absolute ecology LLP wildlife surveys

Preliminary Ecological Appraisal

Mill House Garage

Rushton Spencer

Macclesfield

SK11 0QU

Notice to readers

This report has been prepared by Absolute Ecology LLP with all reasonable skill, care and diligence, within the terms of the contract with the client. The actions of the surveyor on site, and during the production of the report were undertaken in accordance with the Code of Professional Conduct for the Chartered Institute of Ecology and Environmental Management (www. cieem.org.uk).

Non-technical summary

Absolute Ecology LLP were commissioned to undertake a Preliminary Ecological Appraisal of land and buildings at Mill House Garage, Rushton Spencer, Macclesfield, SK11 0QU. The Preliminary Ecological Appraisal was undertaken on the 19th June 2014, by an experienced and licensed ecologist who is a member of the Chartered Institute of Ecology & Environmental Management (CIEEM).

The survey area is situated in an urban fringe location, on the outskirts of Rushton Spencer, in Staffordshire. A thin strip of woodland is present immediately to the south (containing a stream), and further patches of woodland and streams are present within 1km in all directions. The area is largely agricultural, with arable fields in all directions, associated with hedgerows and ditches along the boundaries.

The site itself is for the most part ecologically uninteresting; a former HGV garage, surrounded by areas of hardstanding, with patches of grass and tall ruderal vegetation on the periphery.

Taking into consideration the desk study and site survey findings, this report concludes that it is not possible to adequately manage or exclude the risk of harm to protected species or habitats without the need for further survey effort.

Therefore, in order to provide adequate support for this planning application, the following protected species require further surveys:

- Bats

Depending on the timing of works, it may also be necessary to carry out further surveys for Birds.

A full specification for these surveys that are appropriate to the scale and scope of the proposed development can be found in section 5 of this report.

Contents

1.0 Introduction

Background

1.1 Absolute Ecology LLP was commissioned to undertake a Preliminary Ecological Assessment of a site known as Mill House Garage, Rushton Spencer, Macclesfield, SK11 0QU.

1.2 The Assessment was undertaken on the 19th June 2014 by James Porter BSc(Hons), MSc; an experienced ecologist who is a member of the Chartered Institute of Ecology & Environmental Management (CIEEM). He has 4 years' experience of conducting Preliminary Ecological Appraisals (Phase 1), and holds a Class 1 Bat Licence, with 3 years' experience of bat inspection, as well as a Class 1 Great Crested Newt Licence and 3 years' experience of GCN surveying.

1.3 The objective of this report is to provide the client with information on any known or potential protected or rare species that may be using the site, and to outline recommendations on how to proceed with the works in a legal and ecologically sensitive manner.

1.4 Unless the client indicates to the contrary, information on the species found to be present on the site will be passed to the county biological records centre to update records held for the area.

Site Description

The survey area is situated in an urban fringe location, on the outskirts of Rushton Spencer, in Staffordshire. A thin strip of woodland is present immediately to the south (containing a stream), and further patches of woodland and streams are present within 1km in all directions. The area is largely agricultural, with arable fields in all directions, associated with hedgerows and ditches along the boundaries.

The site itself is a former HGV garage, surrounded by areas of hardstanding, with patches of grass and tall ruderal vegetation on the periphery.

2.0 Methodology

Desk Study

2.1 In order to compile background information on the site and immediate surroundings the Staffordshire Ecological Record (SER) was contacted.

2.2 Information requested was as follows:-

- Records of protected species within the 2 km of the site.
- Records of rare or notable species within the 2 km of the site.
- Non-statutory site designations on or within 2 km of the site.

2.3 Additionally, MAGIC (Multi-Agency Geographic Information for the Countryside, 2010) was used to establish whether any of the following were present:-

- Statutory site designations on or within 2 km of the site.
- Statutory sites designated for bats within 5 km of the site.

Habitat Survey

2.4 The site was visited on the 19th June 2014 and was surveyed in accordance with the Joint Nature Conservation Committee (JNCC) Phase I Habitat Survey methodology (JNCC, 2007). This technique provides an inventory of the basic habitat types present and allows identification of areas of greater potential that might warrant further study.

2.5 The observable higher plant species in each habitat type within the site, and their abundance, were recorded using the DAFOR scale:

D Dominant

A Abundant

F Frequent

O Occasional

R Rare

Fauna

2.6 Habitats present on the site were searched for obvious signs of faunal activity, *e.g.* presence of badger setts, mammal tracks or herpetofauna under refugia. Any buildings and mature trees on site were visually examined from the ground to identify features with the potential to support roosting bats.

Valuation of Ecological Features

2.7 The value of areas of habitat and plant communities has been measured against published criteria where available. Biodiversity Action Plans (BAPs) have been searched to identify

whether action has been taken to protect all areas of a particular habitat and to identify current factors causing loss and decline of particular habitats. The presence of injurious and legally controlled weeds has also been taken into account.

2.8 When assigning a level of value to a species, its distribution and status (including a consideration of trends based on available historic records) has been taken into account. Other factors influencing the value of a species are: legal protection, rarity and Species Action Plans (SAPs). Guidance, where it is available, for the identification of populations of sufficient size for them to be considered of national or international importance has also been taken into account.

Survey Constraints

2.9 Data Search

Desk study data provides information on recorded species in the area and can be helpful for targeting survey. However, it is possible that protected species that have not been identified within the data search may occur on or adjacent to the site.

2.10 Field survey

Habitats within 30 m of the site boundary were inspected as far as access allowed. Ponds up to 500m from the site were viewed where there was public access.

Fauna species present may not always leave field signs and in addition, species may take up residence on site subsequent to the survey. If no development takes place within 12 months of this survey report, the findings should be reviewed and may need updating, and a full survey should be repeated within three years

Nomenclature

2.11 The English name only of flora and fauna species is given in the main text of this report; however, scientific names are used for invertebrates where no English name is available. Vascular plants and charophytes follow the nomenclature of The Botanical Society for the British Isles (BSBI) 2007 database (BSBI, 2011) with all other flora and fauna following the Nameserver facility of the National Biodiversity Network Species Dictionary (http://www.nhm.ac.uk/nbn/), which is managed by the Natural History Museum.

3.0 Legislation

3.1 The United Kingdom Biodiversity Action Plan (BAP) 1994 sets out a strategy for implementing the Convention on Biological Diversity, which was signed by the United Kingdom at the Rio de Janeiro Earth Summit in 1992. The published report contains action plans for the United Kingdom's most threatened species and habitat plans for the most vulnerable areas.

3.2 The Local BAP sets out the county's part in the UK biodiversity planning process, in the form of local habitat and species action plans. Local BAPs are intended to focus resources, to conserve and enhance biodiversity, by taking account of national and local priorities.

3.3 Schedule 1 Part 1 of The Wildlife and Countryside Act 1981 (and amendments) – this lists birds protected by special penalties at all times. It prohibits intentional killing/injuring, taking, possessing, disturbing and selling (including parts and derivatives, eggs, nests, *etc.* as applicable) as well as damaging, destroying or disturbing nests in current use or dependent young, *etc.*

3.4 Schedule 5 of The Wildlife and Countryside Act 1981 (and amendments) – this prohibits deliberate killing, injuring, taking, possessing, disturbing and selling (including parts and derivatives) as well as damaging, destroying or obstructing any structure or place of refuge of listed fauna, such as Dormouse, Otter and bat species.

3.5 The Conservation of Habitats and Species Regulations 2010, consolidate all the various amendments made to the Conservation (Natural Habitats, &c.) Regulations 1994, in respect of England and Wales. It is illegal to kill, disturb, destroy eggs, breeding sites or resting places, to pick, collect, take cuttings, uproot or destroy in the wild as well as keep, transport, sell/exchange and offer for sale/exchange species listed.

3.6 The Countryside and Rights of Way Act 2000 – this increases protection given by The Wildlife and Countryside Act 1981 (and amendments). The offence to intentionally damage any structure or place that a wild animal listed in Schedule 5 of the Act uses for shelter or protection or deliberately disturbing any such animal while in such a structure or place is extended so that the offence also covers reckless damage or disturbance. The CRoW Act also places a duty on Ministers and Government Departments to have regard for the purpose of conserving biological diversity in accordance with the Convention on Biological Diversity.

3.7 The Protection of Badgers Act 1992 - this Act makes it illegal to wilfully kill, injure or take any Badger, or attempt to do so and it is an offence to intentionally or recklessly damage, destroy or obstruct access to any part of a Badger sett.

3.8 The Natural Environment and Rural Communities Act, 2006 - as well as creating Natural England, this act gives all public authorities the duty to have regard for conserving biodiversity within the commission of their duties. This includes a duty to restore and enhance as well as maintain biodiversity. The act also strengthens protection for Sites of Special Scientific Interest (SSSI) and makes authorities liable for allowing damage to such sites or their features.

4.0 Results

Desk Study

4.1 There are three statutory designated sites within 2 km of the site.

- Approximately 1km to the north of the site is the start of Environmentally Sensitive Area of the South West Peak, with the Peak District National Park beginning approximately 1.5km to the northeast of the site. The site is within an Impact Risk Zone (IRZ) for the Leek Moors Site of Special Scientific Interest (SSSI) (approx. 3.5km northeast of the site).

4.2 There are no statutory designated sites for bats within 5 km of the site.

4.3 There are two non-statutory sites within 2 km of the site.

- Approximately 1km northwest of the site begins a Catchment Sensitive Farming Capital Grant Scheme Target Area. The area beginning approximately 1km south of the site is a Priority Catchment under the Catchment Sensitive Farming Delivery Initiative 2011-2014.

4.4 SER provided the following records for protected and notable species within 1 km of the site boundary:

Amphibians	
Common Toad	*Bufo bufo*
Great Crested Newt	*Triturus cristatus*
Birds	
Lesser Redpoll	*Acanthis cabaret*
Common Sandpiper	*Actitis hypoleucos*
Common Kingfisher	*Alcedo atthis*
Eurasian Teal	*Anas crecca*
Mallard	*Anas platyrhynchos*
Greylag Goose	*Anser anser*
Meadow Pipit	*Anthus pratensis*
Tree Pipit	*Anthus trivialis*
Common Swift	*Apus apus*
Common Pochard	*Aythya ferina*
Tufted Duck	*Aythya fuligula*
Common Goldeneye	*Bucephala clangula*
Dunlin	*Calidris alpina*
Ruff	*Calidris pugnax*
Little Plover	*Charadrius dubius*
Black-headed Gull	*Chroicocephalus ridibundus*
Stock Dove	*Columba oenas*
Common Cuckoo	*Cuculus canorus*
House Martin	*Delichon urbicum*
Lesser Spotted Woodpecker	*Dendrocopos minor*
Reed Bunting	*Emberiza schoeniclus*
Eurasian Hobby	*Falco subbuteo*
Common Kestrel	*Falco tinnunculus*
Pied Flycatcher	*Ficedula hypoleuca*
Brambling	*Fringilla montifringilla*
Common Snipe	*Gallinago gallinago*

Eurasian Oystercatcher	*Haematopus ostralegus*
Barn Swallow	*Hirundo rustica*
Herring Gull	*Larus argentatus*
Common Gull	*Larus canus*
Lesser Black-backed Gull	*Larus fuscus*
Black-tailed Godwit	*Limosa limosa*
Red Kite	*Milvus milvus*
Grey Wagtail	*Motacilla cinerea*
Yellow Wagtail	*Motacilla flava*
Spotted Flycatcher	*Muscicapa striata*
Eurasian Curlew	*Numenius arquata*
House Sparrow	*Passer domesticus*
Eurasian Tree Sparrow	*Passer montanus*
Grey Partridge	*Perdix perdix*
Common Redstart	*Phoenicurus phoenicurus*
Willow Warbler	*Phylloscopus trochilus*
Green Woodpecker	*Picus viridis*
Willow Tit	*Poecile montana*
Marsh Tit	*Poecile palustris*
Dunnock	*Prunella modularis*
Common Bullfinch	*Pyrrhula pyrrhula*
Sand Martin	*Riparia riparia*
Eurasian Woodcock	*Scolopax rusticola*
Common Eider	*Somateria mollissima*
Common Tern	*Sterna hirundo*
Common Starling	*Sturnus vulgaris*
Common Whitethroat	*Sylvia communis*
Common Greenshank	*Tringa nebularia*
Redwing	*Turdus iliacus*
Song Thrush	*Turdus philomelos*
Fieldfare	*Turdus pilaris*
Mistle Thrush	*Turdus viscivorus*
Barn Owl	*Tyto alba*
Northern Lapwing	*Vanellus vanellus*

Flowering Plants

Bluebell	*Hyacinthoides non-scripta*
Smooth Cat's-ear	*Hypochaeris glabra*
Small Water-pepper	*Persicaria minor*
Greater Butterfly-orchid	*Platanthera chlorantha*
Corn Buttercup	*Ranunculus arvensis*
Monk's-rhubarb	*Rumex alpinus*
Corn Spurrey	*Spergula arvensis*

Insects

Beetle	*Acrotrichis (Acrotrichis) lucidula*
Beetle	*Acrotrichis (Acrotrichis) strandi*
Beetle	*Atheta aquatilis*
Beetle	*Bembidion (Diplocampa) clarkii*
Beetle	*Bembidion (Notaphus) obliquum*
Beetle	*Dochmonota clancula*
Beetle	*Helophorus (Helophorus) nanus*
Beetle	*Hylecoetus dermestoides*

Beetle	*Lathrobium (Tetartopeus) zetterstedti*
Beetle	*Philhygra britteni*
Beetle	*Pterostichus (Pseudomaseus) gracilis*
White-letter Hairstreak Butterfly	*Satyrium w-album*
Tawny Mining Bee	*Andrena (Andrena) fulva*
Honey Bee	*Apis mellifera*
Hymenopteran	*Ectemnius (Clytochrysus) cavifrons*

Mammals

West European Hedgehog	*Erinaceus europaeus*
Brown Hare	*Lepus europaeus*
Eurasian Badger	*Meles meles*
Harvest Mouse	*Micromys minutus*
Pipistrelle	*Pipistrellus pipistrellus s.l.*
Brown Long-eared Bat	*Plecotus auritus*

Habitats

4.5 The following habitats or vegetation types were identified on the site during the course of the habitat survey.

- Buildings
- Hardstanding
- Amenity grassland
- Tall ruderal vegetation
- Tree

Buildings

4.6 There are three buildings on site. The main building (B1) is a large brick shed, with wooden-framed windows in the eastern & western walls, large steel sliding doors on the north, and pitched, steel-framed, corrugated asbestos roof. B2 is a smaller extension to the south of B1. This is metal-framed, clad in single-skinned corrugated metal, with a low brick walls on one side. B3 is a small, corrugated asbestos shed.

Hardstanding

4.7 Much of the site is concrete and gravel hardstanding. A few typical hardy colonisers were identified within this habitat including; Perennial Ryegrass (Lolium perenne), False Oat Grass (Arrhenatherum elatius), Ordinary moss (*Brachythecium rutabulum*), Ash (*Fraxinus excelsior*) and Ivy (*Hedera helix*).

Amenity grassland

4.8 At the northern and eastern boundaries are areas of closely-mown amenity grassland, dominated by perennial ryegrass (*Lolium perenne*), False Oat Grass (*Arrhenatherum elatius*) and white clover (*Trifolium repens*). Also present are occasional daisy (*Bellis perennis*) and dandelion (*Taraxacum officinale*).

Tall ruderal vegetation

4.9 The southern end of the site still contains the species of the amenity grassland, but has also been colonized by tall ruderal vegetation, including Creeping thistle (Cirsium arvense), Common nettle (Urtica dioica), Broadleaved dock (Rumex obtusifolius) and Rosebay willowherb (Chamerion angustifolium).

Tree

4.10 There is one mature tree on site, which is a large Oak (*Quercus robur*). This is located to the immediate west of B2.

Fauna

Bats

4.11 SER provided several records of bat species within 2 km of the site. There are three buildings on site. B1 is the main garage, which shows multiple potential access points for bats, and contains cracks within the walls which may offer roosting sites for crevice-dwelling species. The interior is fairly light and exposed however, and so potential for roosting bats is low. B2 is a smaller lean-to extension to B1, with steel frame, corrugated steel roof/cladding, and a low brick wall. It is tightly sealed, which (along with the materials used) means that it does not appear to offer any potential roosting sites for bats. B3 is a corrugated asbestos shed. Despite its dilapidated condition, it is tightly sealed, which (along with the materials used) means that it does not appear to offer any potential roosting sites for bats.

4.12 The large oak on site appears to offer features suitable for roosting bats such as rot holes and cracked / split limbs. It is understood however that this tree will not be affected by the proposed development.

4.13 The site itself provides limited foraging habitat for bat species. The adjacent woodland, woodland edge, and hedgerows are likely to be used by foraging bats as well as navigational flight lines however.

Badgers

4.14 Whilst SER provided records of Badger within 2 km of the site, there is no suitable habitat on site for badgers.

Dormice

4.15 There are no records of Dormice occurring within 2 km of the site. There is no suitable habitat on site for dormice.

Water Voles and Otters

4.16 There are no records of Water Voles or Otters occurring within 2 km of the site. There is no water present on site.

4.17 There is no suitable habitat on site for otters or water voles.

Other mammals

4.18 SER provided records of Hedgehog, Brown Hare and Harvest Mouse within 2km of the site. The tall ruderal vegetation in the south of the site provides cover for small animals, and as such is expected to support a good number of common small mammals.

Birds

4.19 Records of a number of bird species were provided by SER within 2Km. The following were either observed or heard on site during the survey: Wren and Starling.

4.20 The site as a whole provides good foraging and nesting habitat for a range of bird species. The area of tall ruderal vegetation provides cover for ground nesting birds, although this is small in area. The buildings and mature tree also offer good foraging and nesting habitat for a range of common birds.

Reptiles

4.21 SER did not provide any records of reptiles. The majority of the site is unsuitable for reptiles, and lacks extensive areas of scrub with open basking areas typically associated with reptiles. The area of tall ruderal vegetation provides the only cover and foraging habitat. All potential refugia on site were inspected, and no evidence of reptiles found.

Amphibians

4.22 SER provided records of Common Toad and Great Crested Newt within 2 km of the site. There is no standing water on site. No ponds are present within 500 m of the site on OS maps, and although the area of tall ruderal vegetation could provide suitable habitat for species of amphibians in the terrestrial phase of their life cycle, the lack of suitable water bodies in the surrounding area means that the site is unlikely to be important for amphibians.

Invertebrates

4.23 Whilst SER provided records of a number of notable invertebrate species within 2km of the site, the habitats on site are generally common and do not provide much potential for rare invertebrate species, although they are expected to support a number of more common species.

5.0 Development Constraints and Recommendations

5.1 The site is the subject of a possible planning application for a residential development. Ecological constraints and recommendations with regard to any development are discussed below.

Designated Sites

5.2 There are three statutory designated sites within 2 km of the site.

- Approximately 1km to the north of the site is the start of Environmentally Sensitive Area of the South West Peak, with the Peak District National Park beginning approximately 1.5km to the northeast of the site. The site is within an Impact Risk Zone (IRZ) for the Leek Moors Site of Special Scientific Interest (SSSI) (approx. 3.5km northeast of the site).

5.3 The proposed development is far removed from these sites, and comprises wholly of previously developed land. No adverse impacts on these sites are therefore expected.

Habitats

5.4 Botanically, the site itself does not appear to have any rare species and it is not particularly diverse.

Potential Impacts of Works

5.5 There are plans for the redevelopment of the site; focusing on demolition & rebuilding of B1 & B3. If development is undertaken in the future, potential impacts are likely to include the following.

5.6 Works affecting the buildings may cause loss of bat roosts, and in the event that bats are present they might be killed or injured during works. Were plans to change and include the mature tree on site, then this would be a consideration also.

5.7 Loss of the buildings may affect birds that use the site for breeding and foraging by causing a decrease in nesting sites and food resources. Loss of these habitats may directly harm nesting birds if carried out during the breeding season (March to August inclusive). Were plans to change and include the tall ruderal vegetation and mature tree on site, then this would be a consideration also.

5.8 In the event that reptiles are present on site, they might be killed or injured if the area of tall ruderal vegetation were to be affected by works. They would also suffer loss of habitat in that case.

Recommendations

5.9 The following are general recommendations that are likely to be a minimum requirement for any future development of the site. To prevent potential delays, it would be prudent to undertake the recommended surveys well in advance of any master-planning and certainly before any planning application is made.

Bats

5.10 The habitats for foraging bats are limited within the site, and loss of the buildings is unlikely to significantly impact local bat populations, particularly as richer foraging areas are present within the vicinity.

5.11 It is recommended that emergence/entry surveys are undertaken to check whether any bats are roosting in B1. Following Good Practice Guidelines for a building of low potential for bats, a minimum of one survey should be undertaken within the peak activity season (May to August).

Birds

5.12 Nesting birds may be present in the tree, tall ruderal vegetation and buildings during the bird breeding season (March to August inclusive). If any works affecting these areas are planned during these months, then a prior check for nesting birds should be undertaken by an ecologist. Any active nests that are found must not be moved until fledglings have dispersed.

5.13 It would be of conservation benefit to install a variety of nesting boxes for different bird species within the site in future (buildings and trees where suitable) to enhance the site for nesting birds and encourage bird diversity. Information on bird nesting boxes can be found at http://www.rspb.org.uk/advice/helpingbirds/nestboxes/. Planting new hedgerows and shrubs within any new development can benefit birds if a wide range of native species are used.

Reptiles

5.14 The presence of reptiles on site is unlikely. However, as current plans do not affect the area of tall ruderal vegetation, it would be prudent to fence this area off, in order to prevent accidental damage during works.

Other considerations

5.15 A lighting design around the new building should be considered at an early stage. Light spill can affect the foraging and commuting strategy of many species and thus should be avoided on nearby trees and hedges/shrubs and should not exceed 200 lumens (150 watts). Any security lighting should be on a timer setting and faced downwards to prevent spillage onto nearby habitats. The height of any lighting columns around the development should not exceed 8 m to further reduce any ecological impact of light pollution. Low-pressure sodium lamps (SOX) fitted with hoods are recommended to direct light below the horizontal plane to minimize upward light spill.

6.0 References

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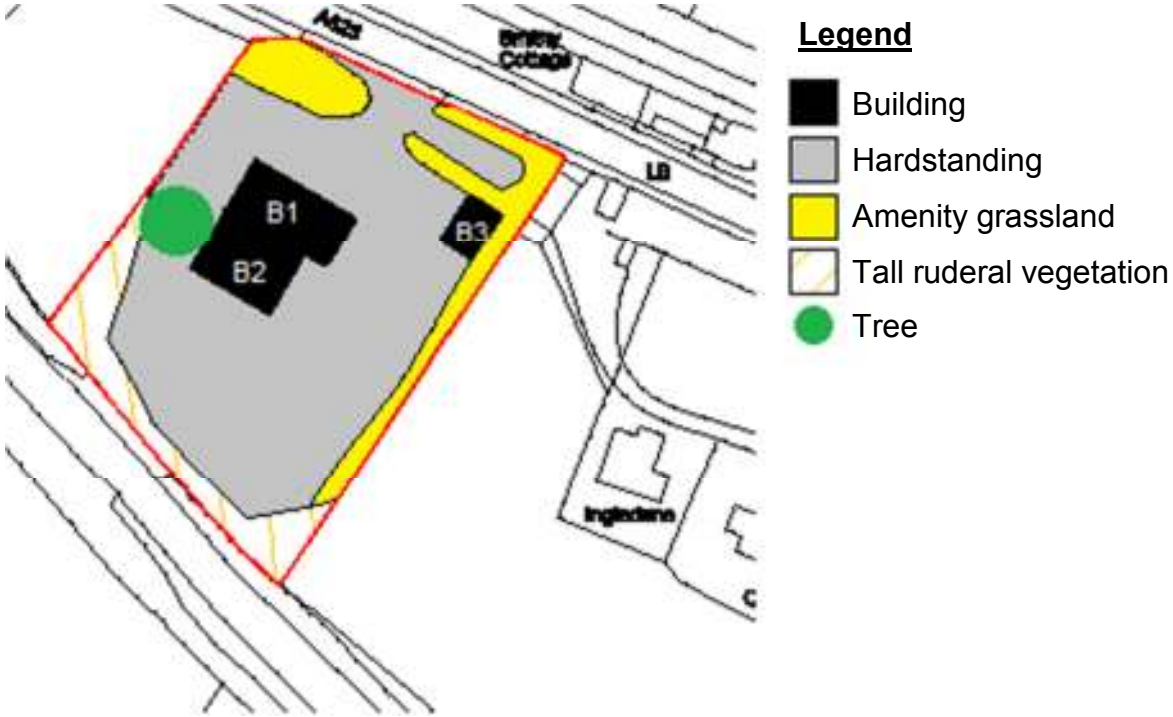
7.0 Plans

Extended Phase I Habitat Survey



8.0 Photographic Plates

Figure 1: B1

Figure 2: B2

Figure 3: B3

Figure 4: B1 internal

Figure 5: Hardstanding, with tall ruderal vegetation to rear

Figure 6: Patches of amenity grassland on northern boundary of site