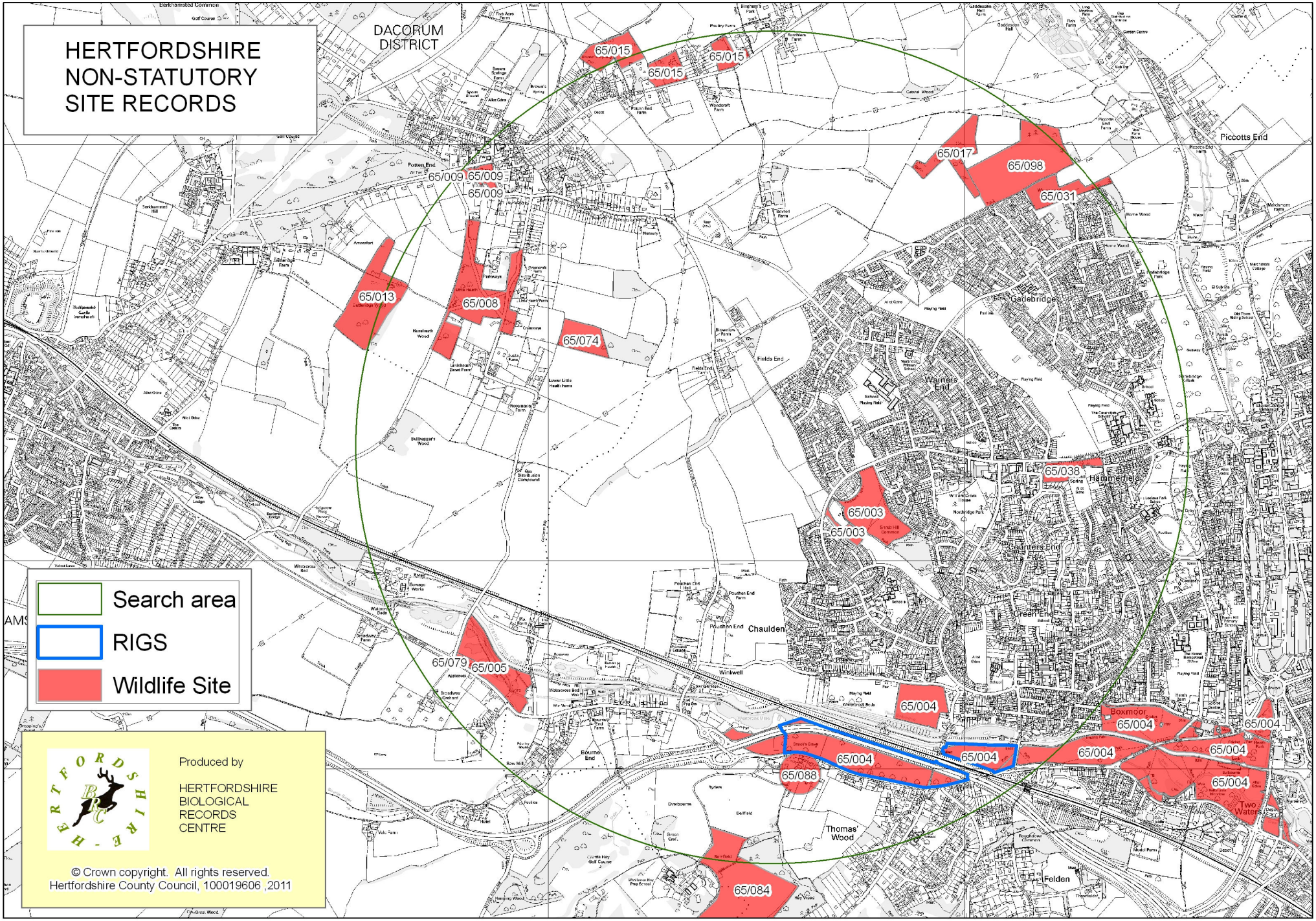
- kill, injure or take any wild bird
- take, damage or destroy the nest of any wild bird while it is in use or being built
- take or destroy the egg of any wild bird.

5.2 Bird nesting sites are not themselves protected when not in use and the common species are not protected from disturbance whilst occupying their nest-sites. However, certain rare

breeding birds, listed on Schedule 1 of the Act (e.g. barn owls), are also protected against disturbance whilst building a nest or on or near a nest containing eggs or young.

APPENDIX 3

Data Search Results for Locally Valued Sites and Protected Species


HERTFORDSHIRE
NON-STATUTORY
SITE RECORDS
DACORUM
DISTRICT
65/015
65/015
65/015
65/009
65/009
65/009
65/017
65/098
65/031
Piccotts End
65/013
65/008
65/074
Gadebridge
Fields End
Warners
End
65/038
Hammerfield
65/003
65/003
Search area
RIGS
Wildlife Site
65/079
65/005
Chaulden
65/004
65/004
65/004
65/004
65/004
65/004
65/004
65/088
Boxmoor
Two
Waters
Thomas'
Wood
65/084
Felden
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Wildlife Sites Report					
SITE REFERENCE	**NAME**	**GRID REFERENCE**	**AREA(ha)**	**RATIFIED**	**DESCRIPTION**
65/003	Shrub Hill Common	TL036072	6.84	1997	The site is situated in a gently undulating chalk dry valley and comprises several old pastures, an area of old secondary woodland and a length of ancient green lane. The grasslands support large areas of unimproved chalk grassland with species such as Salad Burnet (Sanguisorba minor), Greater Knapweed (Centaurea scabiosa), Slender Buckler-fern (Dryopteris carthusiana), Fairy Flax (Linum catharticum), Lady's Bedstraw (Galium verum), Rough Hawkbit (Leontodon hispidus) and Wild Strawberry (Fragaria vesca). These communities grade into more neutral grassland on the lower valley floor and flatter slopes, which include grasses such as Yorkshire Fog (Holcus lanatus), Red Fescue (Festuca rubra) and Common Bent (Agrostis capillaris) and herbs such as Creeping Buttercup (Ranunculus repens), Yarrow (Achillea millefolium) and Common Sorrel (Rumex acetosa). The woodland has a mixed canopy of Pedunculate Oak (Quercus robur), Ash (Fraxinus excelsior), Field Maple (Acer campestre) and Hazel (Corylus avellana), but most notably includes large areas of Yew (Taxus baccata), which are probably native on this site. Old pits in the north corner of the woodland support dense Elder (Sambucus nigra). The ancient green lane is dominated by Hornbeam (Carpinus betulus) with some Beech (Fagus sylvatica) and Pedunculate Oak. Thick mixed species hedgerows border the site on the southern and western edges and divide the two main grasslands. Wildlife Site criteria: Grassland inventory; grassland indicators.
65/004	Harrison's Moor, Boxmoor Common	TL040061	51.18	1997	Series of ancient grazing pastures, on alluvial soils alongside the River Bulbourne, which support dry to marshy, mostly semi-improved, neutral grassland. The site supports an interesting flora which is generally associated with the numerous watercourses that cross the site. Harrison's Moor is perhaps the most diverse area of grassland within the site and supports a mosaic of neutral, dry to marshy grassland. The drier grass supports species such as Crested Dog's-tail (Cynosurus cristatus), Creeping Bent (Agrostis stolonifera), Sweet Vernal-grass (Anthoxanthum odoratum), Meadow Vetchling (Lathyrus pratensis), Hairy Sedge (Carex hirta), Lesser Stitchwort (Stellaria graminea), Red Clover (Trifolium pratensis) and Meadow Buttercup (Ranunculus acris) plus Yellow-rattle (Rhinanthus minor) and Bird's-foot Trefoil (Lotus corniculatus) with less common Lady's Bedstraw (Galium verum). Wet/marshy grassland has Hard Rush (Juncus inflexus) and much Hairy Sedge with

Wildlife Sites Report					
SITE REFERENCE	**NAME**	**GRID REFERENCE**	**AREA(ha)**	**RATIFIED**	**DESCRIPTION**
					locally abundant Common Spike-rush (Eleocharis palustris). Other species in the community include Common Sorrel (Rumex acetosa), Glaucous Sedge (Carex flacca), Marsh Horsetail (Equisetum palustre), Brown Sedge (Carex disticha), Oval Sedge (Carex leporina) and Marsh Thistle (Cirsium palustre). Water Whorl-grass (Catabrosa aquatica) and the rare Ivy-leaved Crowfoot (Ranunculus hederaceus) occur along a small drain. Water Voles (Arvicola amphibius) have been recorded along the River Bulbourne. Wildlife Site criteria: Grassland criteria; species.
65/005	Cress Farm Watercress Beds, Bourne End	TL017065	6.07	1997	A stretch of the River Bulbourne and adjacent land supporting, grassland, old watercress beds and several small lakes/ponds. Varied marginal and aquatic vegetation is recorded with some wider areas of swamp. Species recorded include Reed Sweet-grass (Glyceria maxima), Reed Canary-grass (Phalaris arundinacea), Bulrush (Typha latifolia), Lesser Pond-sedge (Carex acutiformis), Floating Sweet-grass (Glyceria fluitans), Water-cress (Rorippa nasturtium-aquaticum), Water-crowfoot (Ranunculus sp.) and Water Starwort (Callitriche sp.). Other wetland species include Gypsywort (Lycopus europaeus) and Wild Angelica (Angelica sylvestris). The surrounding, drier habitat is generally of low species diversity but species such as Common Knapweed (Centaurea nigra), Common Sorrel (Rumex acetosa), Meadow Buttercup (Ranunculus acris) and Pignut (Conopodium majus) have been recorded. A more ruderal type of vegetation has developed on areas of disturbed ground. Scrub around the margins of the site includes willow (Salix spp.) scrub with some mature willow, Ash (Fraxinus excelsior) trees (some as old pollards) and Alder (Alnus glutinosa) lining the watercourse. Wildlife Site criteria: Grassland indicators.
65/008	Little Heath & Roseheath Wood	TL017083	10.18	1997	An area of common land comprising Roseheath Wood in the south and the larger Little Heath to the north. Roseheath Wood is old secondary woodland with a canopy of dense Beech (Fagus sylvatica) with frequent Hornbeam (Carpinus betulus). Some of the Beech has been coppiced in the past. The understorey is mainly Holly (Ilex aquifolium) and the ground flora is sparse, with Bramble (Rubus fruticosus agg.) dominant and Bluebell (Hyacinthoides non-scripta) occasional. Roseheath Wood is a mature secondary woodland, predominantly of Pedunculate Oak (Quercus robur) developed on old clay and gravel pits. Beech, Ash (Fraxinus excelsior) and Birch

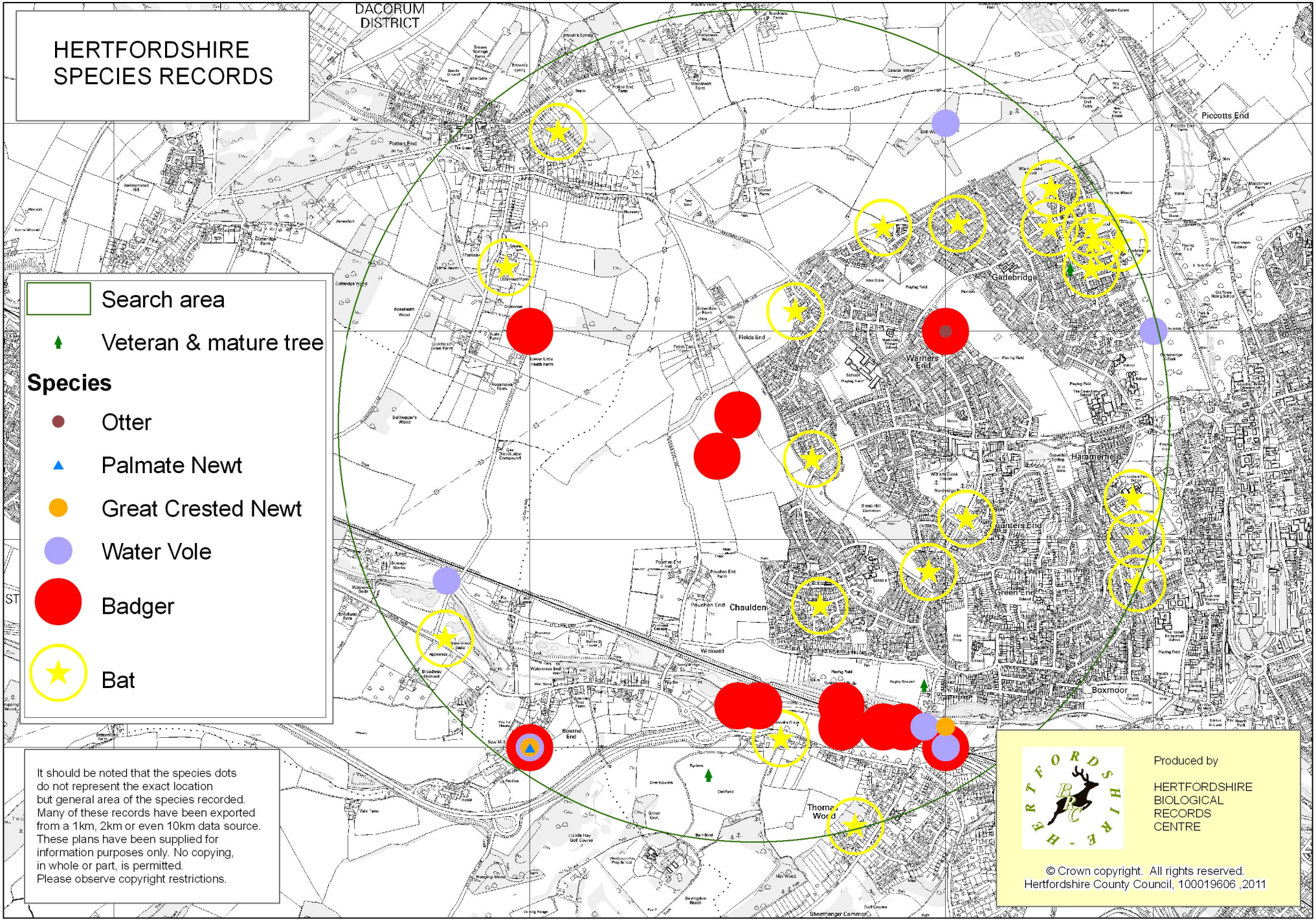
Wildlife Sites Report					
SITE REFERENCE	**NAME**	**GRID REFERENCE**	**AREA(ha)**	**RATIFIED**	**DESCRIPTION**
					(Betula sp.) are also present in the canopy. The shrub layer is mainly Holly, Hawthorn (Crataegus monogyna) and Rowan (Sorbus aucuparia). Other woody species include Hazel (Corylus avellana), Sycamore (Acer pseudoplatanus), Field Maple (Acer campestre), Elder (Sambucus nigra) and Wild Cherry (Prunus avium). The ground flora supports a number of woodland indicators including Common Dog-violet (Viola riviniana) and Enchanter's Nightshade (Circaea lutetiana). Wildlife Site criteria: Old secondary woodland with semi-natural canopy and varied structure; >2 ha.
65/009	Potten End Green and Pond	TL017088	1.4	1997	A village green of semi-improved neutral grassland with a central acid pond. The grassland supports a good diversity of species with several indicator species recorded such as Pignut (Conopodium majus), Common Knapweed (Centaurea nigra), Meadow Buttercup (Ranunculus acris), Common Sorrel (Rumex acetosa), Field Wood-rush (Luzula campestris), Sweet Vernal-grass (Anthoxanthum odoratum) and Oxeye Daisy (Leucanthemum vulgare). A variety of marginal and aquatic species (some introduced) have been recorded from the pond including Rigid Hornwort (Ceratophyllum demersum), Lesser Spearwort (Ranunculus flammula), Trifid Bur-marigold (Bidens tripartita), Water-plantain (Alisma plantago-aquatica), Canadian Waterweed (Elodea canadensis), Yellow Iris (Iris pseudacorus) and White Water Lily (Nymphaea alba). Fauna recorded from the pond includes several amphibians and numerous invertebrates, including uncommon species. A very rare fungus (nationally) has been recorded from the green. Scrub along the southern boundary adds to the habitat diversity. Wildlife Site criteria: Grassland indicators; species.
65/013	Gutteridge Wood	TL012082	8.18	1997	Ancient Pedunculate Oak (Quercus robur)/Hornbeam (Carpinus betulus) coppiced woodland with much Beech (Fagus sylvatica) and some Ash (Fraxinus excelsior). Other prominent species include Rowan (Sorbus aucuparia), Hazel (Corylus avellana) coppice and Goat Willow (Salix caprea). The ground flora supports woodland indicators such as Dog's Mercury (Mercurialis perennis), Bluebell (Hyacinthoides non-scripta), Wood Millet (Milium effusum), Wood Sorrel (Oxalis acetosella), Pignut (Conopodium majus) and Common Dog-violet (Viola riviniana). Areas with Bracken (Pteridium aquilinum), Bramble (Rubus fruticosus agg.) and

Wildlife Sites Report					
SITE REFERENCE	**NAME**	**GRID REFERENCE**	**AREA(ha)**	**RATIFIED**	**DESCRIPTION**
					Common Nettle (Urtica dioica) are present. Wildlife Site criteria: Ancient Woodland Inventory site; woodland indicators.
65/015	Brown's Spring and Hollybush Wood	TL025094	7.09	1997	Remnants of ancient semi-natural woodland with varied stand types including Ash (Fraxinus excelsior)/Field Maple (Acer campestre)/Hazel (Corylus avellana) and Beech (Fagus sylvatica)/Ash woodland on variable soils. Ancient Hazel, Dogwood (Cornus sanguinea) and Guelder-rose (Viburnum opulus) form part of the canopy in long neglected coppice. Other species present include Holly (Ilex aquifolium), Wild Cherry (Prunus avium) and Rowan (Sorbus aucuparia). The woodland groundflora is diverse with many woodland indicators recorded including Bluebell (Hyacinthoides non-scripta), Dog's Mercury (Mercurialis perennis), Wood Sedge (Carex sylvatica), Wood Spurge (Euphorbia amygdaloides), Giant Fescue (Festuca gigantea), Woodruff (Galium odoratum), Hairy Wood-rush (Luzula pilosa), Wood Millet (Milium effusum), Wood Sorrel (Oxalis acetosella), Primrose (Primula vulgaris) and Early Dog-violet (Viola reichenbachiana). Wildlife Site criteria: Ancient Woodland Inventory site; woodland indicators.
65/017	Dell Wood	TL039090	4.09	1997	Ancient semi-natural Pedunculate Oak (Quercus robur)/ Hornbeam (Carpinus betulus) coppice-with-standards woodland with Hazel (Corylus avellana) coppice and some elm (Ulmus spp.), plus Wild Cherry (Prunus avium) and Sycamore (Acer pseudoplatanus) at the western end. The southern part of the wood is probably old secondary woodland comprising Pedunculate Oak and Beech (Fagus sylvatica) with Wild Cherry, Hazel and Holly (Ilex aquifolium). Many woodland indicators are present in the ground flora including Dog's Mercury (Mercurialis perennis), Bluebell (Hyacinthoides non-scripta), Hairy-brome (Bromopsis ramosa), Broad Buckler-fern (Dryopteris dilatata), Yellow Archangel (Lamiastrum galeobdolon), Woodruff (Galium odoratum), Wood Melick (Melica uniflora), Wood Millet (Milium effusum) Wood Meadow-grass (Poa nemoralis) and Goldilocks Buttercup (Ranunculus auricomus). Common Twayblade (Neottia ovata) has also been recorded. A ditch and pit add habitat diversity. Wildlife Site criteria: Ancient Woodland Inventory site and old secondary woodland with a semi-natural canopy and varied structure; woodland indicators.
65/031	Warners End	TL044088	3.05	1997	Ancient semi-natural woodland of Pedunculate Oak (Quercus robur), Ash (Fraxinus

Wildlife Sites Report					
SITE REFERENCE	**NAME**	**GRID REFERENCE**	**AREA(ha)**	**RATIFIED**	**DESCRIPTION**
	Wood				excelsior), Wild Cherry (Prunus avium), including some very large specimens, and coppiced Hornbeam (Carpinus betulus); with mostly secondary woodland to the east of European Larch (Larix decidua) plantation and more recent planting of Pedunculate Oak (Quercus robur). The understorey includes Hazel (Corylus avellana), Holly (Ilex aquifolium), Blackthorn (Prunus spinosa) and Hawthorn (Crataegus monogyna). The ground flora supports a good woodland ground flora dominated by Bluebell (Hyacinthoides non-scripta) with additional species recorded including Wood Meadow-grass (Poa nemoralis), Wood Melick (Melica uniflora), Wood Millet (Milium effusum), Yellow Archangel (Lamiastrum galeobdolon), Ramsons (Allium ursinum) and Broad Buckler-fern (Dryopteris dilatata). Wildlife Site criteria: Part ancient/part secondary woodland with some semi-natural canopy and field evidence suggesting an ancient origin; part present on Bryant (1822); >1 ha; woodland indicators.
65/038	Gravel Hill Spring Wood	TL045074	1.79	1997	An area of broadleaved woodland bisected by Gravel Hill lane; a sunken green lane with ancient laid hedge remnants. Ancient woodland is present to the south of the lane and old secondary woodland in the north. The ancient semi-natural woodland is composed of Pedunculate Oak (Quercus robur), Ash (Fraxinus excelsior), Wild Cherry (Prunus avium), Beech (Fagus sylvatica), and remnant Hornbeam coppice with some Sycamore (Acer pseudoplatanus). Hazel (Corylus avellana) and Field Maple (Acer campestre) coppice is also present. There is a well established ground flora with many woodland indicator species recorded such as Bluebell (Hyacinthoides non-scripta), Yellow Archangel (Lamiastrum galeobdolon), Wood Melick (Melica uniflora), Wood Millet (Milium effusum), Remote Sedge (Carex remota), Wood Sedge (Carex sylvatica), Goldilocks Buttercup (Ranunculus auricomus) and Common Dog-violet (Viola riviniana). Moschatel (Adoxa moschatellina) has also been recorded. A spring and old pits add habitat diversity. The secondary woodland in the north is composed of mainly Sycamore (Acer pseudoplatanus), Ash, Wild Cherry, Elm, Sycamore and Horse-chestnut (Aesculus hippocastanum). Wildlife Site criteria: Part ancient/part secondary broadleaved woodland with a semi-natural canopy and features suggesting an ancient origin; part shown on Bryant (1822); >1 ha; woodland indicators.

Wildlife Sites Report					
SITE REFERENCE	**NAME**	**GRID REFERENCE**	**AREA(ha)**	**RATIFIED**	**DESCRIPTION**
65/074	Lower Little Heath Farm Grassland	TL021081	2.84	1997	Neutral grassland dominated by grasses, mainly Yorkshire Fog (Holcus lanatus), Common Bent (Agrostis capillaris) and Red Fescue (Festuca rubra). Herbs recorded include Bird's-foot Trefoil (Lotus corniculatus), Common Knapweed (Centaurea nigra), Lady's Bedstraw (Galium verum) and Red Bartsia (Odontites vernus). The site supports many anthills and scattered scrub. Wildlife Site criteria: Grassland indicators.
65/079	Bourne End Churchyard	TL016065	0.35	1997	Churchyard with neutral grassland supporting a species-rich sward. Species recorded include Common Knapweed (Centaurea nigra), Pignut (Conopodium majus), Lady's Bedstraw (Galium verum), Bird's-foot Trefoil (Lotus corniculatus), Meadow Buttercup (Ranunculus acris), Bulbous Buttercup (R. bulbosus), Burnet-saxifraga (Pimpinella saxifraga), Field Scabious (Knautia arvensis) and Common Sorrel (Rumex acetosa). Gravestones, paths and surrounding hedgerows add habitat diversity. Wildlife Site criteria: Grassland indicators.
65/084	Bovingdon Reach, Three Crofts, Barnfield	TL029054	21.66	2003	Secondary grassland developed on set-aside arable. A good diversity of grasses and herbs have been recorded from the site, including a number of ruderal and field weed species, such as Yorkshire Fog (Holcus lanatus), Sweet Vernal-grass (Anthoxanthum odoratum), Common Bent (Agrostis capillaris), Bird's-foot Trefoil (Lotus corniculatus), Common Knapweed (Centaurea nigra), Common Centaury (Centaurium erythraea), Oxeye Daisy (Leucanthemum vulgare), Common Rest-harrow (Ononis repens) and the uncommon Thorn-apple (Datura stramonium). Wildlife Site criteria: Grassland indicators.
65/088	Moor End Farm	TL03-05-	0	2000	Building and environs important for protected species. Wildlife Site criteria: Species.
65/098	Former Halsey School Playing Field	TL042088	10.61	2009	Site comprising three main areas of habitat. To the west is a large area of uniform species-poor semi-improved grass dominated by False Oat-grass (Arrhenatherum elatius) and Cock's-foot (Dactylis glomerata) with some Yorkshire Fog (Holcus lanatus) and Common Couch (Elytrigia repens) with herbs generally uncommon. Further to the east is a lower lying area enclosed to the south and west by steep inward-facing slopes with unimproved neutral to somewhat calcareous grassland which supports a moderately species-rich community of grasses and herbs plus abundant invading shrub and tree species. The sward is dominated by False Oat-grass, Cock's-foot and Yorkshire Fog and herbs recorded include Oxeye Daisy

Wildlife Sites Report					
SITE REFERENCE	NAME	GRID REFERENCE	AREA(ha)	RATIFIED	DESCRIPTION
					(Leucanthemum vulgare), Meadow Vetchling (Lathyrus pratensis), Red Clover (Trifolium pratense), Grass Vetchling (Lathyrus nissolia) and Common Spotted-orchid (Pyramidal Orchid (Anacamptis pyramidalis). To the north the third, smaller, area lies on a north-facing slope and is dominated by blocks of broadleaved plantation. The site is important for Roman Snail (Helix pomatia), a protected species. Wildlife Sites Criteria: Species.


HERTFORDSHIRE
SPECIES RECORDS
DACORUM
DISTRICT
Search area
Veteran & mature tree
Species
Otter
Palmate Newt
Great Crested Newt
Water Vole
Badger
Bat
Piccotts End
Gadebridge
Warners End
Fields End
Hammerfields
Chaulden
Boxmoor
Bourne End
Winkwell
Potten End
It should be noted that the species dots do not represent the exact location but general area of the species recorded. Many of these records have been exported from a 1km, 2km or even 10km data source. These plans have been supplied for information purposes only. No copying, in whole or part, is permitted. Please observe copyright restrictions.
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Species records

SPECIES	YEAR	GRID	1 Km	SITE	PROTECTED	BAP	LBAP
Brown Long-Eared Bat	1991		TL0108	Little Heath Farm	1	1	0
Brown Long-Eared Bat	2001		TL0208	Potten End, Rambling Way	1	1	0
Brown Long-Eared Bat	1999		TL0306	Moor End Farm	1	1	0
Brown Long-Eared Bat	1992		TL0408	Home Wood	1	1	0
Brown Long-Eared Bat	2004		TL0407	Lockers Park School	1	1	0
Chiroptera (Bat)	1997		TL0106	Bourne End Churchyard	1	0	0
Chiroptera (Bat)	2002		TL0305	Hemel, Haywood Drive	1	0	0
Chiroptera (Bat)	1995		TL0306	Hemel, Shrub Hill Road	1	0	0
Chiroptera (Bat)	2001		TL0406	Boxmoor, The Cornfields	1	0	0
Natterer's Bat	1999		TL0306	Moor End Farm	1	0	1
Pipistrelle 45 Khz Bat	2002		TL0308	Hemel, Polehanger Lane	1	1	0
Pipistrelle 45 Khz Bat	2004		TL0408	Galley Hill	1	1	0
Pipistrelle 45 Khz Bat	2003		TL0408	Pescott Hill, Hemel Hempstead	1	1	0
Pipistrelle 45 Khz Bat	2003		TL0306	Hemel, Lindlings	1	1	0
Pipistrelle 45 Khz Bat	2004		TL0408	Hemel, Woodview	1	1	0
Pipistrelle Bat	1999		TL0306	Moor End Farm	1	0	0
Pipistrelle Bat	2004		TL0308	Hemel, The Copse	1	0	0
Pipistrelle Bat	1989		TL0307	Newlands Road, Hemel Hempstead.	1	0	0
Pipistrelle Bat	1988		TL0408	Marlins Turn	1	0	0
Pipistrelle Bat	1988		TL0408	Marlins Turn	1	0	0
Pipistrelle Bat	1990		TL0407	Hemel Hempstead	1	0	0
Pipistrelle Bat	1989		TL0408	Middle Knights Mill, Hemel Hempstead	1	0	0
Pipistrelle Bat	2004		TL0408	Manscroft Road	1	0	0
Pipistrelle Bat	1996		TL0407	Boxmoor, Park Hill Road	1	0	0
Badger	1985		TL0206	TL00I	1	0	0
Badger	1985		TL0208	TL00J	1	0	0
Badger	2000		TL0207	Hedgerow east of Pouchen End Lane	1	0	0
Badger	2004		TL0306	A41 west	1	0	0
Badger	2000		TL0307	Hedgerow west of Shrub Hill	1	0	0
Badger	2000		TL0306	A41 east Boxmoor area	1	0	0
Badger	1998		TL0306	A41 east (Boxmoor)	1	0	0
Badger	2001		TL0306	A41	1	0	0
Badger	2004		TL0306	A41 east	1	0	0
Badger	2004		TL0306	A41 east	1	0	0
Badger	2004		TL0306	A41east	1	0	0
Badger	1985		TL0406	TL00N	1	0	0
Badger	1985		TL0408	TL00P	1	0	0
Water Vole	1987	TL020060	TL0206	TL00I	1	1	1
Water Vole	1987	TL040060	TL0406	TL00N	1	1	1
Water Vole	1988	TL0409	TL0409	Meadow by River Gade S. of Grist House Farm	1	1	1
Water Vole	1988	TL0508	TL0508	River Gade, Piccotts End	1	1	1
Water Vole	1997	TL016068	TL0106	Grand Union Canal, River Bulbourne	1	1	1
Water Vole	1998	TL039061	TL0306	Boxmoor Common	1	1	1
Water Vole	2000	TL0508	TL0508	Gadebridge Park	1	1	1
Great Crested Newt	1982	TL020060	TL0206	TL00I	1	1	1
Great Crested Newt	1982	TL040061	TL0406	Boxmoor Common	1	1	1
Palmate Newt	1987	TL020060	TL0206	Pix Farm, Bourne End	0	0	0
Otter	1974	TL040080	TL0408		1	1	1

Ancient Woodland Inventory sites

NAME	WOOD TYPE	AREA (ha)
Brown's Spring	Ancient Semi-natural Woodland	6.40
Bullbeggars Wood	Ancient Semi-natural Woodland	1.99
Dell Wood	Ancient Semi-natural Woodland	4.08
Gutteridge Wood	Ancient Semi-natural Woodland	8.61
Hollybush Wood	Ancient Semi-natural Woodland	0.94

Veteran & Mature Tree records

SPECIES	SURVEY DATE	GIRTH (cm)	SITE	ADDRESS	CONTEXT	EASTING	NORTHING	RECORD NUMBER
Lime species	15/02/1999	400	West Brook Way		PL, Parkland	502860	205870	35
Oak	17/07/2000	481	Outside 1 Pescot Hill	Hemel Hempstead	UT, Urban Tree	504600	208300	719
Oak	03/12/2000	495	Chaulden Lane	Hemel Hempstead	HR, Hedgerow	503900	206300	785