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ECOLOGICAL SURVEY OF LAND AT FIELDS END, HEMEL HEMPSTEAD,

HERTFORDSHIRE

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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.

Vincent and Gorbing

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, broadleaved 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 dogrose. 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.

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. lvy.
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

TABLE 1 TREES WITH POTENTIAL TO SUPPORT ROOSTING BATS

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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APPENDIX 1 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	0
annual meadow-grass	Poa annua	0
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	0
bramble	Rubus fruticosus	Α
bristly oxtongue	Helminthotheca echioides	R
broad-leaved dock	Rumex obtusifolius	Α
bulbous buttercup	Ranunculus bulbosus	0
bush vetch	Vicia sepium	R
Canadian goldenrod	Solidago canadensis	R
cleavers	Galium aparine	Α
cock's-foot	Dactylis glomerata	F
common bird's-foot-trefoil		R
common chickweed	Stellaria media	0
common dog-violet	Viola riviniana	R
common knapweed	Centaurea nigra	R
common mouse-ear	Cerastium fontanum	0
common nettle	Urtica dioica	Ă
common ragwort	Senecio iacobaea	0
common vetch	Vicia sativa	0
cotoneaster	Cotoneaster sp	R
cow parsley	Anthriscus sylvestris	A
creeping bent	Agrostis stolonifera	R
creeping buttercup	Ranunculus repens	0
creeping cinquefoil	Potentilla reptans	0
creeping thistle	Cirsium arvense	F
curled dock	Rumex crispus	0
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		R
false oat-grass	Arrhenatherum elatius	F
false brome	Brachypodium svlvaticum	0
field bindweed	Convolvulus arvensis	0
field maple	Acer campestre	F
field-rose	Rosa arvensis	F
garlic mustard	Alliaria petiolata	0
germander speedwell	Veronica chamaedrys	R
goat willow	Salix caprea	0
goat's-beard	Tragopogon pratensis	R

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

ESL (Ecological Services) Ltd, 1 Otago House, Allenby Business Village, Crofton Road, Lincoln, LN3 4NL Ecological Survey of land at Fields End, Hemel Hempstead, Hertfordshire FEH.VG

PLANTS continued Plantago major R greater plantain Plantago major O greater stitchwort Stellaria holostea O hairy-brome Bromopsis ramosa R hawthorn Crategus monogyna F hazel Corylus aveilana F hedge muslard Sisymbritum officinale O hedge wondwort Stachys styvatica O hoary willowherb Epilobium parvillowim R hoary milowherb Epilobium parvillowillow F holly liex aquitolium F holly liex aquitolium R horbeam Carpinus betulus O hy Hedera helix O konthawthorn Crataegus sumal R ivy Hedera helix O kontgrass Polygonum aviculare R <th>ENGLISH NAME</th> <th>SCIENTIFIC NAME</th> <th>DAFOR</th>	ENGLISH NAME	SCIENTIFIC NAME	DAFOR
greater plantain Epilobum hisutum R greater slichwort Stellara holostea O groundsel Senecio vulgaris O hary-brome Bromopsis ramosa R hawthorn Crataegus monogyna F hazel Corylus avellana F havedrom Stachyrs sylvatica O havgrowt Senecio erucifolius R hoary ragwort Senecio erucifolius R hoary agwort Senecio erucifolius R hoary agwort Epilobium parvillorum F hoary agwort Epilobium parvillorum R hogweed Heracleum sphondyllum F holly Ilex aguifolium R hopped Humulus lupulus R horbeam Carpinus betulus O hydrid nawthorn Crataegus x media R lesser celandine Ficaria verna O lesser celandine Ficaria verna O lesser celandine Ficaria verna O <tr< th=""><th>PLANTS continued</th><th></th><th></th></tr<>	PLANTS continued		
greater plantain Plantago major O greater stitchwort Stellaria holostea O groundsel Senecio vulgaris O hairy-brome Bromopsis ramosa R hawthorn Crataegus mongyna F hazdel Corylus avellana F hedge mustard Sisymbrium officinale O hedge woundwort Stachys sylvatica O hoary ragwort Senecio erucifolius R hoary willowherb Epilobium parvillorum R hoary willowherb Epilobium parvillorum R honeysuckle Lonicera periclymenum R honeysuckle Lonicera periclymenum R honeysuckle Rolicera periclymenum R hornbeam Carpinus betulus O hy Hedera helix O knotgrass Polygonum aviculare R lesser tecloil Trifolium dubium R lesser tecloil Trifolium praenas O meadow buttercup Ranunculus acris	great willowherb	Epilobium hirsutum	R
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DescriptionLeucanthemum vulgareRpearPyrus spRpedunculate oakQuercus roburFperennial rye-grassLolium perenneOprickly sow-thistleSonchus asperRred cloverTrifolium pratenseRred dead-nettleLamium purpureumRred dead-nettleLamium purpureumRred fescueFestuca rubraFribwort plantainPlantago lanceolataOrough chervilChaerophyllum temulumOrough meadow-grassPoa trivialisOrowanSorbus aucupariaRscentless mayweedTripleurospermum inodorumOsilver birchBetula pendulaOsoft-bromeBromus hordeaceusFspear thistleCirsium vulgareOspindleEuonymus europaeusRtraveller's-joyClematis vitalbaOwhite cloverTrifolium repensOwhite cloverTrifolium repensOwild cherryPrunus aviumOwhite cloverTrifolium repensOwild cherryPrunus aviumOwild carrotDaucus carotaRwild carrotDaucus carotaR	nipplewort	Lapsana communis	0
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pedunculate oakQuercus roburFperennial rye-grassLolium perenneOprickly sow-thistleSonchus asperRred cloverTrifolium pratenseRred dead-nettleLamium purpureumRred fescueFestuca rubraFribwort plantainPlantago lanceolataOrough chervilChaerophyllum temulumOrough meadow-grassPoa trivialisOrowanSorbus aucupariaRscentless mayweedTripleurospermum inodorumOsilver birchBetula pendulaOsoft-bromeBromus hordeaceusFspear thistleCirsium vulgareOspindleEuonymus europaeusRtraveller's-joyClematis vitalbaOwhite cloverTrifolium repensOwhite cloverTrifolium repensOwhite cloverTrifolium repensOwild cherryPrunus aviumOwild carrotDaucus carotaR	pear	Pyrus sp	R
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red fescueFestuca rubraFribwort plantainPlantago lanceolataOrosebay willowherbChamerion angustifoliumOrough chervilChaerophyllum temulumOrough meadow-grassPoa trivialisOrowanSorbus aucupariaRscentless mayweedTripleurospermum inodorumOsilver birchBetula pendulaOsmooth meadow-grassPoa pratensisOsoft-bromeBromus hordeaceusFspear thistleCirsium vulgareOspindleEuonymus europaeusRtraveller's-joyClematis vitalbaOwhite bryonyBryonia dioicaRwhite cloverTrifolium repensOwild cherryPrunus aviumOwild carrotDaucus carotaR	red dead-nettle	Lamium purpureum	R
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silver birchBetula pendulaOsmooth meadow-grassPoa pratensisOsoft-bromeBromus hordeaceusFspear thistleCirsium vulgareOspindleEuonymus europaeusRtraveller's-joyClematis vitalbaOwayfaring-treeViburnum lantanaRwhite bryonyBryonia dioicaRwhite cloverTrifolium repensOwild cherryPrunus aviumOwhite dead-nettleLamium albumOwild carrotDaucus carotaR	scentless mayweed	Tripleurospermum inodorum	0
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soft-bromeBromus hordeaceusFspear thistleCirsium vulgareOspindleEuonymus europaeusRtraveller's-joyClematis vitalbaOwayfaring-treeViburnum lantanaRwhite bryonyBryonia dioicaRwhite cloverTrifolium repensOwild cherryPrunus aviumOwhite dead-nettleLamium albumOwild carrotDaucus carotaR	smooth meadow-grass	Poa pratensis	0
spear thistleCirsium vulgareOspindleEuonymus europaeusRtraveller's-joyClematis vitalbaOwayfaring-treeViburnum lantanaRwhite bryonyBryonia dioicaRwhite cloverTrifolium repensOwild cherryPrunus aviumOwhite dead-nettleLamium albumOwild carrotDaucus carotaR	soft-brome	Bromus hordeaceus	F
spindleEuonymus europaeusRtraveller's-joyClematis vitalbaOwayfaring-treeViburnum lantanaRwhite bryonyBryonia dioicaRwhite cloverTrifolium repensOwild cherryPrunus aviumOwhite dead-nettleLamium albumOwild carrotDaucus carotaR	spear thistle	Cirsium vulgare	0
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wayfaring-treeViburnum lantanaRwhite bryonyBryonia dioicaRwhite cloverTrifolium repensOwild cherryPrunus aviumOwhite dead-nettleLamium albumOwild carrotDaucus carotaR	traveller's-joy	Clematis vitalba	0
white bryonyBryonia dioicaRwhite cloverTrifolium repensOwild cherryPrunus aviumOwhite dead-nettleLamium albumOwild carrotDaucus carotaR	wayfaring-tree	Viburnum lantana	R
white cloverTrifolium repensOwild cherryPrunus aviumOwhite dead-nettleLamium albumOwild carrotDaucus carotaR	white bryony	Bryonia dioica	R
wild cherryPrunus aviumOwhite dead-nettleLamium albumOwild carrotDaucus carotaR	white clover	Trifolium repens	0
white dead-nettleLamium albumOwild carrotDaucus carotaR	wild cherry	Prunus avium	0
wild carrot Daucus carota R	white dead-nettle	Lamium album	0
	wild carrot	Daucus carota	R
wild-oat Avena fatua R	wild-oat	Avena fatua	R
wood avens Geum urbanum O	wood avens	Geum urbanum	0
wood dock Rumex sanguineus O	wood dock	Rumex sanguineus	0

ESL (Ecological Services) Ltd, 1 Otago House, Allenby Business Village, Crofton Road, Lincoln, LN3 4NL Ecological Survey of land at Fields End, Hemel Hempstead, Hertfordshire FEH.VG