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| **Site address** | Land at Surrey Close, Barnsley S70 4NB |
| **Grid reference** | SE 34574 05347 |
| **Report composed by** | Amy Reddick BSc (Hons) |
| **Report reviewed by** | David Watts BSc (Hons) FdSc MArborA MCIEEM |
| **Client** | Sub Zero Homes |
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## Executive Summary

Bagshaw Ecology Ltd have been requested by Sub Zero Homes to undertake an Ecological Impact Assessment of the land at Surrey Close, Barnsley S70 4NB, in relation to an application for planning.

The survey found the habitats on the site to be of low ecological value, consisting of amenity grassland. The site was bordered by other residential properties on all aspects.

None of the trees on site had features with potential for roosting bats. Therefore, no further considerations regarding bats are recommended.

The site is suitable for use by foraging hedgehogs, which may be impeded with the addition of fenced gardens within the site. It is recommended suitable mitigation is used to facilitate hedgehog movement through the site.

# 1. Introduction

## 1.1. Background

1.1.1. Bagshaw Ecology Ltd have been requested by Aidan Woodrow, on behalf of Sub Zero Homes, to undertake an Ecological Impact Assessment of the land at Surrey Close, Barnsley S70 4NB, hereafter referred to as 'the site'.

1.1.2. The purpose of the report is to identify the habitat types on the site, along with the presence or absence of any protected or notable species. The ecological impact of any proposed development is assessed, and mitigation, management and aftercare proposals are suggested when appropriate.

## 1.2. Site Details

1.2.1. The site is located at grid reference SE 34574 05347, and is accessed off the north of Surrey Close in Barnsley.

1.2.2. The site comprises an area of amenity grassland and tree.

## 2. Legislative Context

### 2.1. Legislation

2.1.1. The Wildlife and Countryside Act 1981 (as amended), makes it an offence to:

- Deliberately or recklessly injure, kill or capture any animal species protected under Schedule 5 of the act.
- Deliberately or recklessly kill, injure or take any wild bird; to take, damage or destroy the nest of any wild bird while occupied or being built, or to take or destroy the egg of a wild bird. Additional protection is afforded to bird species listed under Schedule 1 of the Act.
- Intentionally pick, uproot or destroy any wild plant included in Schedule 8 of the act.

2.1.2. The Conservation of Habitats and Species Regulations 2010 makes it an offence to deliberately capture, kill or disturb any animal protected under Schedule 2 of the regulations. It is also an offence to damage or destroy a breeding site or resting place of an animal, even if the animal is not present at the time.

### 2.2. Policy

2.2.1. The UK Biodiversity Action Plan (UKBAP) includes a list of 943 national priority species and 56 habitats of principal importance, with all species and habitats having specific action plans defining the measures required to ensure their conservation. Although the UKBAP has since been superseded by County Biodiversity Plans, it remains a useful point of reference.

2.2.2. Section 41 of the Natural Environment and Rural Communities Act (NERC) 2006 requires that any public bodies take into consideration any species and habitats listed in the UKBAP when implementing their duty and exercising any normal functions.

2.2.3. The National Planning Policy Framework (NPPF) states that planning decisions should aim to protect or enhance biodiversity and conservation interests, and where possible any development should aim to increase net gains in biodiversity.

# 3. Methods

## 3.1. Ecological Data Search

3.1.1. The local biological record centres, Barnsley Biological Records Centre (BBRC), was consulted as to any protected/notable species within 1km of the site.

3.1.2. The Department for Environment, Food and Rural Affairs' (DEFRA) Magic Maps website was consulted as to any land based designations within 1km of the site.

3.1.3. Aerial imagery was assessed to give an appraisal of the surrounding land use.

## 3.2. Phase 1 Habitat Survey

3.2.1. The habitat survey and mapping exercise was carried out on the 28th November 2017.

3.2.2. The survey was undertaken by Amy Reddick BSc (Hons) a graduate ecologist and licenced bat surveyor (Class Licence 2017-32206-CLS-CLS), with experience of carrying out habitat surveys.

3.2.3. The study area was surveyed in accordance with JNCC (2010) guidelines. Habitat types were assigned an alphanumeric code, and target notes were made identifying important species, along with the presence of potential habitats for any protected or notable species.

3.2.4. Habitats and species present on or adjacent to the site were assessed using CIEEM's (2016) guidelines. Ecological features were classed as being of either international, national, regional, district, local, low or of negligible importance (see table 3.1).

*Table 3.1 Importance of Ecological Features*

| Value of feature | Key examples |
|---|---|
| International | Internationally designated sites (SPA, pSPA, SAC, cSAC, pSAC, Ramsar site, Biogenetic Reserve, or an area which meets designation for such sites.<br>Internationally significant and viable areas of a habitat type listed in Annexe 1 of the Habitats Directive.<br>Any regularly occurring, globally threatened species.<br>A regularly occurring population of an internationally important species, which is threatened or rare in the UK. |
| National | A nationally designated site (SSSI, NNR), or an area which has met the published selection criteria.<br>A regularly occurring significant number/population of a nationally important species (e.g. listed on the Wildlife and Countryside Act 1981 (as amended)).<br>A feature identified as being of critical importance in the UK BAP. |
| Regional/County | Viable areas of key habitat identified in the regional or county BAP.<br>A regularly occurring significant population/number of any important species important at regional/county level.<br>Sites of conservation importance which exceed the district selection criteria but which fall short of SSSI selection guidelines. |

| Value of feature | Key examples |
|---|---|
| District | Areas of habitat identified in District/City/Borough BAP.<br>Sites that the designating authority has determined meet the published ecological selection criteria for designation.<br>Sites/features which are scarce within the District/City/Borough.<br>A regularly occurring significant population/number of any important species important at District/City/Borough level. |
| Local | Areas identified in a Local BAP.<br>Sites/features which are scarce in the locality or which are considered to appreciably enrich the habitat resource within the local context (e.g. species-rich hedgerows).<br>Local Nature Reserves.<br>Any populations, species or habitats of local importance. |
| Low/Site | Habitats of moderate to low diversity which support a range of locally and nationally common species, the loss of which can be easily mitigated. |
| Negligible | Habitats of no ecological value, the removal of which requires no mitigation. |

### 3.3. Bat Scoping Survey

3.3.1. Trees were assessed from the ground using binoculars to identify any potential roost features. Potential roost features were assessed for their suitability for roosting bats using methods prescribed by Collins (2016) and Andrews *et al.* (2013).

*Table 3. Bat Roosting Potential in Trees*

| Roosting potential | Criteria |
|---|---|
| Confirmed Presence | Presence confirmed by the survey. |
| High | A tree with one of more potential roost features that is obviously suitable for large numbers of bats. |
| Moderate | A tree with one or more potential roost features but which is unlikely to support roosts of high conservation status. |
| Low | A tree of sufficient size and age to contain potential roost features but with none seen from the ground, or features with very limited roost potential. |
| Negligible | Negligible habitat features likely to be used by roosting bats. |

# 4. Results

## 4.1. Constraints

4.1.1. The site survey was conducted outside the optimum period for Phase 1 Habitat surveys. Some species are only visible at certain times of the year, and may not have been present during the survey.

## 4.2. Designated Sites

4.2.1. A search on Magic Maps (DEFRA, 2017) found several designated and notable habitats within 1km of the site, including:

- Seven Deciduous Woodland Priority Habitats, the closest of which is approximately 305m west of the site.

4.2.2. BBRC hold no records of designated sites within the survey area or within 1km of the site.

## 4.3. Habitats

4.3.1. The land use in the nearby surrounding area is predominantly residential, with moderate levels of tree cover. The terrestrial connectivity to and from the site was good for mobile species such as birds and bats but was limited for less mobile species due to the proximity to roads and houses.

4.3.2. The site consisted of an area of scattered trees and amenity grassland within a residential housing estate. The habitats on the site were all of low ecological importance importance. Table 4.1, below, summarises the habitat types found on the site. A map of the habitats can be viewed in the appendices.

*Table 4.1 Habitats as defined by JNCC (2010) on the site*

| | | | |
|---|---|---|---|
| J1.2 Amenity grassland | grassland which was low in forb species. | Negligible |  |

### 4.4. Bats

4.4.1. DEFRA (2017) holds no records of granted European Protected Species Licences for bats within 1km of the site.

4.4.2. BBRC hold records of bat species within the site or within 1km of the site, including:

- Common pipistrelle *Pipistrellus pipistrellus*
- Noctule *Nyctalus noctula*

4.4.3. The scoping survey found no artificial structures suitable for bats on the site.

4.4.4. None of the trees on the site exhibited any features with potential for roosting bats.

### 4.5. Other Mammals

4.5.1. BBRC hold records of brown hare *Lepus europaeus,* European badger *Meles meles,* harvest mouse *Micromys minutus* and European hedgehog *Erinaceus europaeus* within 1km of the site.

4.5.2. No signs or habitats suitable for any protected or notable mammal species were observed on the site.

### 4.6. Reptiles and Amphibians

4.6.1. DEFRA (2017) holds no records of granted European Protected Species Licences for great crested newts *Triturus cristatus* within 1km of the site.

4.6.2. BBRC hold records of common toad *Bufo bufo* and common frog *Rana temporaria* within 1km of the site.

4.6.3. The habitat types found on the site are suitable for reptiles and amphibians, with some areas of scattered trees and tall ruderal vegetation; however, the site has limited terrestrial connectivity for these species and there are no ponds within 1km of the site. Therefore, it has limited value as a habitat for amphibians or reptiles.

4.6.4. A search on aerial imagery (Google Earth Pro, 2017) revealed no ponds within 250m of the site.

### 4.7. Bird Species

4.7.1. BBRC hold records of kingfisher *Alcedo atthis*, hen harrier *Circus cyaneus*, peregrine falcon *Falco peregrinus*, brambling *Fringilla montifringilla*, firecrest *Regulus ignicapilla*, redwing *Turdus iliacus* and fieldfare *Turdus pilaris* within 1km of the site which are afforded protection under Schedule 1 of the Wildlife and Countryside Act 1981 (as amended).

4.7.2. The trees and hedges on site provide suitable habitat for nesting birds. House sparrow *Passer domesticus*, robin *Erithacus rubecula* and blackbird *Turdus merula* were observed utilising the habitats on site during the survey.

### 4.8. Invertebrates

4.8.1. The site provides suitable habitat for invertebrates consisting of areas of scattered trees and ephemeral vegetation.

## 5. Impact Assessment

### 5.1. Habitats

5.1.1. The habitats on the site are considered to be of low or negligible ecological importance, and their removal will result in minimal ecological impact.

### 5.2. Species

5.2.1. The trees and hedges on the site provide suitable habitat for nesting birds. All nesting birds are protected under the Wildlife and Countryside Act 1981 (as amended). The removal or trimming of any of the trees on site during bird nesting season could disturb nesting birds and potentially kill or injure their young.

5.2.2. House sparrows were observed utilising the trees on the site during the survey. House sparrows are listed as a red list National Priority Species on the UK BAP (Biodiversity Action Plan) due to large declines. Removal of habitat utilised by house sparrows could have negative impacts on the local population.

5.2.3. Hedgehogs have been recorded within 1 km of the site. If fences are used to divide new residential gardens this could have negative effects on hedgehog migration through the landscape.

5.2.4. Although the habitats on site provide suitable pollination opportunities for invertebrates, there is an abundance of suitable habitat in the surrounding landscape, including residential gardens.

# 6. Conclusion and Recommendations

## 6.1. Avoidance of Ecological Impacts

6.1.1. No tree removals should be undertaken during bird nesting season (1st March – 31st August). If this is not possible, a nesting bird check should be carried out within 48 hours prior to removal, and works should only commence if it has been established that no nesting birds are present.

6.1.2. To aid the movement of hedgehogs through the site it is recommended that properties are divided by hedgerows, or if fences are to be used, that holes are cut into fences between gardens approximately 13x13cm in size. The habitat could also be enhanced by providing linear features such as hawthorn or blackthorn hedgerows in gardens or along the site boundary.

## 6.2. Mitigation

6.2.1. To mitigate for the loss of house sparrow habitat it is recommended that two 1SP Schwegler Sparrow Terraces are incorporated into the developments site either on the surface of or within a north facing wall at a height of at least 2 metres. Care should be taken to ensure the bird boxes are not positioned near to features such as tall shrubs, which predators may use to reach the nests.

## 7. References

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## Appendices

**Appendix 1: Photographs**



*Plate 1: Amenity grassland and scattered trees at the south aspect of the site*



*Plate 2: Entrance to the site*