

BLACK BOX PLANNING LTD



**ECOLOGY**SOLUTIONS

Part of the ES Group

KNOLL HOUSE HOTEL,  
FERRY ROAD,  
STUDLAND

**EIA**  
**Environmental Statement –**  
**Technical Appendix 7.1 to**  
**Chapter 7:**  
**Biodiversity**

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## 7.1 INTRODUCTION

### Background

- 7.1.1 Ecology Solutions was commissioned in April 2022 by Black Box Planning Ltd. to undertake updated surveys of Knoll House Hotel, Ferry Road, Studland (see Figure 7.1) and were requested to prepare a Biodiversity chapter as part of an Environmental Statement.
- 7.1.2 This assessment relies on habitat and faunal surveys carried out by Ecology Solutions between May and October 2022 with regard also had to the findings from prior surveys by a previous consultancy in August 2017. The habitat surveys were based around extended Phase 1 survey methodology<sup>1</sup>, as recommended by Natural England. The habitat types present within the Application Site have been identified and mapped, providing an inventory of the basic habitat types present and allowing the identification of areas of greater ecological value. Faunal activity, whether visually or by call was recorded during the course of the survey and specific attention was paid to the potential presence of any protected, rare, notable or Priority Species.
- 7.1.3 Previous surveys were also undertaken by Focus Ecology Ltd in 2017 as part of a previous planning application for the same area of land that includes the current Application Site. However, these surveys are considered out of date but have been referenced within this report where appropriate.
- 7.1.4 This technical report sets out any potential impacts arising from the proposed development, together with any required strategies to minimise or compensate for those potential impacts.

### Application Site Characteristics

- 7.1.5 The Application Site is located along Ferry Road, to the north of Studland, Dorset. To the north and west, the Application Site is bounded by a woodland, which forms part of the Wider Study Area, Studland and Godlingston Heath Nature Reserve lies beyond. To the east the Application Site is bounded by Ferry road, with part of the Wider Study Area beyond comprising a golf course and Knoll beach and Studland bay located beyond. The Application Site is bounded to the south by an area of grassland, which lies within the Wider Study Area, with open countryside and areas of existing residential dwellings, whilst to the west the Application Site is bordered woodland with lowland heathland beyond.
- 7.1.6 The Application Site itself is dominated by hardstanding and buildings with small areas of amenity planting, amenity grassland, scattered trees and a tree line. The Wider Study Area comprises mixed woodland to the

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<sup>1</sup> Joint Nature Conservation Committee (1993). *Handbook for Phase 1 Habitat Survey – a Technique for Environmental Audit*. England Field Unit, Nature Conservancy Council, reprinted JNCC, Peterborough.

north and west, with an area of semi-improved grassland to the east and small areas of hardstanding.

### **Proposals**

- 7.1.7 The development proposals are for the redevelopment of Knoll House Hotel which will include the partial demolition of the existing hotel building and the erection of a new hotel as an extension to include 30 rooms, 22 apartments, 26 villas and ancillary leisure facilities which includes a restaurant, bistro, gym, swimming pool and spa along with associated car parking, servicing, and landscaping.

## 7.2 ASSESSMENT METHODOLOGY

### Identifying the Zone of Influence

7.2.1 The potential ecological impacts of the proposed development are largely confined to the Application Site itself but given the continuity of agricultural land outside the Application Site boundaries, consideration has also been given to the following likely significant effects, which may spread beyond the Application Site:

- Disturbance to populations within hearing range during the construction phase;
- Fragmentation of ‘dispersal corridors’ utilised by adjacent populations;
- Disruption to habitats / populations within receiving range of dust etc during the construction phase;
- Disturbance to habitats / populations within walking distance during the operation phase; and
- Pollution to watercourses during the construction and operation phases.

### Impact Assessment Methodology

7.2.2 The evaluation and impact assessment method has been undertaken with due regard to the guidelines produced by the Chartered Institute of Ecology and Environmental Management<sup>2</sup>, which avoids the provision of definitions as to how to assign habitats and species different levels of value and relies on an approach that involves professional judgement and the use of available guidance and information.

7.2.3 The value of each resource is determined within a defined geographical context:

- International;
- UK;
- National (England/Northern Ireland/Scotland/Wales);
- Regional;
- County (or Metropolitan – e.g. in London);
- District (or Unitary Authority, City or Borough);
- Local or Parish; or
- Within Zone of Influence only

7.2.4 A number of other key considerations include:

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<sup>2</sup>CIEEM (2018) Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine. Chartered Institute of Ecology and Environmental Management, Winchester

- Designated Sites and Features (e.g. Special Protection Areas, Sites of Special Scientific Interest, important hedgerows etc.);
- Biodiversity Value (Use of Biodiversity Action Plans, development plans and other published documents);
- Potential Value;
- Secondary or Supporting Value;
- Social or Economic Value; and
- Legal Issues

7.2.5 For example, whilst new Frameworks are being developed which will build on the Dorset Biodiversity Strategy these documents are still useful tools that have been used to assist in valuing features and developing mitigation strategies, where necessary. Consideration has also been given to policies contained within the Local Plans.

7.2.6 Having identified the ecologically important features likely to be affected by the development, the current guidance promotes a transparent approach in which an impact is determined to be significant or not on the basis of a discussion of the factors that categorise it. This includes characterising the nature of the likely impacts on each important feature in terms of ecological structure and function, by considering the following parameters:

- Positive or negative / beneficial or adverse;
- Extent;
- Magnitude
- Duration;
- Reversibility; and
- Timing and frequency.

7.2.7 Where it is concluded that there would be an impact (positive or negative and including cumulative impacts) on a defined site or ecosystem(s) and / or the conservation status of habitats or species within a given geographical area, it is described as significant in the following terms; major, moderate, minor, negligible and none.

## 7.3 SURVEY METHODOLOGY

7.3.1 The methodology utilised for the survey work can be split into three areas, namely desk study, habitat survey and faunal survey. These are discussed in more detail below.

### **Desk Study**

7.3.2 In order to compile background information on the Application Site and the surrounding area, Ecology Solutions contacted Dorset Environmental Records Centre (DERC).

7.3.3 Further information on designated sites from a wider search area was obtained from the online Multi-Agency Geographic Information for the Countryside (MAGIC)<sup>3</sup> database. This information is reproduced at Annex 7.1 and included, where appropriate, on Figure 7.1.

### **Habitat Survey Methodology**

7.3.4 The Application Site and Wider Study Area was subject to habitat surveys between May and October 2022 to ascertain the general ecological value of the land and to identify the main habitats and associated plant species, with notes taken on fauna utilising the site.

7.3.5 **Extended Phase 1.** Ecology Solutions survey work was based around an extended Phase 1 Survey methodology<sup>4</sup> approved by Natural England, whereby the habitat types present are identified and mapped together with an assessment of the species composition of each habitat. This technique provides an inventory of the basic habitat types present and allows identification of areas of greater potential value, which require further survey. Any such areas identified can then be examined in more detail.

7.3.6 The habitats present within the Application Site were classified into areas of similar botanical community types with a representative sample of those species present at the time of the site survey being described where necessary.

### *Previous Surveys*

7.3.7 Previous habitat surveys were undertaken within the Application Site by Focus Ecology Ltd in 2017.

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<sup>3</sup> <http://www.magic.gov.uk>

<sup>4</sup> Joint Nature Conservation Committee (1993) Handbook for Phase 1 Habitat Survey: A Technique for Environmental Audit. Peterborough. 1993.



## **Fauna**

- 7.3.8 General faunal activity, such as birds or mammals observed visually or by call during the course of the survey, was recorded. Specific attention was paid to any potential use of the Application Site and Wider Study Area by protected species, priority species, or other notable species.
- 7.3.9 In addition, specific surveys were carried out between May and October 2022 for the presence of Badgers *Meles meles*, bats and reptiles.
- 7.3.10 Experienced ecologists undertook the faunal surveys with regard to established best practice and guidance issued by Natural England. Details of the methodologies employed are given below.

### Badgers

- 7.3.11 Specific surveys for Badgers were carried out in October 2022.
- 7.3.12 The surveys comprised two main elements. Firstly, searching thoroughly for evidence of Badger setts. For any setts encountered each sett entrance was noted and plotted, even if the entrance appeared disused. The following information was recorded:
- i) The number and location of well used or very active entrances; these are clear of any debris or vegetation and are obviously in regular use and may, or may not, have been excavated recently.
  - ii) The number and location of inactive entrances; these are not in regular use and have debris such as leaves and twigs in the entrance, or have plants growing in or around the edge of the entrance.
  - iii) The number of disused entrances; these have not been in use for some time, are partly or completely blocked and cannot be used without considerable clearance. If the entrance has been disused for some time all that may be visible is a depression in the ground where the hole used to be together with the remains of the spoil heap.
- 7.3.13 Secondly, evidence of Badger activity such as well-worn paths, run-throughs, snagged hair, footprints, latrines and foraging signs was recorded so as to build up a picture of the use of the Application Site by Badgers.

### *Previous Surveys*

- 7.3.14 Surveys for Badgers were previously undertaken by Focus Ecology Ltd in 2017.

## Bats

7.3.15 Field surveys were undertaken within the Application Site with regard to best practice guidelines issued by the Joint Nature Conservation Committee (2004<sup>5</sup>) and the Bat Conservation Trust and (2016<sup>6</sup>).

7.3.16 All standard and hedgerow trees within the Application Site and Wider Study Area were assessed for their potential to support roosting bats. Features typically favoured by bats were searched for, including:

- Obvious holes, e.g. rot holes and old Woodpecker holes;
- Dark staining on the tree, below the hole;
- Tiny scratch marks around a hole from bat claws;
- Cavities, splits and or loose bark from broken or fallen branches, lightning strikes etc; and
- Very dense covering of mature Ivy over trunk.

### *Internal / External Building Assessment*

7.3.17 The buildings within the Application Site and Wider Study Area were assessed for their potential to support roosting bats and were subject to internal and external surveys using ladders, torches, mirrors, binoculars and an endoscope where necessary.

7.3.18 Evidence of the presence of bats was searched for, with particular attention paid to the roof areas and gaps between rafters and beams. Specific searches were made for bat droppings, which can indicate present or past use and extent of use, and other signs to indicate the possible presence of bats e.g. presence of stained areas, or areas that are conspicuously cobweb-free.

7.3.19 The probability of a building being used by bats increases if it:

- is largely undisturbed;
- dates from pre-20<sup>th</sup> Century;
- has a large roof void with unobstructed flying spaces;
- has access points for bats (though not too draughty);
- has wooden cladding or hanging tiles; and/or
- is in a rural setting and close to woodland or water.

7.3.20 Conversely, the probability decreases if a building is of a modern or pre-fabricated design/construction, is in an urban setting, has small or cluttered roof voids, has few gaps at the eaves or is a heavily disturbed premises.

7.3.21 The main requirements for a winter/hibernation roost site are that it maintains a stable (cool) temperature and humidity. Sites commonly

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<sup>5</sup> Mitchell-Jones, A.J. & McLeish, A.P. (Eds.) (2004). *Bat Workers' Manual*. 3<sup>rd</sup> edition. Joint Nature Conservation Committee, Peterborough.

<sup>6</sup> Bat Conservation Trust (2016). *Bat Surveys for Professional Ecologists – Good Practice Guidelines (3<sup>rd</sup> Edition)*. Bat Conservation Trust, London.

utilised by bats as winter roosts include cavities/holes in trees, underground sites and parts of buildings. Whilst different species may show a preference for one of these types of roost site, none are solely dependent on a single type.

- 7.3.22 Field surveys were undertaken within the Application Site with regard to best practice guidelines issued by the Joint Nature Conservation Committee (2004<sup>7</sup>) and the Bat Conservation Trust (2016<sup>8</sup>).

#### *Previous Surveys*

- 7.3.23 Focus Ecology undertook internal, emergence and re-entry surveys for bats between August and September 2017 within the Application Site.

#### Reptiles

- 7.3.24 Specific surveys for reptiles were carried out between August and September 2022. The methodology utilised principally derived from guidance given in the Herpetofauna Workers Manual.

- 7.3.25 Areas of suitable habitat (rough grassland margins) were surveyed for the presence of reptiles using artificial refugia (“tins”). 120 0.5m x 0.5m roofing felt tins were placed within areas of suitable reptile habitat in the Wider Study Area.

- 7.3.26 The tins provide shelter and heat up quicker than the surroundings in the morning and can remain warmer than the surroundings in the late afternoon. Being ectothermic (cold blooded), reptiles use them to bask under and raise their body temperature which allows them to forage earlier and later in the day.

- 7.3.27 To determine presence/absence the tins are checked for reptile activity over seven visits at appropriate times of the day (avoiding the middle of the day when the ambient air temperature is at its highest) in accordance with Natural England guidance. Optimum weather conditions for reptile surveying are temperatures between 10°C and 17°C, intermittent or hazy sunshine and little or no wind.

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<sup>7</sup> Mitchell-Jones, A.J. & McLeish, A.P. (Eds.) (2004). *Bat Workers' Manual*. 3<sup>rd</sup> edition. Joint Nature Conservation Committee, Peterborough.

<sup>8</sup> Bat Conservation Trust (2016). *Bat Surveys for Professional Ecologists – Good Practice Guidelines (3<sup>rd</sup> Edition)*. Bat Conservation Trust, London.

## 7.4 BASELINE CONDITIONS

### Introduction

7.4.1 The objectives of establishing the ecological baseline are twofold:

- to describe aspects of the natural environment and to identify important and protected habitats and species that could be adversely affected by the proposed development; and
- to characterise features that could be positively enhanced, created, restored or managed, by establishing the occurrence, distribution and extent of ecological features on site and in the surrounding area; and/or those species that could be positively managed to enhance their conservation status, distribution and abundance.

### Context

7.4.2 Unlike the intensive amenity habitats within the Application Site, natural and semi-natural habitats usually support the greatest diversity of wildlife. Important species are those protected by international or national legislation; those that have been identified in the 'UK Post-2010 Biodiversity Framework'<sup>9</sup> as Priority Species, and those identified as locally distinctive in a local BAP, such as the 'Dorset Biodiversity Strategy (e.g. 'local keystone', 'flagship' and 'umbrella species'<sup>10</sup>).

7.4.3 National Character Areas are sub-divisions of England, each with a characteristic association of wildlife and natural features defined by Natural England. Each National Character Area has a unique identity resulting from the interaction of wildlife, landforms, geology, land use and human impact.

7.4.4 The Application Site is located within the Dorset Heaths National Character Area. This National Character Area comprises extensive blocks of heathland separated by river valleys and by two natural harbours of Poole and Christchurch. Specialised species within the area includes Dartford warbler *Sylvia undata*, Nightjar *Caprimulgus europaeus*, Woodlark *Lullula arborea*, Sand Lizard *Lacerta agilis* and Smooth Snake *Coronella austriaca*.

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<sup>9</sup> JNCC and Defra (on behalf of the Four Countries' Biodiversity Group) (2012) *UK Post-2010 Biodiversity Framework*. July 2012. <http://jncc.defra.gov.uk/page-6189>

<sup>10</sup> Developing Naturally. 2000. A Handbook for Incorporating the Natural Environment into Planning and Development.

## Designated Sites

### Statutory

- 7.4.5 The nearest statutory designed site is Studland and Godlingston Heaths Site of Special Scientific Interest (SSSI), which forms part of the Dorset Heathlands Special Protection Area (SPA) / Ramsar, Dorset Heaths (Purbeck and Wareham) and Studland Dunes Special Area of Conservation (SAC) and Purbeck Heaths National Nature Reserve (NNR) that lies approximately 70m northwest of the Application Site.
- 7.4.6 Studland and Godlingston Heaths SSSI is designated for its coastal geomorphology and the range of habitats on Studland and Godlingston Heaths including an expanse of heathland which holds a wide variety of rare and protected species. Dorset Heathlands SPA is designated for its populations of Hen harrier *Circus cyaneus* (Non-breeding); Merlin *Falco columbarius* (Non-breeding); Nightjar *Caprimulgus europaeus* (Breeding); Woodlark *Lullula arborea* (Breeding) and Dartford warbler *Sylvia undata* (Breeding), while the Ramsar site is designated for its northern Atlantic wet heaths with cross-leaved heath and acid mire with Rhynchosporion; Supports 1 nationally rare and 13 nationally scarce wetland plant species, and at least 28 nationally rare wetland invertebrate species and has a high species richness and high ecological diversity of wetland habitat types and transitions, and lies in one of the most biologically-rich wetland areas of lowland Britain. Dorset Heaths (Purbeck and Wareham) and Studland Dunes SAC is designated for its Embryonic shifting dunes; "Shifting dunes along the shoreline with Ammophila arenaria ("white dunes")"; Atlantic decalcified fixed dunes (Calluno-Ulicetea); Humid dune slacks; Oligotrophic waters containing very few minerals of sandy plains (Littorelletalia uniflorae); Northern Atlantic wet heaths with Erica tetralix; Temperate Atlantic wet heaths with Erica ciliaris and Erica tetralix; European dry heaths; Depressions on peat substrates of the Rhynchosporion and Bog woodland.
- 7.4.7 The next closest designated site is Isle of Portland to Studland Cliffs SAC, which lies approximately 300m southeast of the Application Site, while Poole Harbour SSSI / SPA / Ramsar is located approximately 1.4km northwest of the Application Site.

### Non-Statutory

- 7.4.8 The nearest non-statutory designated site is Godlingston-Studland Fields Site of Nature Conservation Interest (SNCI), located approximately 280m southwest of the Application Site. This SNCI is designated for its acid grassland and scrub habitats.
- 7.4.9 A number of additional statutory and non-statutory sites are located in the vicinity and these are identified on Figure 7.1.

## Habitats

7.4.10 The following main habitat / vegetation types were identified within the Application Site:

- Amenity Grassland;
- Amenity Planting;
- Trees;
- Hardstanding;
- Swimming Pool; and
- Buildings.

### Amenity Grassland

7.4.11 Areas of amenity grassland are present throughout the Application Site and are regularly managed through cutting to a very short sward. Species present within the sward include Perennial Rye-grass *Lolium perenne*, Red Fescue *Festuca rubra*, Annual Meadow-grass *Poa annua* and Creeping Bent *Agrostis stolonifera*, while herbaceous species include White Clover *Trifolium repens*, Ribwort Plantain *Plantago lanceolata*, Creeping Thistle *Cirsium arvense* and Groundsel *Senecio vulgaris*.

### Amenity Planting

7.4.12 Amenity planting is scattered throughout the Application Site, with species present including *Fuchsia*, Leyland Cypress *Cupressus leylandii*, *Cotoneaster* sp., Himalayan Honeysuckle *Leycesteria formosa*, Smoke Bush *Cotinus coggygria*, Lavender *Lavandula angustifolia*, *Pyracantha* and New Zealand Flax *Phormium tenax*.

### Trees

7.4.13 A number of scattered trees are present throughout the Application Site, with the dominant species comprising Scots Pine *Pinus sylvestris*. Additional species include Sweet Chestnut *Castanea sativa*, Cedar *Cedrus atlantica*, Eucalyptus *Eucalyptus camaldulensis* and *Sorbus* sp.

7.4.14 A tree line is present within the northwest of the Application Site and comprises Scots Pine.

### Buildings

7.4.15 A total of 13 buildings (B1-B4 and B6-B15) lie within the Application Site, while two buildings (B5 and B17) lie within the Wider Study Area, adjacent to the Application Site. Each of these buildings is described individually below.

7.4.16 Building B1 is a two-storey building comprising rendered pebbledash, with a pitched roof comprising clay tiles.

- 7.4.17 Building B2 is a single-storey brick building with a pitched roof comprising tightly fitting concrete tiles.
- 7.4.18 Building B3 is a single storey prefabricated building comprising rendered walls and a pitched roof with tightly fitting concrete tiles.
- 7.4.19 Buildings B4, B5, B6, B7, B11, B13, B14, B15 and B16 are single-storey outbuildings constructed of timber cladding with felt roofs.
- 7.4.20 Building B8 is a series of greenhouses.
- 7.4.21 Building B9 is a single-storey building with tight fitting cladding on its exterior and a pitched clay-tiled roof.
- 7.4.22 Building B10 is rendered single-storey building with a pitched roof comprising tightly-fitting concrete tiles.
- 7.4.23 Building B12 is a two-storey rendered building with a pitched clay tiled roof that has been built out internally.

#### Hardstanding and Swimming Pool

- 7.4.24 Areas of hardstanding are present throughout the Application Site and comprise areas of tarmac, gravel and paving, while an outdoor swimming pool is present along the southern boundary.

#### Background Records

- 7.4.25 The DERC returned a record of the Notable and Protected plant species Bluebell *Hyacinthoides non-scripta* from within a 100m grid square that also includes the Application Site in 2014 including Common Knapweed *Centaurea nigra*, Common Fleabane *Pulicaria dysenterica*, Bog Stitchwort *Stellaria alsine*, Sharp-leaved Fluellen *Kickxia elatine* and Square-stalked St John's-wort *Hypericum tetrapterum*. An additional record returned from within the Wider Study Area comprises Dotted Sedge *Carex punctata* in 2018, which is registered in the Dorset Rare Plan Register.
- 7.4.26 None of the above species were recorded within the boundary of the Application Site and given the amenity nature of the habitats, it is considered unlikely that they would be present. It is therefore considered that the above records all relate to recordings within the Wider Study Area.

#### **Wildlife Use of the Application Site**

- 7.4.27 General observations were made during Ecology Solutions' surveys of any faunal use of the Application Site and Wider Study Area, with attention paid to the potential presence of protected species. In addition,

specific surveys were carried out between May and October 2022 for the presence of Badgers, bats and reptiles.

### Badgers

7.4.28 No evidence of Badgers was recorded within the Application Site or Wider Study Area during surveys.

7.4.29 It is considered that the amenity grassland, trees and amenity planting within the Application Site offers some limited opportunities for Badgers, while the woodland and grassland habitats within the Wider Study Area offers greater opportunities for Badgers.

### *Previous Surveys*

7.4.30 Surveys undertaken by Focus Ecology in 2017 recorded Badger latrines within the off-site woodland.

7.4.31 **Background Records.** The DERC returned no records of Badger from within the Application Site. The nearest record returned of a Badger was of a sett located approximately 1.5km southeast of the Application Site in 2012.

7.4.32 Given the known presence of Badgers within the local area, a precautionary approach with regard to this species is recommended during construction.

### Bats

7.4.33 The trees and amenity planting within the Application Site likely offer some foraging and navigational opportunities for bats.

### *Internal/External Building Surveys*

7.4.34 All buildings were subject to internal and external surveys in respect of roosting bats in October 2022. A single dropping was recorded within the loft void of building B1.

7.4.35 No evidence of roosting bats was recorded within, or on the exterior, of any other buildings during the survey.

7.4.36 **Previous surveys.** Focus Ecology Ltd carried out a Preliminary Roost Assessment in August 2017 and identified building B1 as a bat roost. Buildings 2-8 and 11 were identified as 'low suitability for bats'. A small number of Common Pipistrelle droppings were recorded within the loft void of building B1, while Soprano Pipistrelle droppings were also recorded on the exterior of building B1 along its western aspect.



### *Emergence / Re-entry Surveys*

7.4.37 Buildings B1, B2, B4, B5, B6 and B7 were subject to emergence surveys on 30<sup>th</sup> May 2022, 13<sup>th</sup> July 2022 and 11<sup>th</sup> August 2022 and dawn re-entry surveys on 31<sup>st</sup> May 2022, 14<sup>th</sup> July 2022 and 12<sup>th</sup> August 2022.

7.4.38 A summary of weather conditions can be seen in Table 1 below:

**Table 1.** Weather conditions during emergence and re-entry surveys.

<b>Survey</b>	<b>Temperature (°C)</b>	<b>Cloud Cover (%)</b>	<b>Wind Speed</b>	<b>Precipitation</b>
30 <sup>th</sup> May 2022 Emergence	12	20	Light Breeze	None
31 <sup>st</sup> May 2022 Re-entry	9	70	Still	None
13 <sup>th</sup> July 2022 Emergence	23	70	Still	None
14 <sup>th</sup> July 2022 Re-entry	15	0	Still	None
11 <sup>th</sup> August 2022 Emergence	23	0	Light Breeze	None
12 <sup>th</sup> August 2022 Re-entry	18	0	Still	None

7.4.39 During the emergence survey on 30<sup>th</sup> May 2022, one Common Pipistrelle *Pipistrellus pipistrellus* was recorded emerging from building B1 along the west-facing roof within the courtyard. No emergences were recorded from any other building during the survey. The results of this survey can be seen on Figure 7.4. During the emergence survey 113 registrations of Soprano Pipistrelle *Pipistrellus pygmaeus*, 86 registrations of Common Pipistrelle, 5 registrations of Serotine *Eptesicus serotinus*, 4 registrations of Noctule *Nyctalus noctula*, 4 registrations of Leisler's *Nyctalus leisleri*, 3 registrations of Myotis *Myotis sp.* and 3 registrations of Nathusius' Pipistrelle *Pipistrellus nathusii* were recorded. It is considered that a number of these registrations were duplicates recorded across multiple detectors in close proximity.

7.4.40 During the dawn re-entry survey on 31<sup>st</sup> May 2022 no bats were seen re-entering any buildings. A total of 117 Common Pipistrelle registrations, 33 Soprano Pipistrelle registrations, 3 Nathusius' Pipistrelle registrations, 2 Noctule registrations and one Serotine registration were recorded during the survey. It is considered that a number of these registrations were duplicates recorded across multiple detectors in close proximity.

7.4.41 During the emergence survey on 13<sup>th</sup> July 2022 no bats were seen emerging from any buildings. A total of 248 Common Pipistrelle registrations, 225 Noctule registrations, 94 Soprano Pipistrelle registrations, 89 registrations of Leisler's, 50 Serotine registrations, 8 Nathusius' Pipistrelle registrations, 5 Myotis registrations and two Long-eared *Plecotus sp.* registrations were recorded during the survey. It is considered that a number of these registrations were duplicates recorded across multiple detectors in close proximity.

- 7.4.42 During the dawn re-entry survey on 14<sup>th</sup> July 2022 one emergence of a Common Pipistrelle was recorded leaving building B1 underneath the eaves of the coach house, and five re-entries of Common Pipistrelles were recorded entering into the same area. No other emergences/re-entries were recorded during the survey. The results of this survey can be seen on Figure 7.4. A total of 286 Common Pipistrelle registrations, 69 Soprano Pipistrelle registration, 33 Leisler's registrations, 23 Serotine registrations, 22 Nathusius' Pipistrelle registrations, 9 Noctule registrations and five Myotis registrations were recorded during the survey. It is considered that a number of these registrations were duplicates recorded across multiple detectors in close proximity.
- 7.4.43 During the emergence survey on 11<sup>th</sup> August 2022 no bats were seen emerging from any buildings. A total of 488 Common Pipistrelle registrations, 42 Soprano Pipistrelle registrations, 18 Noctule registrations, 12 Serotine registrations, 7 Nathusius' Pipistrelle registrations, 5 Brown Long-eared registrations, two Leisler's registrations, two Greater Horseshoe *Rhinolophus ferrumequinum* registrations and one Myotis registrations were recorded during this survey. It is considered that a number of these registrations were duplicates recorded across multiple detectors in close proximity.
- 7.4.44 During the dawn re-entry survey on 12<sup>th</sup> August 2022, one Common Pipistrelle was seen re-entering building B1 underneath guttering along the northern side of the building. Additionally, two Common Pipistrelles were seen re-entering the building within different locations along the eastern side of building B1. The results of this survey can be seen on Figure 7.4. A total of 58 Common Pipistrelle registrations, 42 Soprano Pipistrelle registrations, 7 Myotis registrations, 6 Leisler's registrations, 5 Serotine registrations, 3 Nathusius' Pipistrelle registrations, 3 Noctule registrations, two Barbastelle *Barbastella barbastellus* registrations and one Brown Long-eared registration were recorded during the survey. It is considered that a number of these registrations were duplicates recorded across multiple detectors in close proximity.
- 7.4.45 **Previous Surveys.** Surveys undertaken by Focus Ecology in 2017 identified Common Pipistrelle and Soprano Pipistrelle day roosts within building B1, as well as a Soprano Pipistrelle day roost within building B5.
- 7.4.46 **Summary.** Given the results of the internal, emergence and re-entry surveys, it is considered that building B1 supports a small population of Common Pipistrelle bats, with a maximum of five individuals recorded on any one occasion. Given the results from the previous surveys, it is considered likely that building B1 also supports a small population of Soprano Pipistrelle bats. No emergences or re-entries were recorded of building B5 during the updated surveys, however given the results from the previous consultancy report, it is considered that B5 likely supports a small population of Soprano Pipistrelle bats. As such, a Natural England licence will be required for the removal of B1 and B5.

- 7.4.47 **Background Information.** Records of Common Pipistrelle and Soprano Pipistrelle bat roosts were returned by the DERC from within the Application Site within building B1 and B5 during the summer of 2017. The DERC data search also returned records of Myotis sp., Noctule, Brown Long-eared *Plecotus auritus*, Common Pipistrelle and Soprano Pipistrelle as foraging and commuting within the Application Site in 2017. These records are believed to be from the previous ecological assessment conducted by Focus Ecology Ltd in 2017.

#### Other Mammals

- 7.4.48 No evidence of any notable other mammals was recorded within the Application Site during surveys undertaken. It is considered that the trees, amenity planting and amenity grassland within the Application Site offer some suitable opportunities for a range of small mammals.
- 7.4.49 **Background Records.** The DERC returned no records of any notable other mammals within the Application Site. The closest record of an Eurasian Otter *Lutra lutra* was located approximately 600m north in 2013, and three records of European Water Vole *Arvicola amphibius* was recorded nearly 1km north in 2015.
- 7.4.50 Given the absence of aquatic habitat within the Application Site, it is not considered that the Application Site would support Otter or Water Vole and as such, no further regard is given to these species within the remainder of this report.

#### Birds

- 7.4.51 No notable birds were recorded within the Application Site or Wider Study Area during surveys. However, a number of common species including Robin *Erithacus rubecula*, Jay *Garrulus glandarius* and Meadow Pipit *Anthus pratensis* were recorded within the Wider Study Area.
- 7.4.52 **Background Records.** The DERC recorded the Schedule 1 and Red Listed species Merlin *Falco columbarius* within the Wider Study Area in 2012. Red Listed and Priority Species that were recorded external to the Site and the Wider Study Area include Common Scoter *Melanitta nigra* approximately 190m southeast in 2014, Linnet *Linaria cannabina* 700m northeast in 2014, House Sparrow *Passer domesticus* 900m southeast of the site in 2014, Herring Gull *Larus argentatus* and Lesser Redpoll *Acanthis cabaret* approximately 1km northeast of the site in 2014, Hen Harrier *Circus cyaneus* approximately 1km east in 2012, Cuckoo *Cuculus canorus* approximately 1.3km northeast of the site in 2017, Skylark *Alauda arvensis* and Yellowhammer *Emberiza citronella* nearly 1.5km southwest of the site in 2017. The DERC also returned records of the following Priority Species; Nightjar located approximately 800m north of the site in 2014, Reed Bunting *Emberiza schoeniclus* approximately 900m north of the site in 2014 and Song Thrush *Turdus philomelos* approximately 1km southeast of the site in 2017.

7.4.53 It is considered that the trees within the Application Site offer some suitable nesting and foraging opportunities for Linnets, Lesser Redpoll and Song Thrush, potential foraging opportunities for Reed Bunting and House Sparrow and potential nesting opportunities for Cuckoo. The buildings are considered to offer some nesting opportunities for House Sparrow, while the amenity planting is considered to offer some foraging habitat for House Sparrow, Song Thrush and Reed Bunting and a range of other common bird species. It is not considered that the Application Site offers any suitable habitat for the remainder of the above species.

7.4.54 **Previous Surveys.** Surveys undertaken by Focus Ecology in 2017 identified a number of nesting House Martin *Delichon urbicum* on the exterior of building B1.

Reptiles

7.4.55 Surveys for reptiles were carried out between August and September 2022 areas of rough grassland of the Wider Study Area.

7.4.56 During these surveys low populations of Slow Worm *Anguis fragilis*, Grass Snake *Natrix Helvetica*, Adder *Vipera berus* and Common Lizard *Zootoca vivipara* were recorded within the Wider Study Area. No reptiles were recorded within the Application Site boundary itself, although small numbers of Slow Worm were along the southeastern and southwestern Application Site boundary, within the Wider Study Area. The results from these surveys can be seen in Table 2 below and on Figure 7.3.

**Table 2** Reptile survey results August – September 2022

Survey no.	Date	Cloud cover (%)	Temp. (°C)	Adder			Slow Worm			Grass Snake			Common Lizard		
				M	F	J	M	F	J	M	F	J	M	F	U
1	01/08/2022	80	16	0	0	0	0	2	0	0	0	0	0	0	2
2	12/08/2022	0	18	0	0	0	0	0	0	0	0	0	0	0	0
3	19/08/2022	100	18	0	0	0	0	2	0	0	0	0	0	0	1
4	29/08/2022	70	16	0	0	0	0	0	1	0	0	0	0	0	0
5	05/09/2022	80	17	0	0	0	0	0	0	0	0	0	0	0	0
6	12/09/2022	90	17	0	1	0	1	7	12	0	0	1	0	2	1
7	19/09/2022	75	16	1	1	0	2	7	5	0	0	0	0	0	5

\* Male (M), Female (F), Juvenile (J) and Unsexed (U)

7.4.57 **Previous surveys.** Focus Ecology recorded reptiles within similar locations during 2017, albeit small numbers of Slow Worm were noted within the Application Site boundary in the southwest. These previous surveys recorded small numbers of Sand Lizards *Lacerta agilis* along the easternmost boundary of the Wider Study Area and did not record any Adder.

7.4.58 **Background Records.** The DERC returned no records of any reptiles within the Application Site itself. The nearest record of a Slow Worm was returned from approximately 100m south of the Site in 2014, while the

nearest record of a Sand Lizard *Lacerta agilis* was located approximately 200m northeast of the Site in 2014. Additionally, the closest record of an Adder was recorded nearly 250m northeast from the Site in 2014 and also a record of Smooth Snake *Coronella austriaca* was recorded approximately 270m west in 2016. The closest record of a Grass Snake was recorded 275m west in 2018.

#### Great Crested Newts

7.4.59 There are no ponds present within the Application Site itself, although one ponds was identified using OS Maps that lies within 250m of the Application Site boundary (P1 on Figure 7.1). As this pond is online, it is deemed to be unsuitable for Great Crested Newts *Triturus cristatus*.

7.4.60 Although it is known that Great Crested Newts can disperse up to 500 metres through suitable terrestrial habitat from their breeding pond, it is widely accepted that they tend to utilise suitable terrestrial habitat within a much closer distance. Activity is usually concentrated within 100 metres of breeding ponds and key habitat is located within 50 metres (termed by Natural England as core habitat).

7.4.61 Indeed, English Nature Research Report Number 576 (An assessment of the efficiency of capture techniques and the value of different habitats for the great crested newt *Triturus cristatus* by Warren Cresswell and Rhiannon Whitworth) states:

*“The most comprehensive mitigation, in relation to avoiding disturbance, killing or injury is appropriate within 50m of a breeding pond. It will also almost always be necessary to actively capture newts 50-100m away. However, at distances greater than 100m, there should be careful consideration as to whether attempts to capture newts are necessary or the most effective option to avoid incidental mortality. At distances greater than 200-250m, capture operations will hardly ever be appropriate.”*

7.4.62 **Background Records.** The DERC returned no records of Great Crested Newts from within the search area.

7.4.63 Given the lack of suitable ponds within 250m of the Application Site boundary, as well as the absence of any records returned as part of the desk study, it is considered highly unlikely that Great Crested Newts would be present within the Application Site and as such, no further regard is given to this species within the remainder of this report.

#### Invertebrates

7.4.64 It is considered that the Application Site is likely to support a range of common invertebrate species, although there is no evidence to suggest that any notable invertebrates would likely be present.

7.4.65 **Background Records.** The DERC returned a number of records of notable invertebrates within a 100m grid square that also contains the

Application Site including the following Priority Species; White Admiral *Limenitis camilla* in 2019, Wall *Lasiommata megera* in 2015, Grayling *Hipparchia semele* in 2016, Oak Hook-tip *Watsonalla binaria*, Mullein Wave *Scopula marginepunctata*, Blood-vein *Timandra comae*, Feathered Gothic *Tholera decimalis*, Autumnal Rustic *Eugnorisma glareosa*, White-lined Dart *Euxoa tritici*, Neglected Rustic *Xestia castanea*, Anomalous *Stilbia anomala* and Sallow *Cirrhia icteritia* in 2018. Within the Wider Study Area, the following Priority Species have been recorded; Silver-studded Blue *Plebejus argus* in 2014, Brown Argus *Aricia agestis* in 2018, Buff Ermine *Spilosoma lutea* in 2018 and Centre-barred Sallow *Atethmia centrigo* in 2018.

#### Other Species

- 7.4.66 Given the habitats present and records from the local area, there is no evidence from site surveys or desk studies to suggest that any other protected or notable species would be present within the Application Site or Wider Study Area, or affected by the proposed development.

## 7.5 ECOLOGICAL EVALUATION & IDENTIFICATION OF KEY IMPACTS (PRE AND POST MITIGATION)

7.5.1 This section identifies all potentially significant likely impacts, both during construction and post construction (beneficial and adverse), such that mitigation can be identified where necessary to negate such impacts, and enhancements put forward where appropriate.

### Impacts on Designated Sites

7.5.2 A number of designated sites are present within the vicinity of the Application Site. These are shown on Figure 7.1.

### Statutory Sites

7.5.3 The nearest statutory designed site is Studland and Godlingston Heaths Site of Special Scientific Interest (SSSI), which forms part of the Dorset Heathlands Special Protection Area (SPA) / Ramsar, Dorset Heaths (Purbeck and Wareham) and Studland Dunes Special Area of Conservation (SAC) and Purbeck Heaths National Nature Reserve (NNR) that lies approximately 70m northwest of the Application Site.

7.5.4 The next closest designated site is Isle of Portland to Studland Cliffs SAC, which lies approximately 300m southeast of the Application Site, while Poole Harbour SSSI / SPA / Ramsar is located approximately 1.4km northwest of the Application Site.

7.5.5 An increased level of dust may arise during construction, therefore measures to mitigate dust emissions will be implemented during the construction phase. Any potential effects would be easily minimised through use of standard mitigation techniques such that residual effects are of negligible significance. Where mitigation measures rely on water, it is expected that only sufficient water will be applied to damp down the material. There should not be any excess to potentially contaminate the wet ditch that lies adjacent to the site.

7.5.6 Standard engineering practice in respect of pollution control, as part of the development would also be implemented to negate any potential effect to nearby watercourses such as the adjacent ditch (D4) that runs towards the LWS. For example, in order to prevent impacts of laden silts and surface runoff from the construction site entering the non-statutory site (and adjacent ditches), it is recommended that standard engineering safeguards, such as interceptor fencing is installed to negate this low risk, where necessary. Such measures could be secured by way of a planning condition requiring a Construction Environmental Management Plan.

7.5.7 **Impacts:** While the proposals result in a slight increase in guest numbers, residential accommodation for staff within the existing hotel is to be removed as part of the proposals, who are known to utilise the local statutory designated sites and as such, it is deemed that an overall reduction in recreational pressure to the surrounding designated sites will arise as a result of the proposals. This information is set out in further

detail within the Shadow Habitat Regulations Assessment (sHRA) included at Appendix 7.2.

- 7.5.8 **Mitigation and Enhancements:** No mitigation required. A number of enhancements are proposed as part of the development, which are shown on Figure 7.5. Enhancements include the promotion of a circular walk to all guests within the Wider Study Area to encourage guests to utilise a walk that will not access the adjacent European sites. In addition, it is proposed to remove an existing access point to Godlingston Heath from within the woodland located within the Wider Study Area. An enclosed dog walking area is proposed within the east of the Wider Study Area, with the aim of encouraging guests to exercise their dogs onsite and reduce existing usage of the heathlands for dog exercising purposes. In addition, it is proposed to re-instate a former mire along the western boundary of the Wider Study Area, which will represent an enhancement to the drainage strategy serving the adjacent heathland habitat.

#### Non-Statutory Sites

- 7.5.9 The nearest non-statutory designated site is Godlingston-Studland Fields SNCI, located approximately 280m southwest of the Application Site.

- 7.5.10 **Impacts:** Through the implementation of the measures set out within the sHRA, it is considered that the proposed development will not have a direct or indirect impact on Godlingston-Studland Fields SNCI or any other non-statutory designated sites of nature conservation interest.

- 7.5.11 **Mitigation and Enhancements:** No mitigation required.

#### **Impacts on Habitats**

- 7.5.12 The majority of the Application Site is considered to be of low intrinsic ecological value, and any losses to the Proposed Development of the amenity grassland and amenity planting are considered to be of negligible ecological significance. The features of relatively greater ecological interest within the context of the Application Site include the trees. Where losses occur, they could be offset through the creation of habitats of greater value and planted with species of known value to wildlife.

#### Amenity Grassland and Amenity Planting

- 7.5.13 The amenity grassland and amenity planting are of negligible ecological value in terms of their species content. The majority of these habitats will be lost to the Proposed Development, however the amenity grassland in the east of the Application Site is to be retained.

- 7.5.14 **Impacts:** Loss of this habitat to the Proposed Development.

*Prior to mitigation, impacts are **adverse** at the **site level** and are of **negligible-minor significance**.*



7.5.15 **Mitigation and Enhancements.** Proposed new areas of amenity grassland and planting will more than offset losses to these habitats. The provision of new species-rich grassland as part of the proposals, as well as green roofs and green walls will represent an enhancement and serve to enhance the floristic diversity of the Application Site over the existing situation.

7.5.16 In addition, new areas of heathland are to be created within the eastern Wider Study Area (as indicated on Figure 7.5), which will represent a further enhancement over the current situation.

*Post mitigation and enhancements, effects are **beneficial** at the **site level** and are of **minor-moderate significance**.*

#### Trees

7.5.17 The trees within the Application Site are also of relatively greater ecological value in the context of the Application Site. The trees offer suitable nesting opportunities for birds and foraging and navigational opportunities for bats (see below).

7.5.18 The majority of trees located within the west of the site are to be lost in order to facilitate the proposals, while remaining trees are to be retained and safeguarded within the Proposed Development.

7.5.19 **Impacts:** Losses to trees. Temporary effects: potential damage to retained trees during the construction phase, and dust deposition (and potentially other pollution) to retained trees during the construction phase.

*Prior to mitigation, impacts are **adverse** at the **local level** and are of **minor-moderate significance**.*

7.5.20 **Mitigation and Enhancements.** Measures will be put in place to ensure that the retained trees are safeguarded from direct impacts during the construction phase, e.g. fenced-off during construction to prevent encroachment into these areas by construction machinery. No construction machinery or materials will be stored within these areas at any point during the development.

7.5.21 An increased level of dust may arise from the passage of construction traffic. Deposition of this dust on the surrounding vegetation may lead to temporary declines in woodland flora. Measures to mitigate dust emissions will be implemented during the construction phase. Any potential effects would be easily minimised through use of standard mitigation techniques such that residual effects are of negligible significance. Where mitigation measures rely on water, it is expected that only sufficient water will be applied to damp down the material. There should not be any excess to potentially contaminate local watercourses. Even with these measures in place, there remains a slight risk that the woodland might be affected by very occasional dust-soiling impacts. Any

effects will be temporary and relatively short lived, and will only arise during dry weather with the wind blowing towards the receptor, at a time when dust is being generated and mitigation measures are not being fully effective. The overall impacts during the construction phase with mitigation measures in place are judged to be of negligible significance.

7.5.22 New trees will also be included within the landscape proposals, which will be based around native species of local provenance. The planting of new trees will more than mitigate for the loss to the development proposals.

7.5.23 An appropriate woodland management regime will be implemented within the Wider Study Area that will improve the structure and species composition of the woodland, thus representing a further enhancement as part of the scheme. Such measures will include the removal of invasive species such as Bamboo and Leyland Cypress, as well as the creation of two new glade areas through opening up the tree canopy.

*Post mitigation and enhancements, effects are **beneficial** at the **local level** and are of **minor-moderate significance**.*

#### Other Habitats

7.5.24 The hardstanding, swimming pool and buildings are of negligible ecological value and are to be lost as part of the proposals, although bat roosts are present within buildings B1 and B5 (see ‘bats’ below).

7.5.25 **Impacts:** No significant impacts.

7.5.26 **Mitigation and Enhancements:** No mitigation required.

#### **Impacts on Fauna**

7.5.27 Surveys for a number of protected species have been undertaken and the results have been utilised to inform this impact assessment. It is considered that overall, enhancements are likely to be realised with regard to protected species, and suitable mitigation has been put forward where protected species are to be affected by the development proposals.

#### Badgers

7.5.28 **Legislation.** The Protection of Badgers Act 1992 consolidates the previous Badgers Acts of 1973 and 1991. The legislation aims to protect the species from persecution, rather than being a response to an unfavourable conservation status, as the species is in fact common over most of Britain, with particularly high populations in the southwest.

7.5.29 As well as protecting the animal itself, the 1992 Act also makes the intentional or reckless destruction, damage or obstruction of a Badger sett an offence. A sett is defined as “any structure or place which displays

signs indicating current use by a Badger”<sup>11</sup>. “Current use” of a Badger sett is defined by Natural England as “how long it takes the signs to disappear”, or more precisely, to appear so old as to not indicate “current use”.

- 7.5.30 In addition, the intentional elimination of sufficient foraging area to support a known social group of Badgers may, in certain circumstances, be construed as an offence by constituting ‘cruel ill treatment’ of a Badger.
- 7.5.31 **Application Site Usage.** No evidence of Badgers was recorded within the Application Site or Wider Study Area during 2022 surveys. Previous surveys undertaken by Focus Ecology in 2017 recorded Badger latrines within the off-site woodland.
- 7.5.32 It is considered that the amenity grassland, trees and amenity planting within the Application Site offers some limited opportunities for Badgers, while the woodland and grassland within the Wider Study Area offers greater opportunities for Badgers.
- 7.5.33 As set out above, although areas of amenity grassland, planting and trees are to be lost, losses will be offset through new landscaping provision as part of the Proposed Development.
- 7.5.34 **Impacts:** Loss of potential foraging grounds. Potential construction effects on Badgers such as accidental trapping/injury.
- Prior to mitigation, impacts are **adverse** at the **County level** and are of **negligible-minor significance**.*
- 7.5.35 **Mitigation and Enhancements:** The provision of new areas of species-rich grassland and landscape planting as part of the Proposed Development will maintain foraging opportunities for Badgers. In addition, the planting of new trees throughout the development will provide additional foraging opportunities and cover for Badgers.
- 7.5.36 In the unlikely event that any active Badger setts are identified during construction, a Natural England licence will be sought prior to any construction works commencing within 30m of the identified sett and, if necessary, the sett closed and an artificial sett constructed in order to compensate for its loss (e.g. in the large area of open space in the south of the Application Site).
- 7.5.37 During the construction phase of development it is often necessary to undertake a number of additional measures to safeguard any Badgers present on a site.
- 7.5.38 All contractors working on the Application Site will be briefed regarding the presence of Badgers in the local area and of the types of activities

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<sup>11</sup> Protection of Badgers Act 1992 (as amended). Guidance on ‘Current Use’ in the definition of a Badger Sett <http://www.naturalengland.org.uk/ourwork/regulation/wildlife>

that would not be permissible on site, with all measures included as part of a Construction Environmental Management Plan (CEMP).

- 7.5.39 Any trenches or deep pits that are to be left open overnight will be provided with a means of escape should a Badger enter. This could simply be in the form of a roughened plank of wood placed in the trench as a ramp to the surface. This is particularly important if the trench fills with water.
- 7.5.40 Any trenches/pits will be inspected each morning to ensure no Badgers have become trapped overnight. Should a Badger get stuck in a trench it will likely attempt to dig itself into the side of the trench, by forming a temporary sett. Should a trapped Badger be encountered, the project ecologist should be contacted immediately for further advice.
- 7.5.41 The storage of topsoil or other ‘soft’ building materials within the Application Site will be given careful consideration. Badgers will readily adopt such mounds as setts, which would then be afforded the same protection as established setts. So as to avoid the adoption of any mounds, they would be subject to daily inspections (or nightly patrols if 24 hour security is present on site) or consideration given to fencing them with Badger proof fencing.
- 7.5.42 During the development the storage of any chemicals required for the building construction will be well away from any Badger activity and contained in such a way that they cannot be accessed or knocked over by any roaming Badgers.

*Post mitigation and enhancements, effects are **beneficial** at the **County level** and are of **minor significance**.*

### Bats

- 7.5.43 **Legislation.** All bats are protected under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) and included on Schedule 2 of the Conservation of Habitats and Species Regulations 2017 (as amended) (“the Habitats Regulations”). These include provisions making it an offence to:
- Deliberately kill, injure or take (capture) bats;
  - Deliberately disturb bats in such a way as to be likely to significantly affect:-
    - (i) the ability of any significant group of bats to survive, breed or rear or nurture their young; or to hibernate; or
    - (ii) to affect significantly the local distribution or abundance of the species concerned;
  - Damage or destroy any breeding or resting place used by bats;
  - Intentionally or recklessly obstruct access to any place used by bats for shelter or protection (even if bats are not in residence).

- 7.5.44 While the legislation is deemed to apply even when bats are not in residence, Natural England guidance suggests that certain activities such as re-roofing can be completed outside sensitive periods when bats are not in residence provided these do not damage or destroy the roost.
- 7.5.45 The words ‘deliberately’ and ‘intentionally’ include actions where a court can infer that the defendant knew ‘the action taken would almost inevitably result in an offence, even if that was not the primary purpose of the act.
- 7.5.46 The offence of damaging (making it worse for the bat) or destroying a breeding site or resting place is an absolute offence. Such actions do not have to be deliberate for an offence to be committed.
- 7.5.47 Licences can be granted for development purposes by an ‘appropriate authority’ under Regulation 55 (e) of the Habitats Regulations. In England, the ‘appropriate authority’ is Natural England (the government’s statutory advisors on nature conservation). European Protected Species licences permit activities that would otherwise be considered an offence.
- 7.5.48 In accordance with the Habitats Regulations the licensing authority (Natural England) must apply the three derogation tests as part of the process of considering a licence application. These tests are that:
1. The activity to be licensed must be for imperative reasons of overriding public interest or for public health and safety;
  2. There must be no satisfactory alternative; and
  3. The favourable conservation status of the species concerned must be maintained.
- 7.5.49 Licences can usually only be granted if the development is in receipt of full planning permission (and relevant conditions, if any, discharged).
- 7.5.50 Seven species of bat are Priority Species, these are Barbastelle, Bechstein’s *Myotis bechsteinii*, Noctule, Soprano Pipistrelle, Brown Long-eared, Greater Horseshoe *Rhinolophus ferrumequinum*, and Lesser Horseshoe *Rhinolophus hipposideros*.
- 7.5.51 **Application Site Usage.** Building B1 supports a small population of Soprano Pipistrelle and Common Pipistrelle, while B5 supports a small population of Soprano Pipistrelle. The trees and amenity planting within the Application Site likely offer some foraging and navigational opportunities for bats.
- 7.5.52 **Impacts:** Loss of a Common Pipistrelle and Soprano Pipistrelle roost from within building B1 and loss of a Soprano Pipistrelle roost from building B5. Losses to trees that offer suitable foraging and commuting opportunities for bats; potential disturbance from lighting on foraging and commuting routes during the construction and operational phases.

*Prior to mitigation, effects will be **adverse** at the **European level** and of **moderate significance**.*

- 7.5.53 **Mitigation and Enhancements.** Using the sliding scale of mitigation (Figure 4 in the Bat Mitigation Guidelines 2004)<sup>12</sup> it is considered that the status of the Common Pipistrelle and Soprano Pipistrelle bats within buildings B1 and B5 represent ‘*Small numbers of common species. Not a maternity site*’. The mitigation/compensation required for the occasional roosts of Common Pipistrelle and Soprano Pipistrelle would therefore be ‘*Provision of new roost facilities where possible. Need not be exactly like-for-like, but should be suitable based on the species’ requirements. Minimal timing constraints or monitoring requirements*’.
- 7.5.54 The development proposals include the demolition of the buildings B1 and B5, which will result in the loss of the one day roost of Common Pipistrelle and two day roosts of Soprano Pipistrelle. As such, a Natural England licence will be obtained prior to any development work commencing on buildings B1 and B5.
- 7.5.55 The loss of these roosts would fall within the remit of a Natural England Bat Mitigation Class Licence (BMCL) for which compensation is not mandatory. However, it is proposed that three new bat boxes, designed to be suitable for crevice-dwelling species such as Pipistrelle bats, are erected on the proposed new building on the northwestern, southeastern and southwestern aspects in order to maintain roosting features in similar locations to those lost, which would more than compensate for the loss of such roosts in any event (see Figure 7.5 for proposed locations).
- 7.5.56 As set out above, losses to trees will be offset through the planting of new trees based around native species as part of the Proposed Development. The provision of species-rich grassland, green roofs and green walls will provide enhanced foraging opportunities for bats. In addition, enhancements to the adjacent woodland within the Wider Study Area, as well as the creation of heathland will offer further enhanced opportunities for bats.
- 7.5.57 During the operational phase, although there is likely to be an increase in lighting within the Application Site, ‘dark’ corridors will be maintained using a sympathetic lighting regime, e.g. involving the use of directional, low-powered, warm white spectrum LED lighting to minimise light spillage. ‘Dark’ corridors will be maintained along existing and new hedgerows to maintain suitable navigational and foraging opportunities for bats. Where lighting is necessary during construction, any potential light spillage will be reduced by directing light below the horizontal plane, preferably at an angle less than 70 degrees away from features that offer suitable foraging opportunities for bats, e.g. the woodland, hedgerows and trees. Such details could be secured by way of a condition.

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<sup>12</sup> English Nature (2004). Bat Mitigation Guidelines

- 7.5.58 As an enhancement, new bat boxes will also be provided throughout the Application Site and Wider Study Area on retained mature trees, which will provide additional roosting opportunities for bats. Details regarding the locations of these boxes could be secured by way of a condition.

*Post mitigation and enhancements, effects are **beneficial** at the **European level** and are of **minor-moderate significance**.*

#### Other Mammals

- 7.5.59 **Application Site Usage.** Given the trees and amenity habitats present, the Application Site is likely to support a range of common small mammals.

- 7.5.60 **Impacts:** Loss of suitable foraging habitat for a range of mammals.

*Prior to mitigation, effects will be **adverse** at the **site level** and of **negligible significance**.*

- 7.5.61 **Mitigation.** The planting of new native trees and amenity grassland will maintain foraging and shelter opportunities for a range of mammals. The provision of species-rich grassland, green roofs and green walls will provide potential enhanced foraging opportunities for a range of small mammals.

*Post mitigation and enhancements, effects are **beneficial** at the **site level** and are of **minor-moderate significance**.*

#### Birds

- 7.5.62 **Legislation.** Section 1 of the Wildlife & Countryside Act is concerned with the protection of wild birds. With certain exceptions all wild birds and their eggs are protected from intentional killing, injuring and taking; and their nests, whilst being built or in use, cannot be taken, damaged or destroyed.

- 7.5.63 Schedule 1 of the Wildlife & Countryside Act 1981 is a list of the nationally rarer and uncommon breeding birds for which all offences carry special (i.e. greater) penalties. These species also enjoy additional protection whilst breeding, as it is also an offence to disturb adults or their dependant young when at the nest.

- 7.5.64 **Application Site Usage.** No notable birds were recorded within the Application Site or Wider Study Area during surveys. However, a number of common species including Robin, Jay and Meadow Pipit were recorded within the Wider Study Area.

- 7.5.65 It is considered that the trees within the Application Site offer some suitable nesting and foraging opportunities for a range of birds, while the amenity planting and amenity grassland is considered to offer some foraging habitat a range of common bird species.

- 7.5.66 As set out above, a number of trees are to be lost within the west of the Application Site to facilitate the proposals.
- 7.5.67 **Impacts:** Loss of suitable foraging and nesting habitat for bird species. Potential for killing and injury of birds and / or damage or destruction of nests during clearance of vegetation.
- Prior to mitigation, impacts are **adverse** at the **site-local level** and of **minor significance**.*
- 7.5.68 **Mitigation and Enhancements.** The provision of new native trees and throughout the Proposed Development will provide suitable new nesting opportunities for a range of bird species, while the creation of green roofs and green walls will provide new and enhanced foraging opportunities.
- 7.5.69 In addition, enhancements to the woodland and the creation of new areas of heathland within the Wider Study Area will provide further enhanced foraging and nesting opportunities for birds.
- 7.5.70 In order to safeguard any nesting bird species within the Application Site, the clearance of any hedgerows and trees will be undertaken outside of the bird breeding season (March-August inclusive). Should this not be possible potential nesting habitat is subject to a check survey immediately prior to its removal by an experienced ecologist. Should any nesting birds be identified then the nest should be fully safeguarded *in situ* and subject to a disturbance buffer of at least 5 metres and only removed once it has been confirmed any fledglings have left the nest.
- 7.5.71 As an enhancement, new bird nest boxes will be provided on suitable retained trees / new buildings within the Application Site, within the retained areas of open space and on new buildings. These will provide new nesting opportunities for a range of birds. Using nest boxes of varying designs would maximise the species complement attracted to the Application Site and, where possible, could be tailored to provide opportunities for Red Listed / Priority Species, e.g. House Sparrow, that are known from the local area. Location and specifications of proposed bird boxes could be secured via a planning condition.

*Post mitigation and enhancements, effects are **beneficial** at the **site-local level** and are of **minor significance**.*

#### Reptiles

- 7.5.72 **Legislation.** All six British reptile species receive a degree of legislative protection that varies depending on their conservation importance.
- 7.5.73 Smooth Snake and Sand Lizard receive 'full protection' under the Wildlife and Countryside Act 1981 as well as protection under the Conservation of Habitats and Species Regulations 2017 ("the Habitats Regulations"). These receive protection from:



- Killing, injuring, taking;
- Possession or control (of live or dead animals, their parts or derivatives);
- Damage to, destruction of, obstruction of access to any structure or place used for shelter or protection;
- Disturbance of any animal occupying such a structure or place;
- Selling, offering for sale, possession or transport for purposes of sale (live or dead animal, part or derivative).

7.5.74 Common Lizard, Grass Snake, Slow Worms and Adder are only 'partially protected' under the Wildlife and Countryside Act 1981 (as amended) and as such only receive protection from:

- Deliberate killing and injuring;
- Being sold or other forms of trading.

7.5.75 The legislation relevant to common reptiles therefore protects the species, but not their habitat and any works that avoid killing or injuring any of these species, should ensure that an offence is avoided.

7.5.76 All reptiles are also Priority Species.

7.5.77 **Application Site Usage.** Low populations of Slow Worm, Grass Snake, Adder and Common Lizard were recorded within the Wider Study Area. No reptiles were recorded within the Application Site boundary itself, although small numbers of Slow Worm were along the southeastern and southwestern Application Site boundary, within the Wider Study Area. In addition, Focus Ecology recorded small numbers of Sand Lizards along the easternmost boundary of the Wider Study Area in 2017.

7.5.78 The majority of the reptile habitat lies within the Wider Study Area and will therefore not be impacted by the proposals. Minor areas of grassland are to be lost along the Application Site boundary to the west and south, which may support small numbers of Slow Worm.

7.5.79 **Impacts:** Loss of habitat for Slow Worm. Potential for killing or injury of reptiles during clearance of vegetation.

*Prior to mitigation, impacts are **adverse** at the **National level** and are of **minor significance**.*

7.5.80 **Mitigation and Enhancements.** A habitat manipulation exercise supplemented with a small-scale in-situ relocation exercise (moving reptiles to retained / new areas of rough grassland) will be carried out in the small areas of rough grassland to be lost to the Proposed Development. This will ensure no reptiles are injured or killed during the construction phase.

7.5.81 New areas of species-rich grassland within the Application Site will provide enhanced opportunities for reptiles over the existing situation, while the provision of log piles will provide new sheltering/hibernation

opportunities for this faunal group. In addition, the creation of areas of heathland within the Wider Study Area will provide further enhanced habitat.

*Post mitigation and enhancements, effects are **beneficial** at the **National level** and are of **minor significance**.*

#### Invertebrates

7.5.82 **Application Site Usage.** Given the habitats present it is likely an assemblage of common invertebrate species would be present within the Application Site.

7.5.83 **Impacts:** Loss of suitable habitat for common invertebrates.

*Prior to mitigation, impacts are **adverse** at the **site level** and of **minor significance**.*

7.5.84 **Mitigation and Enhancements.** The planting of new native trees, and the creation of new areas of species-rich grassland, green roofs and green walls within the Application Site, will enhance the floristic diversity of the site and provide enhanced habitat for a range of invertebrates.

7.5.85 The creation of log piles would benefit a range of saproxylic species (as well as providing refuge for reptiles). The implementation of other measures recommended above would also likely provide knock-on benefits for invertebrates, e.g. through tree planting and use of planting of wildlife benefit.

*Post mitigation and enhancements, effects are **beneficial** at the **site level** and are of **minor-moderate significance**.*

## **7.6 DEFRA BIODIVERSITY METRIC**

- 7.6.1 Biodiversity net gain has been assessed based upon the indicative landscape proposals (4651-AWW-SI-00-DR-A-20002-P09-Site – Ground Floor - Proposed / 4651-AWW-SI-RF-DR-A-20003-P06-Site – Roof Plan - Proposed) for the Application Site.
- 7.6.2 The landscape proposals include the loss of hardstanding, buildings, amenity grassland, amenity planting and trees. Figure 7.6 shows the existing habitats within the site.
- 7.6.3 Proposed habitats include amenity grassland, species-rich wildflower grassland, green roofs, green walls, scattered trees and buildings/hardstanding. Figure 7.7 shows the proposed habitats within the site. In addition, a new native species-rich hedgerow of at least 12m in length is proposed as part of the development and such details would be provided at the detailed planning stage.
- 7.6.4 Following calculations undertaken using the DEFRA Biodiversity Metric 3.1 Calculation Tool, it can be seen that a net gain in biodiversity will be delivered as a result of the proposed development. Specifically, an increase in habitat units from 18.07 units to 25.03 units (which equates to a 38.50% increase) and an increase in hedgerow units from 0.08 units to 0.09 units (which equates to a 17.38% increase). The DEFRA Biodiversity Metric 3.1 Calculation Tool is shown at Appendix 72.
- 7.6.5 It should be noted that the DEFRA Biodiversity Metric calculation does not take into consideration measures relating to protected or notable species. The provision of wildflower grassland, green roofs and green walls will provide enhanced foraging opportunities for bats, birds, small mammals and invertebrates over the existing situation. A number of additional enhancements will also be provided as part of the proposed development, that are not accounted for within the net gain calculation. This includes the provision of bat boxes providing enhanced roosting opportunities for bats and bird boxes providing enhanced nesting opportunities for birds, as well as the provision of log piles/hibernacula that will provide enhanced hibernation/shelter opportunities for reptiles and create new habitat for saproxylic invertebrates post-development. Further enhancements are also proposed to the Wider Study Area, including the creation of heathland and the improved management of woodland, which would deliver further net gains in terms of biodiversity.
- 7.6.6 The calculation indicates that a net gain in biodiversity can be achieved under the current development proposals. Furthermore, it has also been demonstrated that the proposals would achieve a net gain in excess of 10%, which is expected to become the minimum net gain requirement following the adoption of a regulation within the Environment Act. Moreover, it has been demonstrated that the proposed development would achieve a net gain in excess of 20%, which during a recent planning appeal (APP/A2280/W/20/3259868), the Secretary of State concluded that a net gain in excess of 20% attracts substantial weight in favour of development in decision taking.

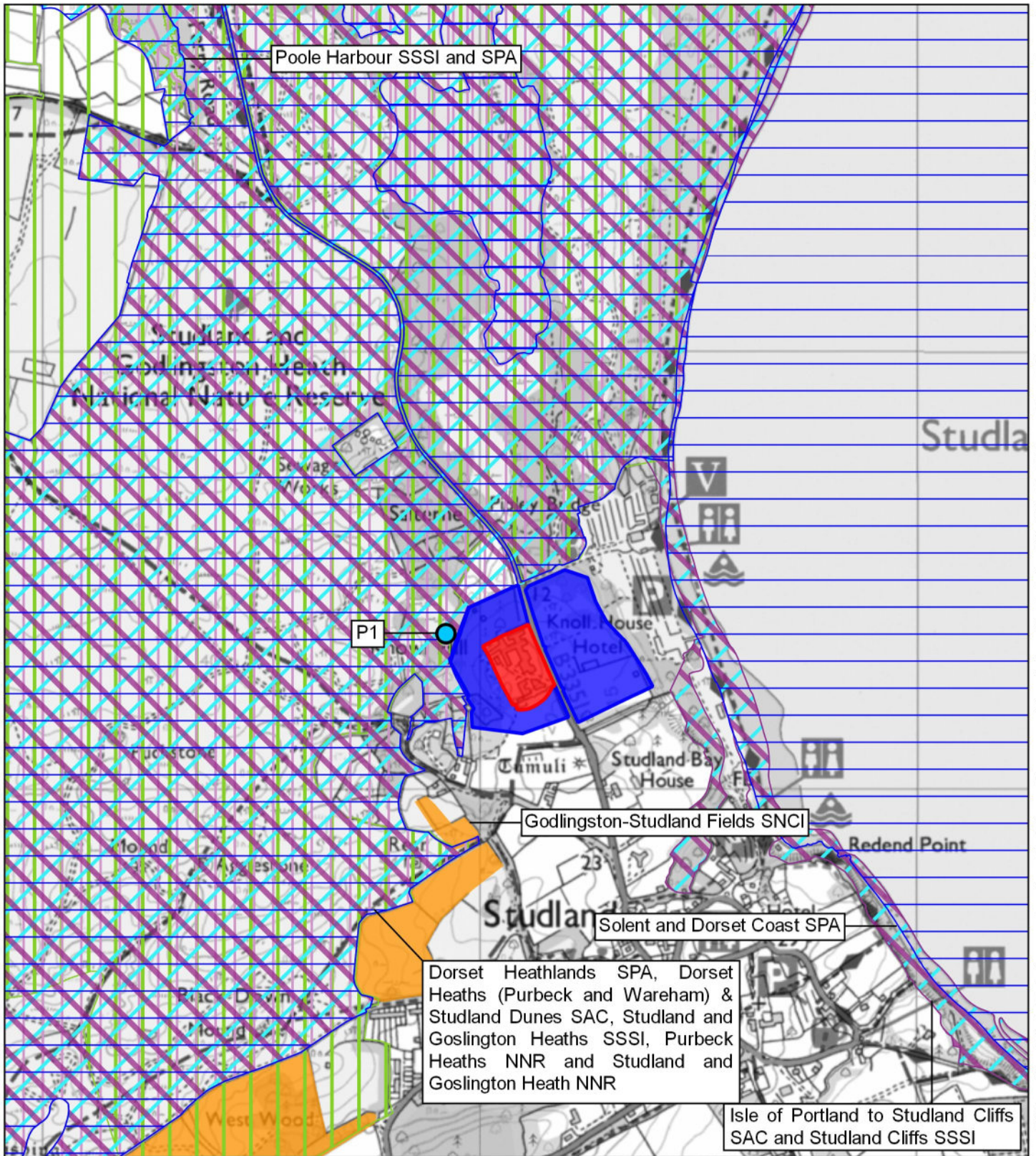
- 7.6.7 It is also considered that the development proposals will deliver a further net gain in biodiversity through the additional enhancement measures detailed above that are not accounted for within the calculation. As such, it is considered that it has been demonstrated that the proposed development will achieve an overall net gain in biodiversity over the existing situation.

## FIGURES

**FIGURE 7.1**

Application Site Location, Ecological Designations  
and Pond Location





**KEY**

- APPLICATION SITE
- WIDER STUDY AREA
- SPECIAL PROTECTION AREAS (SPA)
- SPECIAL AREAS OF CONSERVATION (SAC)
- SITES OF SPECIAL SCIENTIFIC INTEREST (SSSI)
- RAMSAR SITE
- NATIONAL NATURE RESERVES (NNR)
- SITE OF NATURE CONSERVATION INTEREST (SNCI)
- OFFSITE POND LOCATED SWITHIN 250M OF APPLICATION SITE BOUNDARY



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**FIGURE 7.1: APPLICATION SITE LOCATION, ECOLOGICAL DESIGNATIONS AND OFFSITE POND LOCATION**

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**FIGURE 7.2**  
Ecological Features





**KEY:**

- APPLICATION SITE
- WIDER STUDY AREA
- AMENITY GRASSLAND
- HARDSTANDING
- AMENITY PLANTING
- SEMI-IMPROVED GRASSLAND
- MIXED WOODLAND
- BUILDING
- SWIMMING POOL
- TREE
- TREE LINE



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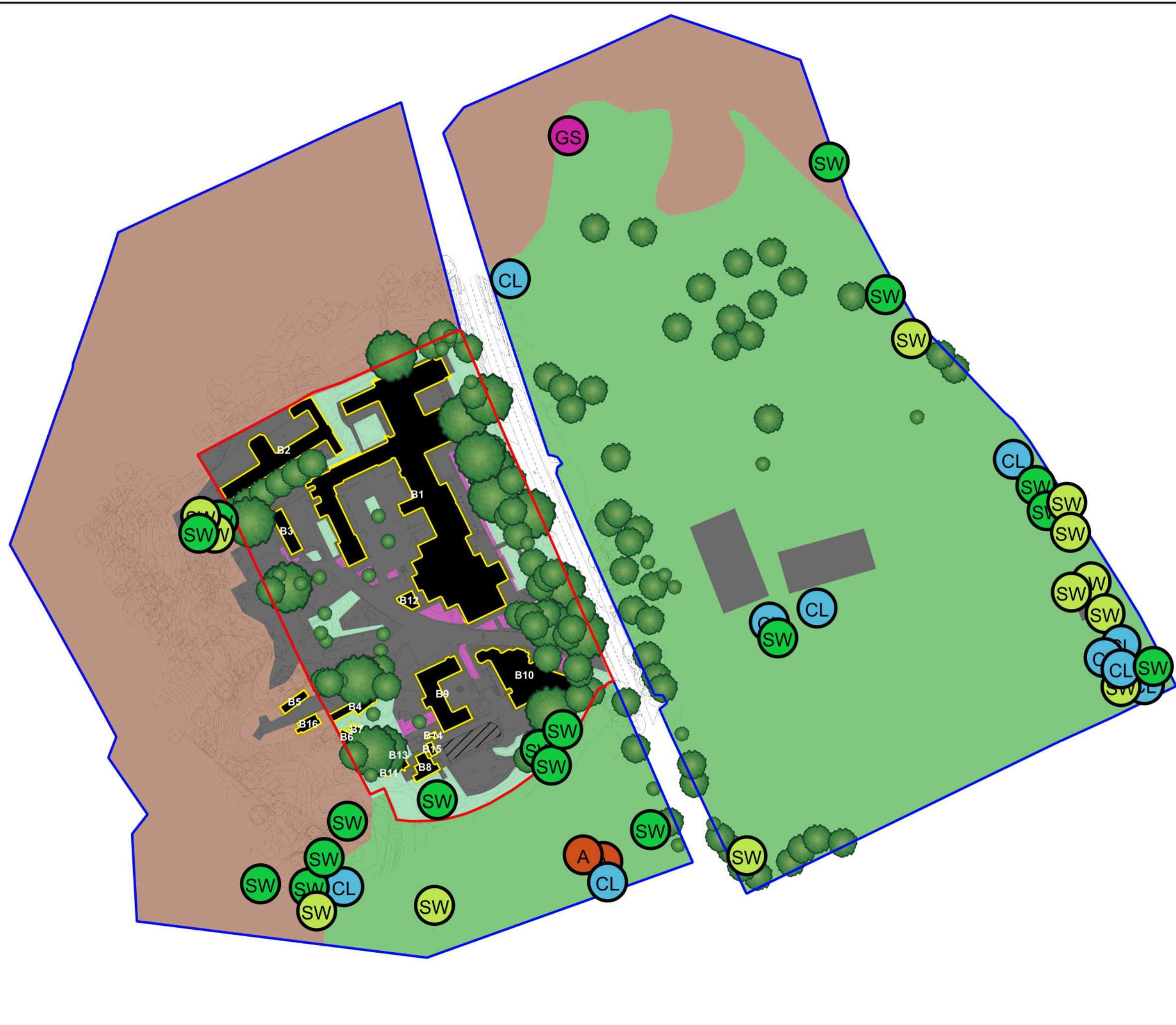
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FIGURE 7.2: ECOLOGICAL  
 FEATURES

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**FIGURE 7.3**  
Protected Species





- KEY:**
- APPLICATION SITE
  - WIDER STUDY AREA
  - A ADDER RECORDED DURING 2022 SURVEYS
  - CL COMMON LIZARD RECORDED DURING 2022 SURVEYS
  - GS JUVENILE GRASS SNAKE RECORDED DURING 2022 SURVEYS
  - SW SLOW WORM RECORDED DURING 2022 SURVEYS
  - SL JUVENILE SLOW WORM RECORDED DURING 2022 SURVEYS



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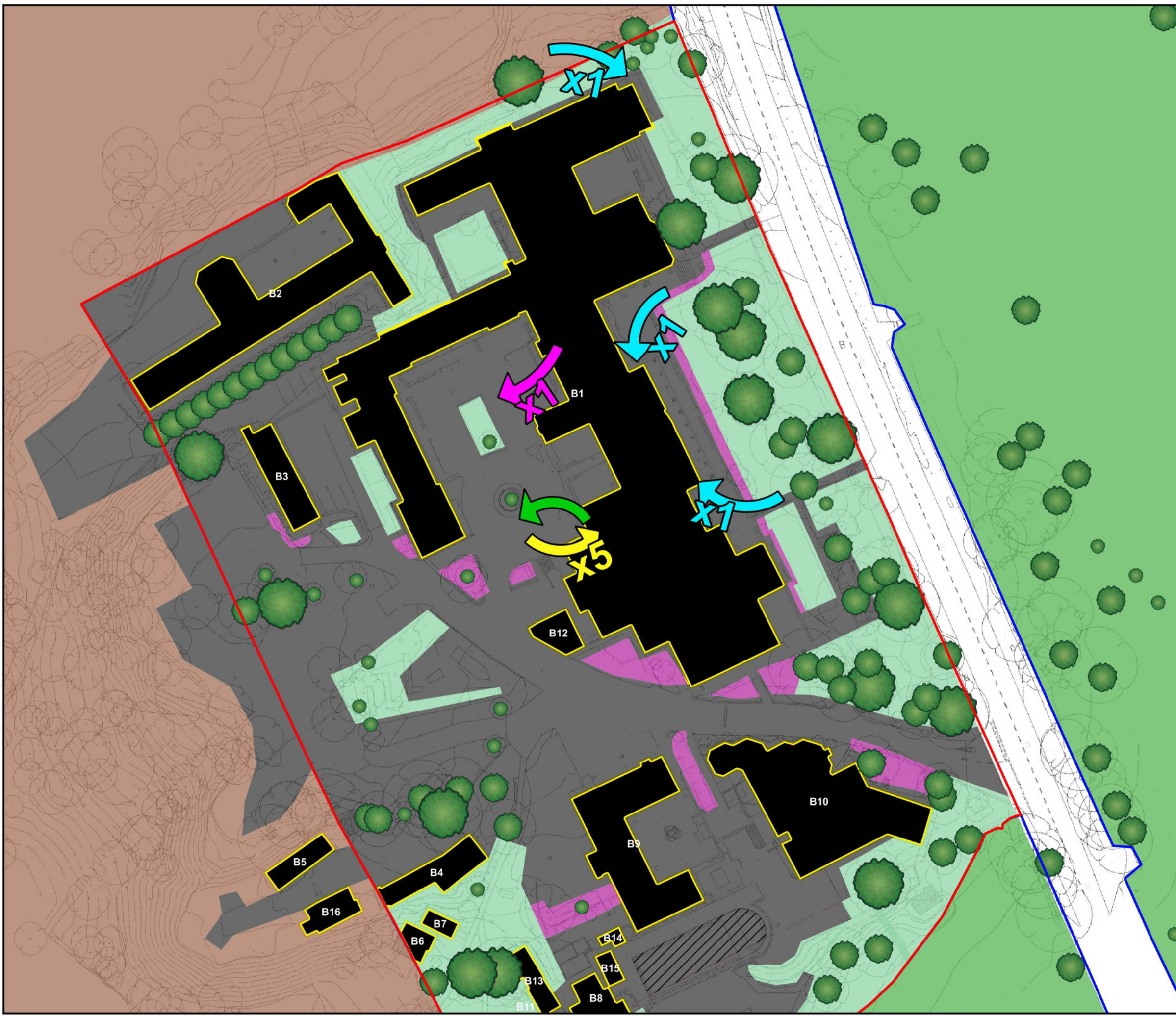
FIGURE 7.3: PROTECTED SPECIES

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**FIGURE 7.4**

Emergence and Re-entry Survey Results 2022





- KEY:**
- APPLICATION SITE
  - WIDER STUDY AREA
  - COMMON PIPISTRELLE RE-ENTRY (# OF BATS) (AUGUST 2022)
  - COMMON PIPISTRELLE EMERGENCE (# OF BATS) (JULY 2022)
  - COMMON PIPISTRELLE EMERGENCE (# OF BATS) (MAY 2022)
  - COMMON PIPISTRELLE RE-ENTRY (# OF BATS) (JULY 2022)



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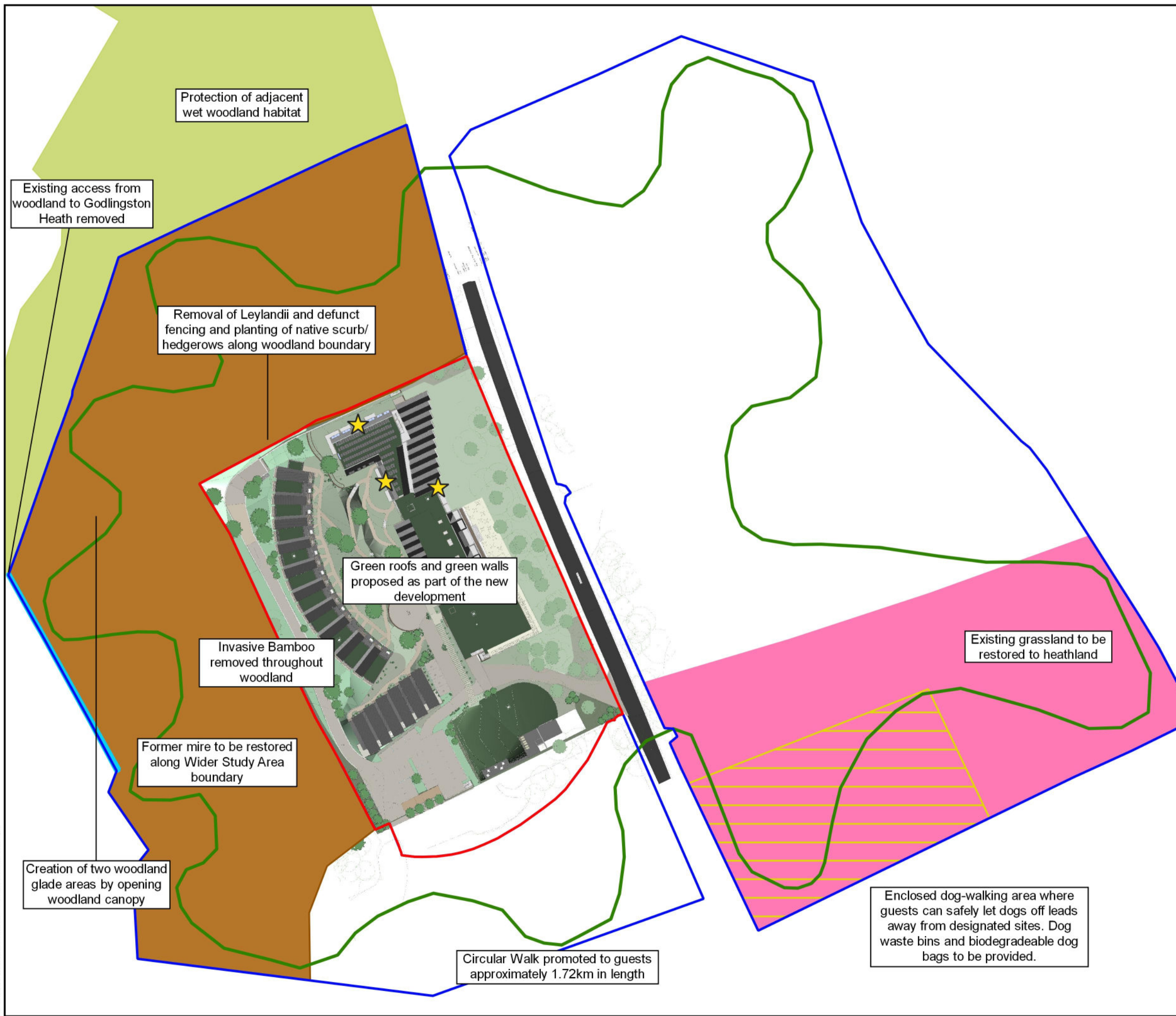
FIGURE 7.4: EMERGENCE AND RE-ENTRY SURVEY RESULTS 2022

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**FIGURE 7.5**

Ecological Enhancements



- KEY:**
- APPLICATION SITE
  - WIDER STUDY AREA
  - DOG WALKING AREA
  - ENHANCED WOODLAND
  - RESTORED HEATHLAND
  - MIRE RESTORATION
  - ADJACENT WET WOODLAND
  - CIRCULAR WALK TO BE PROMOTED TO GUESTS
  - ★ PROPOSED BAT BOX LOCATION



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<b>FIGURE 7.5: ECOLOGICAL ENHANCEMENTS</b>	Rev: A Oct 2022
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**FIGURE 7.6**

Existing Habitat Measurements





- KEY:**
- SITE BOUNDARY
  - WIDER STUDY AREA
  - DEVELOPED; SEALED SURFACE 1.138 ha
  - INTRODUCED SHRUB 0.049 ha
  - MODIFIED GRASSLAND (POOR CONDITION) 0.49 ha
  - URBAN TREES (AREA); SMALL 0.22 ha MEDIUM; 2.014 ha
  - TREE LINE 0.042 km



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<b>FIGURE 7.6: EXISTING HABITAT MEASUREMENTS</b>	Rev: A Oct 2022
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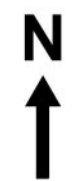


**FIGURE 7.7**

Proposed Habitat Measurements



- KEY:**
- SITE BOUNDARY
  - WIDER STUDY AREA
  - DEVELOPED; SEALED SURFACE 0.727 ha
  - OTHER NEUTRAL GRASSLAND 0.439 ha
  - MODIFIED GRASSLAND 0.429 ha
  - GREEN ROOF 0.259 ha
  - GREEN WALL 0.002 ha
  - RETAINED TREES (AREA); SMALL 0.032 ha MEDIUM; 1.502 ha
  - PROPOSED TREES (AREA); MEDIUM 2.6 ha



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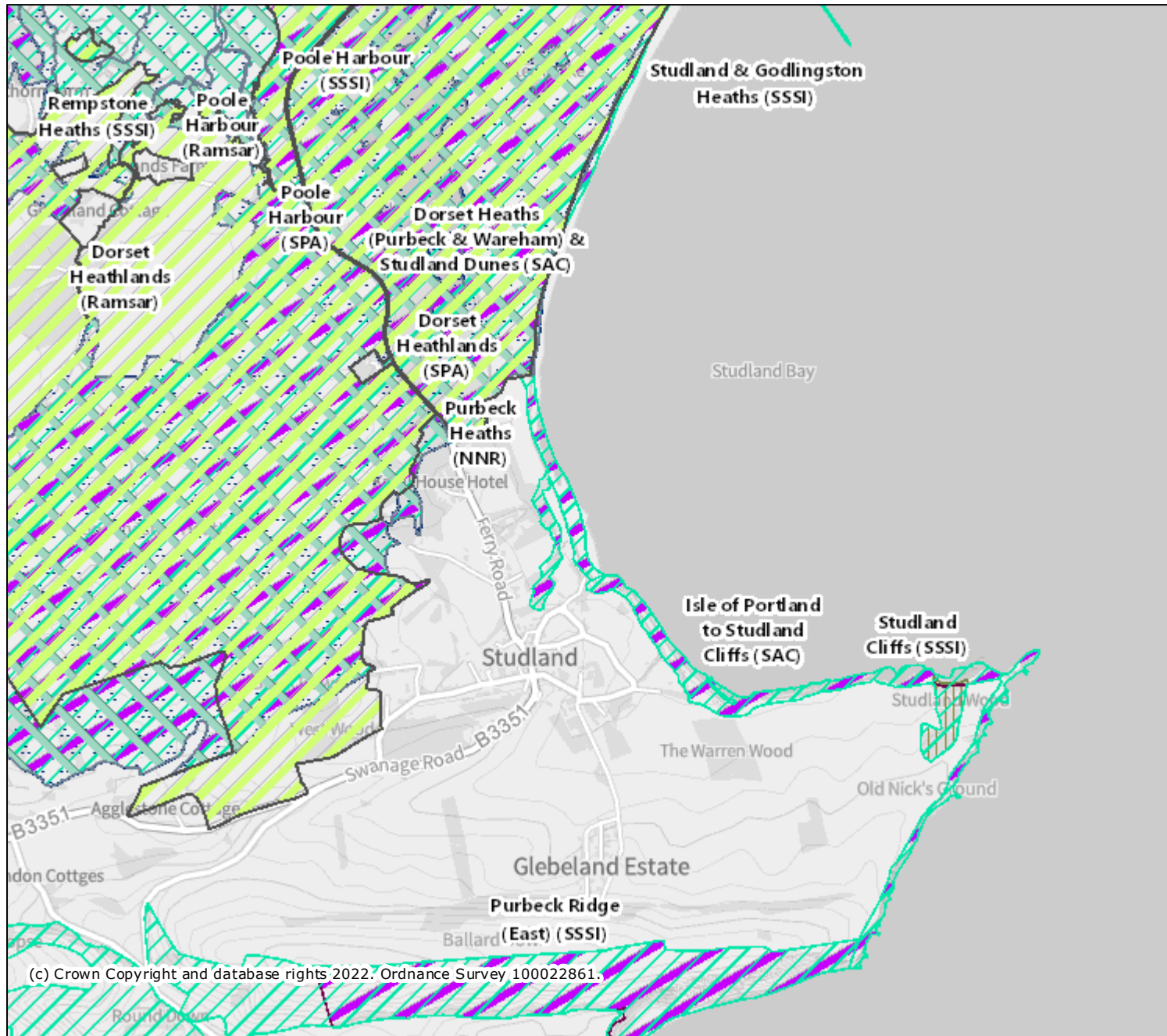
FIGURE 7.7: PROPOSED HABITAT MEASUREMENTS Rev: A  
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## **ANNEXES**


## **ANNEX 7.1**

Information downloaded from Multi-Agency  
Geographic Information for the Countryside (MAGIC)







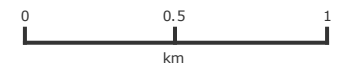
### Legend

-  Local Nature Reserves (England)
-  National Nature Reserves (England)
-  Ramsar Sites (England)
-  Proposed Ramsar Sites (England)
-  Sites of Special Scientific Interest (England)
-  Special Areas of Conservation (England)
-  Possible Special Areas of Conservation (England)
-  Special Protection Areas (England)
-  Potential Special Protection Areas (England)

### Ancient Woodland (England)

-  Ancient and Semi-Natural Woodland
-  Ancient Replanted Woodland

Projection = OSGB36  
 xmin = 397400  
 ymin = 79970  
 xmax = 410100  
 ymax = 86290



Map produced by MAGiC on 31 October, 2022.  
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## **ANNEX 7.2**

### DEFRA Biodiversity Metric Calculation

Headline Results

[Return to results menu](#)

On-site baseline	<i>Habitat units</i>	18.07
	<i>Hedgerow units</i>	0.08
	<i>River units</i>	0.00
On-site post-intervention <small>(Including habitat retention, creation &amp; enhancement)</small>	<i>Habitat units</i>	28.03
	<i>Hedgerow units</i>	0.09
	<i>River units</i>	0.00
On-site net % change <small>(Including habitat retention, creation &amp; enhancement)</small>	<i>Habitat units</i>	38.50%
	<i>Hedgerow units</i>	17.38%
	<i>River units</i>	0.00%
Off-site baseline	<i>Habitat units</i>	0.00
	<i>Hedgerow units</i>	0.00
	<i>River units</i>	0.00
Off-site post-intervention <small>(Including habitat retention, creation &amp; enhancement)</small>	<i>Habitat units</i>	0.00
	<i>Hedgerow units</i>	0.00
	<i>River units</i>	0.00
Total net unit change <small>(including all on-site &amp; off-site habitat retention, creation &amp; enhancement)</small>	<i>Habitat units</i>	6.96
	<i>Hedgerow units</i>	0.01
	<i>River units</i>	0.00
Total on-site net % change plus off-site surplus <small>(including all on-site &amp; off-site habitat retention, creation &amp; enhancement)</small>	<i>Habitat units</i>	38.50%
	<i>Hedgerow units</i>	17.38%
	<i>River units</i>	0.00%
Trading rules Satisfied?	Yes ✓	



A-1 Site Habitat Baseline

Condense / Show Columns

Condense / Show Rows

Main Menu

Instructions

Ref	Habitats and areas			Distinctiveness		Condition		Strategic significance			Suggested action to address habitat losses	Ecological baseline
	Broad Habitat	Habitat Type	Area (acres)	Distinctiveness	Score	Condition	Score	Strategic significance	Strategic significance	Strategic significance multiplier		
1	Urban	Developed land, sealed surface	1.318	V.Low	0	NA - Other	0	Awa/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	Compensation Not Required	0.00
2	Grassland	Modified grassland	0.49	Low	2	Poor	1	Awa/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	Same distinctiveness or better habitat required P	0.98
3	Urban	Introduced shrub	0.049	Low	2	Condition Assessment NA	1	Awa/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	Same distinctiveness or better habitat required P	0.10
4	Urban	Urban Tree	0.22	Medium	4	Poor	1	Awa/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	Same distinctiveness or higher distinctiveness habitat required P	0.88
5	Urban	Urban Tree	2.014	Medium	4	Moderate	2	Awa/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	Same forest habitat or a higher distinctiveness habitat required P	16.11
6												
7												
8												
9												
10												
		<b>Total habitat area</b>	<b>4.08</b>									<b>18.07</b>

Area retained	Area enhanced	Retention category biodiversity value		Area habitat lost	Units lost	Response compensation agreed for unavailability losses	Comments	
		Baseline units retained	Baseline units enhanced				Assessor comments	Reviewer comments
0	0.00	0.00	0.00	1.32	0.00			
0	0.00	0.00	0.00	0.49	0.98			
0	0.00	0.00	0.00	0.05	0.10			
0.032	0.13	0.00	0.19	0.75			Small trees	
1.502	12.02	0.00	0.51	4.10			Medium trees	
<b>1.53</b>	<b>0.00</b>	<b>18.14</b>	<b>0.50</b>	<b>2.88</b>	<b>5.83</b>			

**Total area lost (excluding area of Urban trees and Green walls)** 1.88



**B-1 Site Hedge Baseline**

Condense / Show Columns    Condense / Show Rows  
 Main Menu    Instructions

UE Habitats - existing habitats				Habitat distinctiveness		Habitat condition		Strategic significance			Suggested action to address habitat losses	Ecological baseline Total hedgerow units	Retention category biodiversity value						Comments	
Baseline ref	Hedge number	Hedgerow type	Length (km)	Distinctiveness	Score	Condition	Score	Strategic significance	Strategic significance	Strategic position multiplier			Length retained	Length enhanced	Units retained	Units enhanced	Length lost	Units lost	Assessor comments	Reviewer comments
1	T1	Line of Trees	0.02	Low	2	Moderate	2	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	Same distinctiveness hard or better	0.08	0	0	0.00	0.00	0.02	0.08		
2																				
3																				
4																				
5																				
6			0.02									0.08	0.00	0.00	0.00	0.00	0.02	0.08		





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