



LAND AT YAPTON, WEST SUSSEX

Extended Phase I Habitat Survey

For and on behalf of

Strutt and Parker

June 2013

CORYLUS ECOLOGY

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1.0 INTRODUCTION

1.1 Corylus Ecology has been requested by Strutt and Parker LLP to undertake an extended Phase I Habitat Survey of land on the outskirts of the village of Yapton in West Sussex., hereinafter referred to as 'the Site'.

1.2 The Phase I Habitat Survey provides information relating to the habitats within the Site and identifies potential for and, if apparent, evidence of use by protected species. In addition, it provides recommendations for further surveys if required.

1.3 This report sets out the results of the Phase I Survey undertaken to assess the importance of the flora and potentially the protected species assemblage within the Site.

Scope of Survey

1.4 The objectives of the survey were to:

- Survey and map habitats within the Site boundary;
- determine the potential for protected species to occur within the Site;
- assess all trees within and close to the Site boundary for their potential to support roosting bats; and
- recommend further survey work for protected species where appropriate.

2.0 METHODOLOGY

2.1 Extended Phase I Habitat Survey

2.1.1 The Site was subject to an extended Phase I Habitat Survey on 23rd May 2013. The habitats present on the Site were mapped in accordance with the, 'Handbook for Phase I Habitat Survey – a Technique for Environmental Audit' (Joint Nature Conservation Committee, 2003). Habitat areas and features of topographical and/or ecological interest were described in the form of target notes. These were later used to create botanical species lists by target note area and also to create a colour coded Phase I Habitat map, which is presented as Figure 1. All nomenclature follows Stace (1997). Non-native or invasive species were also identified and mapped where appropriate.

2.2 Protected Species Assessment

2.2.1 The Phase I Habitat survey included an assessment of the potential for the Survey Area to support protected species. This type of survey aims to assess the potential for protected species to occur due to the habitats present and does not include any species specific survey methods designed to demonstrate whether the Site is in fact used by such species. Areas of potential for protected species have been marked on Figure 1.

Badgers

2.2.2 With regard to badgers *Meles meles*, any holes or scrapes likely to be used by or indicate the presence of badgers were searched for together with any other field signs associated with this species, including latrines, pushes and hairs.

2.3 Bat Tree Assessment

2.3.1 A ground level survey of all trees within the Site was also undertaken looking for evidence of and potential to be used by bats. Bats may use any crack or hole (such as woodpecker holes), splits or flaking bark as a roost site. Field signs to look for include dark streaking below holes and crevices, droppings under access points. Chattering noises emitted by bats may also be audible, particularly during the summer. Even where bats are known to occur, such signs may not always be evident.

2.3.2 Trees were placed into one of three categories as described below in accordance with the Bat Conservation Trust Good Practice Survey Guidelines 2nd Edition 2012:

- 1*: Trees with multiple, highly suitable features capable of supporting larger roosts;
- 1. Trees with definite bat potential but supporting features suitable for use by singleton bats;
- 2. No obvious potential although the tree is of a size and age that elevated surveys may result in cracks or crevices being found or the tree supports some features which may have limited potential to support bats; and,

3. Trees with no potential.

- 2.3.3 Trees were also noted if they supported ivy *Hedera Helix*. Ivy can do one of two things; very old, dense ivy can provide cavities for bats between the thick interwoven stems and the tree trunk or it can conceal features in the tree itself. The former would be classed as Category 1; the latter would be Category 2.

3.0 RESULTS

3.1 Extended Phase 1 Habitat Survey

- 3.1.1 The Site is located on the northern edge of the village of Yapton in West Sussex. The Site is an arable field measuring approximately 6.3ha with unmanaged grassland and tall ruderal margins and a line of mature oak trees along the eastern boundary. To the east, north and west are arable fields with the village to the south.
- 3.1.2 The habitats present are shown within Figure 1 with further details provided by way of specific Target Notes, denoted by the letters TN.

Scattered Trees

- 3.1.3 Along the eastern boundary is a line of several mature pedunculate oak *Quercus robur* and sycamore *Acer pseudoplatanus* marked as TN3 on Figure 1. In the centre of the Site is a single large mature lime *Tilia* sp. tree.

Semi-improved grassland

- 3.1.4 Surrounding the field on all sides is an unmanaged semi-improved grassland margin that varies in width from 2m along the northern boundary to 0.5m along parts of the southern boundary. The botanical species are relatively similar throughout and are generally consistent with these types of habitats. The grass species are mainly the more coarse species such as cock's-foot *Dactylis glomerata*, tall fescue *Festuca arundinacea*, false oat-grass *Arrhenatherum elatius*, rough meadow-grass *Poa trivialis*, meadow foxtail *Alopecurus pratensis*, Yorkshire-fog *Holcus lanatus* and quaking grass *Briza media*. The floral species are again more common with disturbed habitats and are mainly tall ruderal species such as common nettle *Urtica dioica*, cow parsley *Anthriscus sylvestris*, broad-leaved dock *Rumex obtusifolius*, hogweed *Heracleum sphondylium*, lesser burdock *Arctium minus*, and dandelion *Taraxacum officinale*. These species are particularly common along the northern boundary (TN1) where common sorrel *Rumex acetosa*, white dead-nettle *Lamium album* cleaver *Galium aparine* were also recorded.
- 3.1.5 Along the eastern boundary (TN2) the grassland margin is not as tall and rank as the northern margin TN1 and the percentage cover of tall ruderal species such as nettle, spear thistle *Cirsium vulgare* was far greater. Here rabbit grazing is more evident and a number of entrance holes were noted. The grassland is dominated by rough meadow-grass with abundant ground-ivy *Glechoma hederacea* with creeping buttercup *Ranunculus repens*, Lord's-and-Ladies *Arum maculatum*, garlic mustard *Alliaria petiolata*, red dead-nettle *L. purpureum*, sorrel and ribwort plantain *Plantago lanceolata* also recorded.
- 3.1.6 In the far south-eastern corner and adjacent to the boundary with a neighbouring property is a tall unmanaged patch of grassland (TN1a) with similar species to TN1 but also field forget-me-not *Myosotis*

arvensis, herb-Robert *Geranium robertianum* and sterile brome *Anisantha sterilis* recorded. Around the base of the lime tree in the centre of the Site a small patch of wild onion *Allium vineale* was recorded.

Improved grassland

- 3.1.7 The main habitat type is the arable field (IN2) that is believed to be sown with wheat *Triticum aestivum*. Common fumitory *Fumaria officinalis* was noted in the tyre tracks.

Boundaries

- 3.1.8 The southern boundary is boarded by residential properties with a mixture of boundary types but predominately is a Leyland cypress *X Cupressocyparis leylandii* hedge that continues northwards where there is a tall dense hedge 12m high with a large mature oak (IN6). The remainder of the southern boundary is a well-managed dense Leyland cypress hedge approximately 3.5m tall (IN7). In the south-west corner there is a small fallen tree mixed with dense bramble and rose *Rosa* sp. scrub with a grass and tall ruderal margin (IN8). The western boundary consists of the remnants of a tall unmanaged hawthorn *Crataegus monogyna* hedge that is now defunct with 10m to 15m gaps between each hawthorn stand (IN9). The boundary continues around the neighbouring residential property in the north-east corner of the Site which is marked by a low mesh fence that is largely open, however, along a 30m section extending to the far north-east corner there is a dense treeline boundary that includes a mature willow *Salix* sp., elder *Sambucus nigra*, wild plum *Prunus domestica* and Leyland cypress (IN10).

Disturbed ground

- 3.1.9 Midway along the southern boundary is a 20m section of boundary that has recently been cleared by the adjoining property (IN5). Here there is a large amount of bare ground with single hazel *Corylus avellana*, rosebay willowherb *Chamerion angustifolium*, common ivy *Hedera helix* ssp. *helix* and bittercress *Cardamine* sp. with a number of garden escapees.

3.2 Bat Tree assessment

- 3.2.1 A single mature oak tree (T2 on Figure 1) has been awarded Category 1 for bat potential. The tree has a horizontal split on a limb extending north-west over the adjacent field. The split faces eastwards and is approximately 1.2m in length and 7m high.
- 3.2.2 Trees T3, T4, T5 and T6 are mature oak trees that have no obvious features suitable for bats but the trees are covered in ivy and in some cases (tree T4 and T3 for example) the ivy is quite dense and mature but thins out toward the canopy but no obvious features could be seen but as a precaution the trees have been awarded Category 2/3 potential for bats.

- 3.2.3 Tree T1 in the centre of the Site has no obvious features but covered in dense leaf cover so the upper canopy could not be surveyed in detail. A single rot hole 3m high on the south was noted but was not considered to extend back into the branch.

3.3 Protected Species Assessment

Reptiles

- 3.3.1 The grassland margins around the Site, with the exception perhaps of the eastern boundary, are suitable for common reptile species and mainly slow worm and possibly grass snake.

Mammals

- 3.3.2 Badger field signs were searched for but none were found. Along the eastern boundary there are a number of rabbit holes. No habitat within the Site is suitable for dormice.

Amphibians

- 3.3.3 There are no ponds within the Site. The closest pond to the Site is located approximately 200m to the west and on the opposite side of North End Road and the second 220m to the south-east.

Breeding Birds

- 3.3.4 The hedgerows and trees on the boundaries of the Site provide suitable habitat for breeding bird. The arable field may be suitable for ground nesting birds and skylarks were heard in the adjacent field to the east. However, there is a footpath through the centre of the site and this is heavily used by walkers with dogs so disturbance may be too high for ground nesting birds.

4.0 EVALUATION AND RECOMMENDATIONS

4.1 The proposals for the Site are understood to include the construction of several residential properties.

4.2 The extended Phase 1 Habitat Survey identified no rare or nationally scarce plant species and the Site was found to support a relatively limited diversity of plants and habitats that is consistent with a heavily grazed horse paddock. No invasive, non-native plant species were identified within the survey area. The majority of the Site is heavily grazed species poor semi-improved grassland with boundaries of deciduous trees and hedgerows which are considered to be the most ecological significant feature within the Site and are understood to be left untouched under the proposals.

Bats

4.3 A single tree located on the eastern boundary has been awarded Category 1 for its potential to support bats. The Site proposals have not been reviewed so if this tree is to be directly affected by the plans then it is recommended that summer emergence surveys may be required to be undertaken between May and August. With regard to trees T3, T4, T5 and T6 if these trees are to be directly affected by the proposals then the ivy should be severed at ground level and allowed to die back and then the tree re-surveyed for any features suitable for bats. Further emergence surveys may be required if suitable features are identified. Any trees that support bat roosts that will be directly or indirectly affected by the plans will require a European Protected Species licence from Natural England.

4.4 With regard to the wider Site the poor structure and limited diversity of habitats associated with the open and well managed nature of the arable field does not provide adequate habitat for invertebrates and therefore the foraging habitat for bats is considered to be low quality. Furthermore, the boundary habitats are not suitable as a commuting link; the eastern boundary is too open and the individual mature trees do not provide a habitat corridor to other more suitable habitat. Therefore bat activity surveys are not considered necessary.

Reptiles

4.5 With regard to reptiles the unmanaged margins of the Site are suitable habitat for basking and shelter by common reptile species such as slow worm and grass snake and therefore a presence/likely absence survey for common reptiles is recommended should these areas be directly affected by the proposals. Under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) it is an offence to intentionally kill or injure a reptile. To avoid committing an offence under the Act, precautions must be put in place to reduce threats to reptile species but also to mitigate against the effects of development. Mitigation for the more common British reptile species does not require a licence from Natural England but a mitigation strategy should be designed for approval by the planning authority for the protection and conservation of

reptiles. This will include the most appropriate method of moving the reptiles from the development area and whether this would be best achieved by translocation or habitat manipulation.

- 4.6 The reptile survey should it be required, would entail setting out heat traps (squares of roofing felt) which the reptiles use to thermo-regulate. Froglife (1999) recommend that a minimum of 10 heat traps are set out per hectare. However, the density may be increased in areas where more suitable habitat is present and to cover all the suitable habitat areas. Once set, the heat traps are left to bed in for a few days and are then checked on seven occasions in suitable conditions. The number and species of reptile and breeding conditions would be recorded. The optimal survey period for reptiles is March – July, and September – October. The month of August is not considered an ideal period to survey as the ambient air temperature is often too high for reptiles to need to use heat traps.

Dormice

- 4.7 No habitat within the Site is suitable for dormice. No further surveys are required.

Birds

- 4.8 The hedgerows in the south-east corner and along the southern boundary as well as the mature trees on the eastern boundary are considered suitable for breeding birds, although no nests were recorded during the survey. It is considered likely that these habitats would be used by the more common garden species rather than any rare or protected species. With regard to the field itself, skylark was noted in the adjacent fields to the east but this Site is considered to be too disturbed and close to private properties and unlikely to support ground nesting birds. All wild birds receive protection under the Wildlife and Countryside Act 1981 as amended and this includes disturbance while breeding. It is understood that no habitats within the Site with potential for breeding birds will be lost under the proposals. However, should this change it is recommended that any clearance should be undertaken outside of the breeding bird season limiting this work to between October and end of February. If these dates do not coincide with Site works then it is recommended that these areas are checked by a suitably experienced ecologist before the work commences.

National Planning Policy Framework

- 4.9 The National Planning Policy Framework replaced the Planning Policy Statement 9 (2005) Biodiversity and Geological Conservation in March 2012 and sets out planning policies on protection of biodiversity and geological conservation through the planning system. Section 11 of the National Planning Policy Frameworkⁱ (NPPF) sets out the Government's current planning policy in relation to conserving and enhancing the natural environment. The NPPF states that 'the planning system should contribute to and enhance the natural and local environment by:

- Protecting and enhancing valued landscapes, geological conservation interests and soils;
- Recognising wider benefits of ecosystem services;
- Minimising impacts on biodiversity and providing net gains in biodiversity where possible, contributing to the Government's commitment to halt the overall decline in biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures

4.10 With regard to providing a net gain for biodiversity, it is recommended that the site proposals are reviewed prior to any recommendations being made. However, the following are general enhancements that can be included in the design of the scheme:

- With regard to bats it is recommended that cavity wall bat box such as the Habibat (www.habibat.co.uk) or the Ibstock enclosed bat box (www.ibstock.com/sustainability-ecozone.asp) are fitted to the southern and western elevations of the properties along the southern and eastern boundaries. These boxes should be fitted as high as possible and close to the gable apex or eaves.
- Additional planting should be added to the western hedgerow to fill any gaps. Any new tree and shrub planting (throughout the Site not just the eastern boundary) should be from native species and locally sourced. Suitable species would include hawthorn, blackthorn *Prunus spinosa*, holly, spindle *Euonymus europaeus*, hazel, field maple *Acer campestre*, dog rose *R. canina* and honeysuckle *Lonicera periclymenum* that all benefit small mammals and birds.
- In addition to the above it is recommended that nectar rich plants are considered for any landscape planting around the Site and where other opportunities may exist, for example, where any flower beds are to be created. A list of nectar rich species for bumblebees prepared by Buglife (www.buglife.co.uk) is given as Appendix 3. It is essential that flowering plants are available for as long as possible through the seasons and a combination should be chosen from the plants recommended for spring, summer and late summer.

5.0 CONCLUSIONS

- 5.1 The Phase 1 Habitat Survey identified no rare plants or habitats within the Site. The majority of the Site is an arable field with semi-improved grassland margins that are considered suitable for common reptile species. Recommendations have been made to undertake a presence/likely absence survey for reptiles should these margins be directly affected by the proposals.
- 5.2 With regard to other protected species, a single mature tree along the eastern boundary is considered suitable for bats and emergence surveys have been recommended should this tree be directly affected by the proposals. Other trees along the same boundary are covered in dense ivy and recommendations for the removal of this ivy has been made should these trees be directly affected by the proposals.
- 5.3 In addition, general recommendations for ecological enhancements have been made in relation to the National Planning Policy Framework but as the Site proposals have not been reviewed these recommendations are not Site specific.

REFERENCES

Joint Nature Conservation Committee. JNCC, 2003. Handbook for Phase I Habitat Survey. A technique for Environmental Audit. JNCC, Peterborough.

Stace, C. 1997. New Flora of the British Isles. 2nd Edition. Cambridge University Press.

Altringham, J. 2003. British Bats. The New Naturalist.

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FIGURES

Figure 2 - Annotated Photographs



Main field - TN2



Field margin TN1 - northern boundary



Eastern boundary - TN3



Tree T2 - Category 1 feature for bats



Field margin TN6 - southern boundary



Southern boundary - TN7

APPENDICES

SOME SUGGESTED GARDEN FLOWERS FOR BUMBLEBEES

SPRING

White Deadnettle (*Lamium album*)*

Berberis

Bulbs: English bluebells (*Hyacinthoides non-scripta*)*,

Crocus, Grape Hyacinths (*Muscari*)

Lungwort (*Pulmonaria* species)

Snowberry

Mahonia

Snakeshead (*Fritillaria meleagris*)*

Rosemary (*Rosmarinus officinalis*)

Cotoneaster (e.g. *horizontalis*)

Ceanothus

Winter Honeysuckle (*Lonicera x purpusii*)

Flowering Currant (*Ribes sanguineum*)

Redcurrants, Blackcurrants, Gooseberries*

Pussy willow (*Salix*)*

Thymes (*Thymus*)

Perennial Cornflower (*Centaurea montana*)

Winter Heather (*Erica carnea*)

Bugle (*Ajuga reptans*)*

Rhododendron

Pears, cherries or plums

SUMMER

Brassicas (cabbage etc) left to flower

Pea (everlasting, sweet) and Beans (runner and broad)

Foxgloves (*Digitalis purpurea** and other species)

Catmint (*Nepeta*: many kinds)

Hyssop (*Agastache*)

Woundworts and Betony (*Stachys* species)*

Knapweeds (*Centaurea scabiosa*, *C. nigra*)*

Lupins (herbaceous and shrubby species)

*Origanum vulgare** and other *Origanum* species

Calamintha species*

Hebe or Speedwells: *Veronica**, *Veronicastrum*)

Sea Hollies (*Eryngium*: all species)

Globe Thistle (*Echinops*: all species)

Other thistle-like plants (*Onopordum**, *Cirsium*, etc)

Myrtle (*Myrtus communis*)

Cranesbills (wild *Geraniums**)

Snapdragon (*Antirrhinum*)

Coneflower (*Echinacea purpurea*)

Aquilegia vulgaris (single flowered only)*

Larkspur (*Consolida*: single flowered only)

Delphiniums (single flowered only)

Viper's Bugloss (*Echium vulgare*)*

Scabiouses (*Knautia**, *Scabiosa**, *Cephalaria*)

Honeywort (*Cerinthe*)

*Iris pseudacorus** and *I. siberica*,

Lavender (esp. the tall L. 'intermedia' forms)

Sainfoin (*Onobrychis*)*

Purple Toadflax (*Linaria purpurea*)

Bell Heather (*Erica cinerea*)*

Chives* and ornamental garlics (*Allium* species)

Bellflowers or Campions (*Campanulas**; wild sp.)

Comfrey (*Symphytum*)*

Borage (*Borago officinalis*)

Escallonia

Brambles* (wild or cultivated)

Raspberries and Blackberries*

LATE SUMMER

Aster Novi-angliae cultivars (hairy-leaved Michaelmas daisy), and *Aster amellus* and its cultivars; these two species are not invasive.

Buddleja x weyeriana (orange Buddleia)

Some Hardy Fuchsias (forms of *F. magellanica*)

Cornish Heath (*Erica vagans*)*

Sedum 'Matrona'

Culinary sage, Meadow Clary (*Salvia pratensis*)* and other blue-flowered *Salvias*

Succisa pratensis (Devil's Bit Scabious)*

Native Goldenrod (*Solidago virgaurea** only) - other kinds of Goldenrod are very invasive

Marsh Woundwort (*Stachys palustris*)*

Single-flowered Dahlias

Helianthus x "Lemon Queen"

Strawberry Tree (*Arbutus unedo*)

Mallow (*Malva* and *Lavatera*)

SPECIALLY FOR POLLEN

Single-flowered wild and shrub roses,

e.g. *Rosa moyesii*, *Rosa gallica officinalis*, *R.*

'Complicata', *R. virginiana*, *R. canina**, *R.*

*pimpinellifolia**, *R. mollis**, *R. 'Frances E. Lester'*;

and many others

*Plants marked with an asterisk are native British flowers.

Hypericums

Single-flowered poppies (*Papaver rhoeas**, *P. somniferum*, *Meconopsis cambrica**)

Yellow Broom*, and broom-like plants (*Genista*,

Cytisus, *Dorycnium* etc)

GENERALLY NOT MUCH GOOD FOR BUMBLEBEES:

Jasmine; Forsythia; Lilies (*Lilium*), Arum Lilies (*Zantedeschia*), Gladiolus; Lilac (*Syringa*); Magnolia; Hydrangea; Viburnum; Lobelia; Cannas; Crocosmias; Kniphophias; Phormiums, Most Penstemons, Most Umbellifers (Carrot Family: Fennel, Angelica etc.); Bearded Irises; Astilbe; Hemerocallis; Tulips; Alstroemeria.; Sunflowers; Yuccas; Pelargoniums; Pansies; Dianthus (pinks and Sweet Williams) Evening Primrose (*Oenothera*) Ox-Eye Daisy and most other white daisies; H.T. roses; Most bedding plants, *Buddleja Davidii*, *Sedum 'Herbstfreude'*.