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Ecological Assessment
Moorlands Farm, West End
Southampton

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Revised December 2015

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1.0 INTRODUCTION

1.1 Brief

Ecosupport Ltd was commissioned by the Hearing Dogs for Deaf People charity to conduct an extended Phase I ecological scoping survey (first undertaken in 2012 and updated in 2015) of land associated with Moorlands Farm, Hedge End. This assessment was required to identify any ecological impacts that might arise from a proposed development on site. The objectives of this survey are as follows:

- Identify current land use and distribution of broad habitat types including plant communities of ecological importance
- Identify and classify any priority habitats,
- Identify signs or habitat features of protected species

This survey takes no account of seasonal variation and fluctuations in presence of any species noted that may take up residence following this report. Lack of signs of particular species does not confirm its absence, merely that there was no indication of its presence during the time of survey.

If no action or development of this land is undertaken within twenty four months of this report, then the findings of this survey will no longer be considered valid and should be repeated.

1.2 Site description

The site comprises of a semi improved pasture field and associated tin construction sheds / pole barns which form part of Moorlands Farm off of Botley Road, Southampton SO30 3HD (OS grid reference SU 481 145). The site is set in a semi-rural location, although bounded on the west by the M 27 motorway with the wider locality including arable fields, semi natural deciduous woodland, and buildings (**Fig 1**). The Moorgreen Meadows Site of Special Scientific Interest (SSSI) bounds the east of the site.

Fig 1. The site for proposed development. Approximate boundary is outlined in red.



1.3 Proposed Development

It is proposed that the southern part of the pasture field has a new training hall for the Hearing Dogs for Deaf People Charity. This will also involve some new car parking and a new access road, which will require a small number of trees and bit of scrub to be removed. The tin buildings that fall within the site boundary (outlined above) will be removed as part of the proposals. The remainder of the field will be screened off from the new training hall by a native species hedgerow with this field used as an outdoor training area.

NB It is understood that this updated report is in support of a renewal of the existing planning permission, consent reference F/12/71729.

1.4 Scope

A Phase I ecological survey is the first step in assessing the potential ecological effects (or lack of) of a proposed development activity. The purpose of an ecological survey is not to provide a definitive

ecological assessment of a development and will often recommend that further ecological investigations are required. The general aims of a Phase I ecological survey are to:

- Identify, and where possible, provide an evaluation of features of ecological interest on a site (such as habitats and protected species);
- Recommend further ecological survey (e.g. protected species surveys), if more detailed information is likely to be required in a planning application or protected species licence application;
- Assess the likely ecological effects of the development against relevant legislation and policy;
- Recommend avoidance and/or mitigation measures that are likely to be required to reduce the ecological impact of the proposals.

1.5 Relevant legislation and policy

1.5.1 Relevant legislation

The Wildlife & Countryside Act 1981 (as amended) (HMSO, 1981) is the primary piece of legislation by which biodiversity in the UK is protected. The most relevant areas of the Act to development related activities are:

- The identification and subsequent protection of Sites of Special Scientific Interest (SSSIs), which prohibits damaging activities
- The protection of certain species listed in Schedule 5, which prohibits killing, injury, disturbance, damage and/or destruction of breeding sites and/or resting places and sale (it should be noted that all parts of this protection do not apply to all Scheduled species)
- The protection of wild birds and their nests, which prohibits damage or destruction of nests whilst in use.

The Conservation of Habitats and Species Regulations 2010 (known as the 'Habitats Regulations') (HMSO, 2010), pass two EEC Directives into UK law. The Regulations protect sites and species deemed to be of conservation importance across Europe. The most relevant parts of the Regulations to development related activities are:

- The protection of Special Protection Areas (SPAs) and Special Areas of Conservation (SACs)
- The protection of species listed within Schedule 2 of the Regulations, which prohibits killing, injury, disturbance, damage and/or destruction of breeding sites and/or resting places and sale, this confers some level of habitat protection.

In order for activities that would be likely to result in a breach of species protection under the regulations to legally take place, a European Protected Species (EPS) licence must first be obtained from Natural England.

1.5.2 Policy

National government guidance is provided by National Planning Policy Framework (NPPF) (3) which places an onus on development to conserve and enhance biodiversity with a requirement for positive biodiversity outcomes wherever possible from the overall development process. The NPPF provides guidance to Local Authorities in how to conserve and enhance biodiversity through local Planning Policies and when assessing planning applications.

2.0 METHODS

2.1 Desk Study Methodology

Available online resources such a NBN (National Biodiversity Network), Multi Agency Geographic Information for the Countryside (MAGIC) and Natural England's nature on the map websites were searched for relevant information about species and habitats within 1 km of the proposed development. Owing to the close proximity of a pond a data request was also made to the Hampshire Biodiversity Information Centre (Hbic) for any records of Great Crested Newt (*Trituras cristatus*) within 2 km and Sites of Importance for Nature Conservation (SINC).

2.2 Site Survey Methodology

The survey was carried out by Adam Jessop on the 4th August 2012 with an updating survey undertaken on the 10th June 2015. The survey consisted of a site walkover (loosely based on the "Phase 1" methodology (JNCC, 1990), modified to suit the situation) with all accessible areas of the site and adjacent land (where relevant) covered. The habitats present were generally described, with particular attention paid to their potential to support protected species. In addition, a general search for evidence of protected species was undertaken. The survey effort, timing of survey and hence results were considered to provide an accurate representation of the habitats on site.

An additional site visit was made by Ian White AIEEM on the 3rd October 2012, the Dormouse officer from the Peoples Trust for Endangered Species (PTES). This was due to the known presence of Dormice in within 1 km of the site and the minor level of scrub / tree removal required for the development. Ian made a brief assessment of the suitability of any habitat on site to support Dormice and what, if any mitigation would be required to ensure there are no adverse impacts. It was not considered necessary to update this survey as the nature of the proposals had not changed.

2.3 Assessment for Bat Potential

Whilst on site an assessment of the building and any trees present was made to determine their likelihood of supporting bats and provide information as to whether additional surveys would be required. These assessments were carried out according to best practice guidelines as published by the Bat Conservation Trust (Hundt, 2012).

The exterior of the tin barns and sheds were checked using 8 x 42 Avian Trekker binoculars for any gaps under constructional materials, which bats may use to roost within or signs indicative of usage by bats (i.e. droppings). Trees were also checked and using the same method searching for features such as loose bark, occludes, cracks and cervices and Ivy (*Hedera helix*) coverage which bats may use to rest or roost within. Both the sheds / barns and affected trees were subsequently classified for their potential to support bats according to the BCT guidelines (Hundt, 2012).

This assessment was re-done during the updating survey undertaken in June 2015.

2.4 Assessment Methodology

2.4.1 Introduction

The methodology for the assessment of the likely ecological effects of the proposed development is based on IEEM's Guidelines for Ecological Assessment in the UK (IEEM,2006). Although this assessment does not constitute a formal ecological/environmental impact assessment, the IEEM guidelines provide a useful framework for assessing ecological impacts at any level.

2.4.2 Valuation

Features of ecological interest are valued on a geographic scale. Value is assigned on the basis of legal protection, national and local biodiversity policy and cultural and/or social significance.

3.0 SURVEY RESULTS

3.1 Desktop Survey

Statutory designated areas within 2 km of the site as identified on Magic Maps are:

- Moorgreen Meadows SSSI – Bounding east of the site. Designated for neutral meadows and Alder (*Alnus glutinosa*) wood flanking a small tributary of the River Hamble. The grassland is of exceptional scientific importance for populations of Marsh Orchids (*Dactylorhiza* spp.).

3.2 Vegetation Survey Results

(N.B. The following information provides a broad description of the main habitats found within the survey area. Specific features of ecological interest, such as trees, hedges, watercourses are described in the relevant sections below).

3.2.1 Poor semi-improved grassland

This is the dominant habitat on site comprising of the main field area. This consists of typical pastoral grasses which are dominated by Cocks Foot (*Dactylis glomerata*), Yorkshire Fog (*Holcus lantus*), Perennial Rye Grass (*Lolium perenne*) with occasional Sweet Vernal Grass (*Anthoxanthum odoratum*) and Common Bent (*Agrostis capillaris*). There was also a relatively high level of forb coverage with abundant Birds Foot Trefoil and occasional Black Medick (*Medicago lupulina*), Ribwort Plantain (*Plantago lanceolata*), Self Heal (*Prunella vulgaris*) and Common Vetch (*Vicia sativa*). Locally abundant patches of Creeping Thistle (*Crisium arvense*), Spear Thistle (*Crisium vulgare*) and Ragwort (*Senecio jacobaea*) were noted during the updated Phase I presumably indicative of localised enrichment from the cows present (**Fig 2**).

Figure 2. View across field with localised *Crisium* spp patches.



3.2.2 Dense scrub

There is a patch of dense continuous scrub located adjacent to one of the tin barns. This area was dominated by Bramble (*Rubus fruitcosus* agg), with occasional Elder (*Sambucus nigra*) shrubs (**Fig 3**).

Figure 3. Dense scrub area, and edge of tin pole barn with brick pile



3.2.3 Hedgerow with trees

Bounding the west and northern extents of the site is a largely unmanaged and defunct hedgerow with trees. The hedge itself comprises of frequent Goat Willow (*Salix caprea*) with occasional Hawthorn (Crataegus monogyna), Dog Rose (Rosa carina) and Sycamore (*Acer pseudoplatanus*). Trees are reasonably frequent and include Ash (Fraxinus excelsior), Oak (*Quercus robur*) and Rowan (*Sorbus aucuparia*). The understory is largely scrubby and dominated by Bramble with frequent Gorse (*Ulex* spp.).

3.2.4 Buildings

There are a number of small tin constructed sheds and pole barns, which are to be removed as part of the current proposals. These have been used for holding livestock in the past or currently house farm machinery.

3.2.5 Running water

A small stream bounds the east of the site separating the site from the edge of the Moorgreens meadows SSSI. It is understood that this is owned by the Highways Agency and is used as a run off for the M 27 motorway.

3.2.6 Dry ditch

A small (~ 15 m) ditch is located adjacent to one of the sheds which differed in vegetation owing to its periodic inundation. This was dominated by Hard Rush (*Juncus inflexus*) with occasional Rosebay Willowherb (*Chamerion angustifolium*) and Redshank (*Persicaria maculosa*) (**Fig 4**).

Fig 4. Dry ditch dominated by Hard Rushes.



3.3 Bat Survey

There is moderate – high potential for foraging bats along the natural habitat around the perimeter of the site which includes linear hedgerows, stream, woodland and scrub.

Buildings

There are a total of 5 breeze block and tin constructed buildings which will be demolished under the current proposals. 4 of these are less than 2 m in height and have previously been used to hold livestock. The final building is a tin pole barn which is currently being used to store farm machinery and equipment. None of the buildings were considered suitable to support roosting bats as no features were identified which could be used and no signs indicative of current usage noted (i.e. droppings, feeding remains). Furthermore, as there was no underlining beneath the tin roofs, the buildings would be draughty and not support the thermally stable conditions which roosting bats favour. Based on this assessment all buildings were classified as being of ***negligible*** potential to support roosting bats according the BCT guidelines (Hundt, 2012)

Trees

The majority of the trees to be removed on site are scrubby and not mature enough to support any features suitable for roosting and resting bats. As such they have all been classified as category 3

according to the BCT guidelines (Hundt, 2012). Three conifers are to be removed to facilitate construction of the new access road however again, these did not support any suitable features and were subsequently classified as category 3 (i.e. trees with no potential to support roosting bats).

3.4 Great Crested Newts

The Highways Agency have undertaken presence / likely absence surveys of the balancing pond bounding the north of the site the results of which will be provided as a separate report to support this submission. These surveys inducted the likely absence of GCN from within the pond.

3.5 Reptiles

A presence / absence survey for reptiles was undertaken during May – June 2015 by Ecosupport staff members. The results of these surveys are provided in a separate report.

3.6 Dormice

Based on Ian Whites assessment, it was considered the area to be removed was of suboptimal suitability with vegetation density and diversity low. Notwithstanding this the

Figure 5. Area where the new access road is proposed comprising of low level scrub and conifer trees.



This area largely comprises of bare ground with a few Holly (*Illex aquifolium*) shrubs and sparse Braken (*Pteridium aquilinum*) coverage. Three of the conifers are to be removed to facilitate the construction of the access road however it was not considered that their removal would impact significantly upon Dormice and an arboreal linkage at the canopy can be maintained.

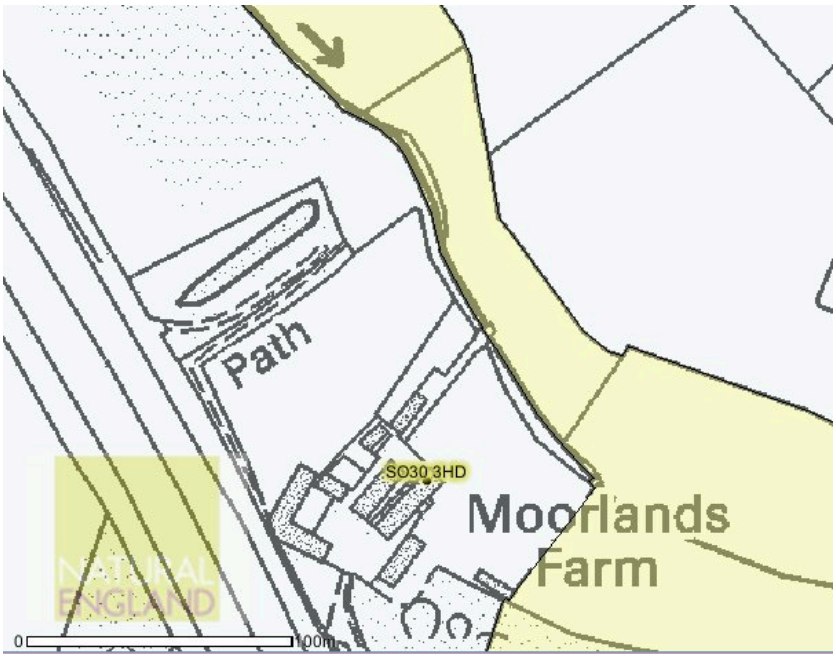
3.7 Nesting birds

The scrubby areas and trees on site provide suitable habitat for nesting birds.

3.8 Statutory Designated Sites, Assessed Level of Impacts

Owing to the close proximity of the Moorgreen meadows SSSI (**Fig 6**) and based on pre-application discussions with the Eastleigh Borough council's biodiversity officer, the proposals were forwarded to Natural England for consideration (Simon Thompson, lead advisor, land-use operations team).

Figure 6. The Moorgreen meadows SSSI (yellow) bounding the east of the site. OS licence number 100048821



Based on the provided information they were happy that the proposed usage will not cause any problems with regards to the SSSI, however the demolition and construction elements will need to be undertaken in a sensitive way, paying due regard to the sensitivity of the SSSI and the water quality issues.

4.0 ASSESSMENT OF LIKELY IMPACTS IN ABSENCE OF MITIGATION

The IEEM guidelines require that the potential impacts of the proposals should be considered in absence of mitigation. In order for a significant adverse effect to occur, the feature being affected must be at least of local value. However in some cases, features of less than local value may be protected by legislation and/or policy and these are also considered within the assessment.

As the habitats present are not considered to be of value outside of the zone of influence (i.e. only of site value), site clearance (and subsequent construction) would not have a significant adverse ecological impact in terms of habitat losses.

If construction is not considerate to the stream bounding the east of the site there may be adverse impacts to water quality.

The SSSI may be adversely impacted upon if due regard to its sensitivity is not made. This may result in an increase in exposure to dust, noise and lighting. Furthermore, with the new facility a training hall for dogs, there may be impacts from dogs running through the SSSI and fouling if there is not an adequate fence to prevent this.

Owing to the suitability of areas for breeding and nesting birds if the scrub and shrubby trees are removed within the bird nesting season, then an offence may be committed under the WCA (1981) by harming/killing nesting birds.

5.0 RECOMMENDATIONS

5.1 Introduction

This chapter contains recommendations for further works needed to fully assess the ecological impacts of the proposals and to mitigate any potential adverse effects. In addition, recommendations for the enhancement of nature conservation and biodiversity on the site are included, which, if implemented will contribute to local and national biodiversity targets and meet local planning policy.

5.2 Mitigation Measures

5.2.1 Nesting birds

Any trees or scrub that require clearance should be cleared outside of the bird-nesting season (March- September inclusive). If clearance is required during the bird-nesting season, then a suitably qualified ecologist should carry out a search and any nests found should be left with a 3m buffer zone until the nest is deemed inactive.

5.2.2 Dormice

The shrubby trees / scrub due to be removed to facilitate the new access road is of sub optimal suitability to support Dormice. Notwithstanding this, this area is connected to the scrubby bank along the M27 which does provide good habitat for Dormice and it is understood that there are records of Dormice from along this corridor (Deborah Salmon EBC, July 2015, pers comm). As such the following precautionary measure will be implemented during the vegetation removal:

- To avoid any impacts to Dormice the removal of the woodland scrub / Bramble will adopt a staggered approach with the upper sections removed over winter (when Dormice may be hibernating in the lower parts) and the lower sections removed during spring. This will ensure that there are no impacts to hibernating and nesting animals (including birds). As Dormice go into hibernation generally between October – December and (depending on temperatures) emerge from hibernation generally during April – May Bright et al., 2006), the removal and clearance of the roots will be carried out during late spring outside of the hibernation period and once temperatures and weather conditions are considered stable and suitable for dormice to be active. At this point the upper sections of the scrub will have been removed encouraging the Dormice to passively move into the neighbouring suitable areas. Roots will be removed using hand tools where possible or with a mini digger using a toothed bucket.

All site personnel involved in the vegetation removal will be briefed on the nature of the works they are undertaken wit a brief note about Dormice and their conservation status.

The above-described works will also be carried out with an Ecological Watching Brief (EWB) by a suitably experienced and licenced ecologist in case any Dormice are found.

5.2.3 Sensitive lighting

Owing to the high suitability of the on site habitat and surrounding environs, it is likely that the site is used by foraging and commuting bats. To prevent any disturbances to bats, any lighting that is used, particularly on the car park, should be low wattage and hooded towards the ground preventing any undue spill over to the surrounding habitat.

5.2.4 Moorgreen Meadows SSSI & stream

Although, after consultation with Natural England it was not considered that the proposed usage will cause any problems, in recognition of the sensitive location of the proposed development, there are a number measures which will be taken during the construction process to prevent any possible deleterious impacts.

These measures will include

- Designating an area for the refueling of plant off the grassland area and away from the stream and SSSI. This should be located on an area of hard standing. (i.e. within the area of the farm).
- An oil spillage kit should be present on site whilst plant is operating.
- Work should not occur during hours of darkness nor should any artificial lighting be used during the works.
- If heavy plant is to be used during or after periods of heavy rainfall silt traps or fencing will be required to protect the nearby stream and the flush in the adjacent SSSI.

5.3 Ecological Enhancements

The following enhancements have been made to maximise on site opportunities for biodiversity thus meeting the requirements of the NPPF and the Eastleigh Borough Councils LDF and ensuring there is a net gain in potential for rare and protected species.

5.3.1 Native species planting

The screening hedgerow proposed to separate the new training hall from the training area of the remaining grassland should use native species of local provenance. This is to include species such as Dog Rose (*Rosa canina*), Hawthorn (*Crategaeus monogyna*), Honeysuckle (*Lonicera periclymenum*), Blackthorn (*Prunus spinosa*), Hazel, Wild Hop (*Humulus lupulus*) Dogwood (*Cornus sanguine*) Wild Privett (*Ligustrum vulgare*). This will provide foraging and nesting habitat for a variety of birds and invertebrate species.

Any tree and shrub species used within the landscaping should include as many fruiting-species as possible to provide food for birds during the autumn and winter and nest sites during the spring and summer. Native species such as Holly (*Ilex aquifolium*), Wild Cherry (*Prunus avium*), Hawthorn and Rowan (*Sorbus aucupaira*) are recommended. A bias towards ornamentals should only be made in formal areas where aesthetics are a priority.

5.3.2 Bat boxes

It is recommended that two bat boxes are erected within suitable trees on site to provide roosting opportunities for bats within the area, These should be of the specification Schwegler 2F/N or similar. These should be positioned by an experienced ecologist and placed above 4 m off the ground.

6.0 REFERENCES

ARG (2010) Advice note 5, Great Crested Newt Habitat Suitability Index

Bright, P., Morris, P., & Mitchell-Jones, T., (2006) The Dormouse Conservation Handbook, English Nature

Eastleigh Borough Council (2011) Local Development Framework, sustainability appraisal

Froglife (2003) Advice sheet 11, Surveying for Great Crested Newt Conservation

HMSO. (1981). The Wildlife & Countryside Act 1981. HMSO, London

HMSO. (2010). The Conservation of Habitats and Species Regulations 2010. HMSO. Statutory Instrument 2010 No. 490. HMSO, London.

HMSO. (1992). The Protection of Badgers Act 1992. HMSO, London

Hundt, L., (2012) Bat Surveys: Good Practice Guidelines, 2nd edition, Bat Conservation Trust

IEEM. (2006). Guidelines for Ecological Assessment in the United Kingdom. Institute of Ecology and Environmental Management, Winchester.

JNCC (1990). Handbook for Phase 1 Habitat Survey. Joint Nature Conservation Committee, Peterborough