

ecological support,
management and solutions



218 Stakes Hill Road

Phase I Ecological Survey

Tristanna Boxall BSc (Hons)

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1.0 INTRODUCTION

1.1 Brief

ecosupport Ltd was commissioned to conduct a Phase I Survey of the 218 Stakes Hill property and associated land. This survey was required to identify any ecological impacts that may arise from the proposed demolition of the existing property to facilitate the extension of the adjacent care home.

This document has been prepared in order to ensure the proposed development fully complies with nature conservation legislation and policy where applicable.

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

Data contained within this report will be valid for 24 months, after which the advice of a Suitably Qualified Ecologist must be sought as surveys may require updating if the proposed works have not been undertaken.

1.2 Aim

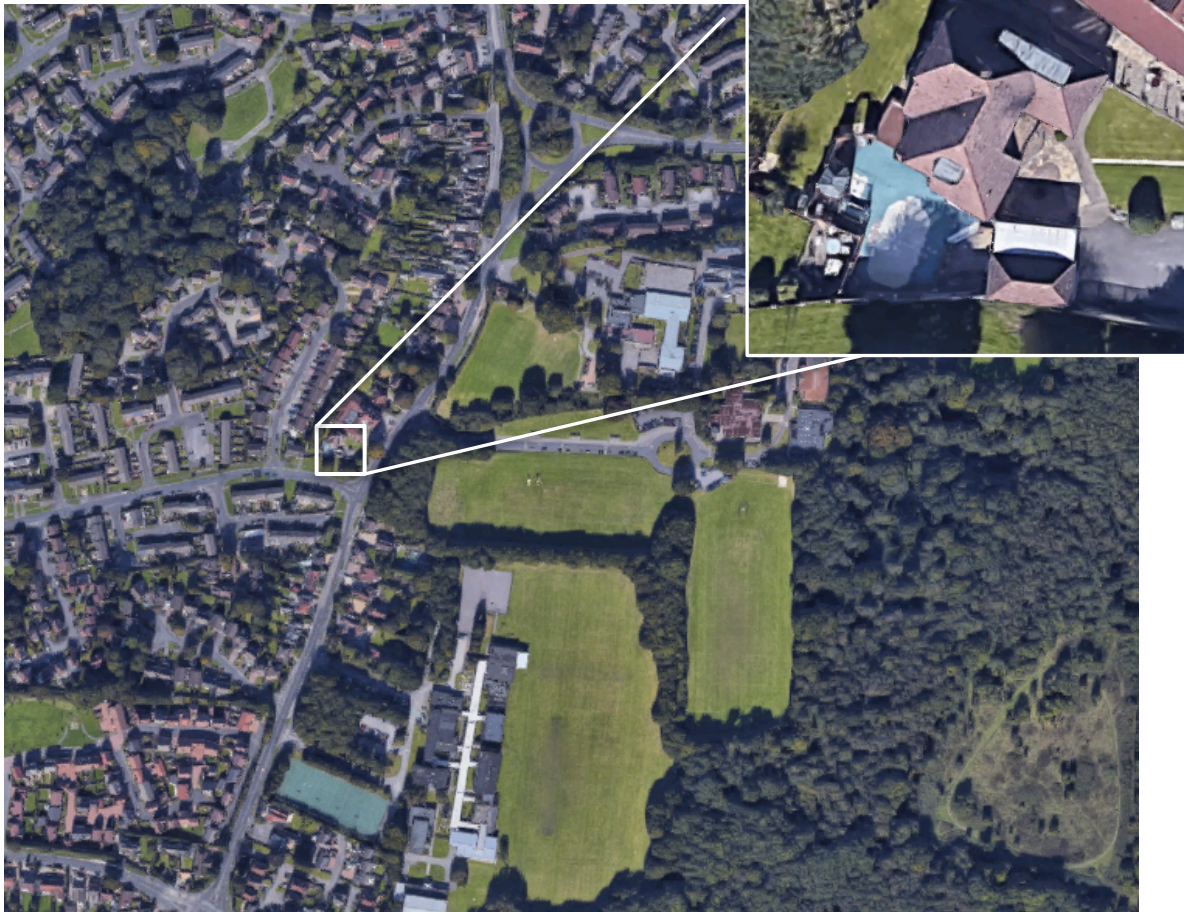
A Phase I Habitat Survey is the first step in assessing the potential ecological effects (or lack of) of a proposed development, and determines whether or not (and which) Phase II Protected Species Surveys are required. The objectives of this survey were as follows:

- Identify current land use and distribution of broad habitat types including plant communities of ecological importance,
- Identify and classify any priority habitats,
- Assess the ecological value of the site
- Identify any signs of protected species and potential features that may support them
- Identify all relevant legislation and policy
- Make recommendations for further survey work as appropriate
- Make recommendations for appropriate enhancements

1.3 Site Location

The site is located on the junction of Stakes Hill Road and Shaftesbury Avenue. Stakes Hill Road runs along the eastern boundary with Shaftesbury Avenue to the south. To the west of the site lies residential housing associated with Place Crescent whilst to the north lies Oaklands Care Home (**Figure 1**) (Grid Reference SU 68619 08078). The surrounding landscape is a mixture of residential development, local infrastructure such as Crookhorn College and woodland including Johnston's Coppice and Gundymoor Wood.

Figure 1. Location of the site (Google Maps, 2018).



1.4 Proposals

Proposals will see the demolition of existing dwelling to facilitate the extension of the Oaklands Care Home.

2.0 LEGISLATION & POLICY

One of the aims of this report is to demonstrate that the proposed development complies with relevant Planning Policy and nature conservation legislation. This section details the policy and legislation with which the development would need to comply.

2.1 Legislation

2.1.1 The Conservation of Habitats and Species Regulations (2017)

The Conservation of Habitats and Species Regulations (2017) transposes the EU Habitats Directive (Council Directive 92/43/EEC) into UK domestic law. It provides protection for sites and species deemed to be of conservation importance across Europe. It is an offence to deliberately capture, kill or injure species listed in Schedule 2 or to damage or destroy their breeding sites or shelter. It is also illegal to deliberately disturb these species in such a way that is likely to significantly impact on the local distribution or abundance or affect their ability to survive, breed and rear or nurture their young.

2.1.2 The Wildlife and Countryside Act (1981) (as amended)

The Wildlife and Countryside Act (1991) (as amended) is the primary piece of legislation by which biodiversity is protected within the UK. Protected fauna and flora are listed under Schedules 1, 5 and 8 of the Act. They include all species of bats, making it an offence to intentionally or recklessly disturb any bat whilst it is occupying a roost to intentionally or recklessly obstruct access to a bat roost. Barn Owls are also protected under the Wildlife and Countryside Act 1981 (as amended) which makes it an offence to kill, injure or take a wild barn owl and take or destroy their eggs. It is also illegal to disturb or check a nest site during the breeding months of April to October.

2.2 Policy

The development would seek to comply with relevant Planning Policy at a local, regional and national level.

2.2.1 National Planning Policy and Framework (2012)

This sets out the Government's vision for biodiversity in England. It states that the planning system should maintain, enhance, restore or add to biodiversity and geological conservation interests. Key principles of the framework include the creation, protection, enhancement and management of networks of biodiversity, the preservation, restoration and recreation of priority habitats and ecological networks and the recovery of priority species populations, including sections on legally protected species.

2.2.2 Havant Borough Core Strategy (2011)

Part of the 'Vision for Havant Borough in 2026' is to protect and enhance biodiversity. Similarly policy 'CS11: Protecting and Enhancing the Special Environment and Heritage of Havant Borough' states that planning permission will only be granted when development protects habitats and features of biological interest and prevents the fragmentation of existing habitats.

3.0 METHODOLOGY

3.1 Desk Based Search

A search using online resources was undertaken to establish the nearby designated sites.

3.2 Phase I Habitat Survey

The initial walk over survey was carried out by Tristanna Boxall BSc (Hons) (Natural England Class Level 2 Bat and Class Level 1 Great Crested Newt License Holder) of ecosupport Ltd on the 11th April 2018. This incorporated a visual assessment of the site and the surrounding landscape, loosely following the methodology outlined within the Joint Nature Conservation Committees (JNCC) *Phase I habitat survey handbook* (2003). The habitats present were described, paying particular attention to their potential to support protected species. Similarly a thorough search for evidence of protected species was undertaken.

3.3 Assessment of Buildings to Support Roosting Bats

An assessment of the building on site was undertaken to determine the likelihood of roosting bats being present. The externals were examined, using 8 x 42 Avian Trekker binoculars and a high-powered torch, for any suitable features which bats may use to enter the internals or an external roost and also to search for signs of (i.e. droppings, feeding remains) and/or bats themselves. In addition access into the loft space of the existing dwelling was attained to assess the suitability for roosting bats and also to search for evidence of bats themselves. The survey was carried out in accordance with *Bat Surveys for Professional Ecologists; Good Practice Guidelines* 3rd edition published by the Bat Conservation Trust (Collins, 2016).

4.0 RESULTS

4.1 Desk Based Search

The site is located 2.77km north of Chichester and Langstone Harbour (Ramsar, Special Protection Area and Site of Special Scientific Interest) and Solent Maritime. Portsdown Hill (SSSI) is also 2.88km southwest of the site.

The features for which Chichester Harbour was designated a SAC include sandbanks which are covered by sea water at all times, estuaries, mudflats and sandflats not covered by seawater at low tide and coastal lagoons. Internationally important wetland types and internationally important numbers of waterbirds were the Ramsar qualifying features. Similarly internationally important numbers of wintering waterbirds, migratory birds and breeding seabirds were the factors that lead to the site being classified as a SPA (Chichester Harbour Conservancy, 2018). The extensive intertidal mudflats are the feeding grounds for internationally important numbers of Ringed Plover (*Charadrius hiaticula*), Grey Plover (*Pluvialis squatarola*), Redshank (*Tringa totanus*), Black-tailed Godwit (*Limosa limosa*), Dunlin (*Calidris alpina*), Sanderling (*Calidris alba*), Curlew (*Numenius arquata*) and Greenshank (*Tringa nebularia*). Bar-tailed Godwit (*Limosa lapponica*) numbers are of European importance. Unimproved permanent pasture provides alternative feeding sites for the geese and major high tide wader roosts. Some of this pasture is floristically rich being a Red Fescue (*Festuca rubra*) sward with scarce species such as Green-winged Orchid (*Orchis morio*) and Adder's Tongue Fern (*Ophioglossum vulgatum*). Langstone Harbour consists of large, sheltered estuarine basins comprising of extensive sand- and mudflats exposed at low tide. The mud-flats are rich in invertebrates and support extensive beds of algae and Eelgrasses (*Zostera* Sp). The basin contains a wide range of coastal habitats supporting important flora and fauna communities. The site is of particular significance for waterbirds, especially in migration periods and in winter. It also supports important colonies of breeding Terns (*Sternidae* Sp.) (JNCC, 2018a). The harbour includes one of the largest areas of mixed saltmarsh on the south coast, and extensive Cord-grass (*Spartina anglica*). The harbour is among the twenty most important intertidal areas in Britain as a summer and autumn assembly ground for waders during the moult and as a post-moult wintering ground (Natural England, 2018b).

Solent Maritime is designated due to it encompassing a major estuarine system on the south coast of England. Sediment habitats within the estuaries include extensive estuarine flats, often with intertidal areas supporting Eelgrass (*Zostera* spp.) and Green Algae, sand and shingle spits, and natural shoreline transitions. The mudflats range from low and variable salinity in the upper reaches of the estuaries to very sheltered almost fully marine muds in Chichester and Langstone Harbours. Unusual features include the presence of very rare sponges in the Yar estuary and a sandy 'reef' of the

polychaete *Sabellaria spinulosa* on the steep eastern side of the entrance to Chichester Harbour. In addition, the site is notified for being the only site for Cord-grass (*Spartina spp.*). The Solent contains the second-largest aggregation of Atlantic salt meadows in south and south-west England. This habitat supports species such as Sea-purslane (*Atriplex portulacoides*), common Sea-lavender (*Limonium vulgare*) and Thrift (*Armeria maritime*).

Portsdown Hill (SSSI) is an isolated east-west chalk anticline with a long south-facing escarpment which remains un-reclaimed. Despite the absence of grazing and extensive disturbance, the slopes of Portsdown Hill still support a rich chalk grassland flora and a rich and diverse insect fauna. The site supports a number of species of limited distribution, including Hairy Rock-cress (*Arabis hirsute*), Pale Flax (*Linum bienne*), Meadow Cranesbill (*Geranium pratense*), Horseshoe Vetch (*Hippocrepis comosa*), Bastard Toadflax (*Thesium humifosum*), Early Gentian (*Gentianella anglica*), Knapweed Broomrape (*Orobanche elation*), Bee Orchid (*Ophrys apifera*) and Fly Orchid (*O. insectifera*). The insect fauna includes a comprehensive range of chalk downland Butterflies, Beetles and Bees.

4.2 Phase I Habitat Survey

The following habitat types and dominant species were identified on site:

Buildings: The 218 Stakes Hill Road property is of red brick construction with machine cut concrete tiles on the roof. PVC soffit, fascia and windows are present throughout. In addition two flat roof dormer windows, covered in bitumen roofing felt, were recorded. Two lengths of weatherboarding were present on the front elevation of the property. There is also a single storey garage on site, of the same construction.

Figure 2. 218 Stakes Hill dwelling.



Improved Grassland: The site is dominated by amenity grassland, which currently acts as garden space (evident in **Figure 2**). Species noted within the sward included common grass and moss species, Scarlet Pimpernel (*Anagallis arvensis*), Creeping Buttercup (*Ranunculus repens*), Ribwort Plantain (*Plantago lanceolata*), Yarrow (*Achillea millefolium*), Selfheal (*Prunella vulgaris*), Dandelion (*Taraxacum agg.*) and Daisy (*Bellis perennis*). This is subject to continual management, which has suppressed the sward from developing.

Ornamental Shrubs: Also for aesthetic purposes, a number of ornamental shrubs were recorded in the garden.

Hardstanding: A concrete driveway, pathway and previous swimming pool was present on site.

4.3 Assessment of Buildings to Support Roosting Bats

The property and associated garage were considered to be in a good state of repair. The roofing tiles were in tact and, given the style of tiles, closely fitted together. Similarly the mortar was still in place and no notable gaps were found to be present. The soffits and fascia were also considered to be in good condition and tightly fitted to the wall. Likewise the hanging tiles were found to be in good condition. The gaps often associated with hanging tiles were not found to be present. Finally the limited area of

weatherboarding was also found to be in tact, with no notable gaps recorded.

The internal assessment found an easily accessible loft with no obstructions (**Figure 3**). This aided a thorough and systematic search for evidence of bats. The bitumen roofing felt, underlining the tiles, was in tact with no visible tears. Daylight was only found to be entering through the vents in the soffit. The insulation provided a clear surface for the search for evidence, despite a small accumulation of rodent droppings, no evidence of bats or bats themselves was identified.

Figure 3. Loftspace of 218 Stakes Hill Road.



4.4 Limitations

The species list provided is not considered to be an exhaustive list instead a record of those identified during the Phase I survey. Similarly, this survey does not constitute a full site assessment for invasive species, such as Japanese Knotweed (*Fallopia japonica*), but no such species were found during the time on site.

5.0 EVALUATION

5.1 Desk Based Search

No protected sites were recorded adjacent to proposals. It therefore considered highly unlikely proposals will have any direct impacts during the construction phase itself (i.e. through noise, air or water pollution). However, as the development falls within 5.6km of Special Protection Areas within and around the Solent it falls in the zone within which Natural England's advise states that net increase in development 'would be likely to have a significant effect'.

A continuing program of grassland management work and footpath improvement is opening up more of Portsdown Hill area to visitors. As additional visitors are being welcomed and encouraged to the site, it is not considered that this development will detrimentally impact upon the site or its designated features.

5.2 Phase I Survey

Improved Grassland: Reptiles require open habitats with a deep and diverse vegetation structure. Scrub and grass tussocks are also preferable (Edgar et al., 2010). Due to the level of management it is considered that there are no habitats suitable to support reptiles.

The floral element of the sward is of minimal ecological value as the species present are common and widespread. It is however considered likely that foraging bats will utilise the site along with other mammals such as Hedgehog (*Erinaceus europaeus*).

Ornamental Shrubs: Although due to their origin (i.e. ornamental and the majority non-native) it is considered the species present are of limited botanical value, however they do provide opportunities for nesting birds.

Hardstanding: This aspect of the site is considered to be of negligible ecological value.

5.3 Assessment of Buildings to Support Roosting Bats

Both the house and the garage are considered to have negligible potential for roosting bats. A lack of opportunities for access into the internals, including no gaps between the roof tiles themselves, supported by a lack of evidence within the loft space, have lead to the conclusion that it is highly unlikely roosting bats would utilise the internals of the building. Similarly external features on the building, which are commonly exploited by crevice dwelling bats, are not applicable. Given the style of tiles they are tightly fitted and well sealed, preventing access.

6.0 FURTHER RECOMMENDATIONS

6.1 Proximity to Designated Sites

The site lies within the vicinity of the Solent SPAs. In order to mitigate for the likely increases in residential pressure upon this SPA, due to the high densities of wildfowl and waders for which the area is predominantly protected, the Solent Disturbance Mitigation Project (SDMP) has been introduced in collaboration with Natural England, comprising a partnership of all local councils. Mitigation towards the SPA must be provided for all new recreational developments within the 5.6km disturbance zone of the SPA. The simplest method of providing a necessary suitable and appropriate level of mitigation is via financial contributions.

The need for mitigation for the recreational impact of other types of residential accommodation will be assessed on a case-by-case basis by the local planning authority. The key 'test' is based around the likelihood of the proposed development generating additional recreational visits to the SPA(s). For example, in respect of residential accommodation designed specifically for elderly people, a developer contribution (or bespoke mitigation) will be required for apartments for the active elderly, but not for secure accommodation such as a residential nursing home for people who are unable to independently leave that accommodation and which does not provide residents parking or allow pets (this would also apply to people living with conditions that limit their mobility). However, mitigation may be required for any additional staff living on-site.

6.2 Nesting Birds

Any vegetation, for example the ornamental shrubs, will be removed prior to or after the bird-nesting season (March – August inclusive).

It is recommended that two bird boxes be erected on site; one 32mm entrance hole bird box, which will attract Great, Blue, Marsh, Coal and Crested Tit, Redstart, Nuthatch, Collared and Pied Flycatcher, Wryneck, Tree and House Sparrow and one 26mm entrance hole ideal for Blue, Marsh, Coal and Crested Tit and possibly Wren.

6.3 Bats

Although the Phase I survey did not identify any evidence of bats, and concluded it was unlikely they were present, due to their transient use of roosts and opportunistic exploitation of features suitable to support roosts, there is a possibility that bats may take up residence after the Phase I survey. If prior to, or during works, a bat is found a Suitably Qualified Ecologist should be consulted immediately.

It is recommended that an integrated bat box be introduced into the extension of the care home.

In addition one Schwegler 2F should be erected on site. The front panel of the 2F has a second inner wooden panel fitted to it to create a cavity wall. This provides ideal quarters for bats that inhabit crevices, such as *Pipistrelles* specie. This is manufactured from long-lasting Woodcrete, which is a blend of wood, concrete and clay which will not rot, leak, crack or warp, and will last for at least 20 - 25 years, making it suitable for long-term mitigation/enhancement projects. Woodcrete is breathable and maintains a stable temperature inside the box. It is painted black to absorb warmth.

Increased levels of artificial light can cause disturbance and disruption to bats. Though several bat species can take advantage of artificial lighting systems for foraging, feeding off the insects they attract, other species avoid them. If lighting is required on site low level and/or directional lighting will be utilised. When lighting is utilised should also be limited to maintain dark periods for as long as possible. Therefore any new lighting should be sensor-controlled lighting.

6.4 Native Planting

As a general enhancement, in line with the CIEEM guidance (2012) any proposed planting should aim for a 70:30 ratio in favour of native species over non-natives and ornamentals. Ideally fruit bearing trees, providing food sources for birds and small mammals during the autumn and winter and nest sites during the spring and summer, should be utilised. Species that should be considered include:

- Hawthorn (*Crataegus monogyna*)
- Alder Buckthorn (*Frangula alnus*)
- Blackthorn (*Prunus spinosa*)
- Wild Cherry (*Prunus avium*)
- Crab Apple (*Malus sylvestris*)
- Elder (*Sambucus nigra*)
- Rowan (*Sorbus aucuparia*)

Shrubs to be considered within the landscape planting include:

- Dogwood (*Cornus sanguinea*)
- Holly (*Ilex aquifolium*)
- Privet (*Ligustrum vulgare*)
- Dog Rose (*Rosa canina*)
- Guelder Rose (*Viburnum opulus*)

Native species and pollen rich ornamentals can greatly increase the assemblage of invertebrates on site, in turn encouraging further species such as reptiles and foraging bats. Planting a mixture of flowering plants, trees (including fruit trees) and shrubs encourages a diversity of insects to sustain bats. It is beneficial that the flowers vary in colour (although pale flowers that are more easily seen in poor light and so attract

insects at dusk), fragrance, shape, amount of nectar and time of flowering. (It is important to provide native flowering plants, shrubs and trees throughout spring, summer and autumn). Flowers with 'landing platforms' for insects (i.e. flowers from the Daisy and Carrot families) increase opportunities for insects and in turn foraging bats.

Native trees are important to foraging bats. Key species are Willow, Birch and Oak as they can support high numbers of insects. In addition once matured they can eventually provide roosting opportunities (see **Table 1** below).

Table 1. Tree species for foraging and roosting potential (Gunnel et al. 2012).

Native Tree species	Roosting potential	Supporting foraging
Oak	Very good	Very good
Willow	Minimal	Very good
Beech	Very good	Good
Ash	Good	Good
Elm	Good	Good
Birch	Minimal	Very good

6.5 Hedgehogs

Access for hedgehogs can be achieved either through cutting a five inch hole into the bottom of any new fences or leaving out a small a section of gravel board (ensuring five inch clearance).

7.0 CONCLUSION

The site is considered to be a limited ecological value. Other than nesting birds, it is considered unlikely any legally protected species will be impacted by proposals. It is also considered unlikely any habitats of ecological importance will be negatively impacted by works. Finally, a number of ecological enhancements have been recommended as to enhance the sites ecological value.

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