

7. Ecology

7.1. This ES chapter considers the effects of the proposed development in relation to Ecology. This chapter sets out potential ecological impacts arising from the proposed development, together with any required strategies to minimise or compensate for those potential impacts.

7.2. This chapter has been prepared by Ecology Solutions.

Legislative and Policy Context

Legislation

- Conservation of Habitats and Species Regulations (2017);
- Wildlife and Countryside Act (1981) (as amended);
- Natural Environment and Rural Communities (NERC) Act (2006);
- Council Directive 92/43/ECC on the conservation natural habitats and of wild fauna and flora;
- Directive 2009/147/EC on the conservation of wild birds; and
- The Protection of Badgers Act (1992).

Badgers

7.3. 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.

7.4. 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”. “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. 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.

Bats

7.6. 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:-
- the ability of any significant group of bats to survive, breed or rear or nurture their young; or to hibernate; or
- 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).

7.7. 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.

7.8. 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.

7.9. 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.

7.10. 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.

7.11. 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.

7.12. Licences can usually only be granted if the development is in receipt of full planning permission (and relevant conditions, if any, discharged).

Birds

- 7.13. 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.
- 7.14. 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.

Reptiles

- 7.15. All six British reptile species receive a degree of legislative protection that varies depending on their conservation importance.
- 7.16. 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).
- 7.17. 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.
- 7.18. 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.
- 7.19. All reptiles are also Priority Species.

National Planning Policy Framework

National Planning Policy Framework (July 2021)

- 7.20. Guidance on national policy for biodiversity and geological conservation is provided by the National Planning Policy Framework (NPPF), published in March 2012, revised on 24 July 2018, 19 February 2019 and again on 20 July 2021. It is noted that the NPPF continues to refer to further guidance in respect of statutory obligations for biodiversity and geological conservation and their impact within the planning system provided by Circular 06/05 (DEFRA / ODPM, 2005) accompanying the now-defunct Planning Policy Statement 9 (PPS9).
- 7.21. The key element of the NPPF is that there should be “a presumption in favour of sustainable development” (paragraphs 10 to 11). It is important to note that this presumption “does not apply where the plan or project is likely to have a significant effect on a habitats site (either alone or in combination with other plans or projects), unless an appropriate assessment has concluded that the plan or project will not adversely affect the integrity of the habitats site” (paragraph 182). ‘Habitats site’ has the same meaning as the term ‘European site’ as used in the Habitats Regulations 2017.
- 7.22. Hence, the direction of Government policy is clear. That is, the presumption in favour of sustainable development is to apply in circumstances where there is potential for an effect on a European site, if it has been shown that there will be no adverse effect on that designated site as a result of the development in prospect.
- 7.23. A number of policies in the NPPF are comparable to those in PPS9, including reference to minimisation of impacts to biodiversity and provision of net gains to biodiversity where possible (paragraph 174).
- 7.24. The NPPF also considers the strategic approach that Local Authorities should adopt with regard to the protection, maintenance and enhancement of green infrastructure, priority habitats and ecological networks, and the recovery of priority species.
- 7.25. Paragraphs 179 to 181 of the NPPF comprise a number of principles that Local Authorities should apply, including encouraging opportunities to incorporate biodiversity in and around developments; provision for refusal of planning applications if significant harm cannot be avoided, mitigated or compensated for; applying the protection given to European sites to potential Special Protected Areas (SPA), possible Special Areas of Conservation (SAC), listed or proposed Ramsar sites and sites identified (or required) as compensatory measures for adverse effects on European sites; and the provision for the refusal for developments resulting in the loss or deterioration of ‘irreplaceable’ habitats – unless there are ‘wholly exceptional reasons’ (for instance, infrastructure projects where the public benefit would clearly outweigh the loss or deterioration of habitat) and a suitable compensation strategy exists.
- 7.26. National policy therefore implicitly recognises the importance of biodiversity and that with sensitive planning and design, development and conservation of the natural heritage can co-exist and benefits can, in certain circumstances, be obtained.

Local Development Plan Policy

Purbeck Local Plan Part One

- 7.27. The current Purbeck Local Plan was adopted in November 2012 and contains three policies of relevance to nature conservation.
- 7.28. **Policy BIO** is concerned with the protection and enhancement of biodiversity, including the protection of statutory designated sites. **Policy DH** is specifically concerned with the protection of the Dorset Heaths, while **Policy PH** is specifically concerned with the protection of Poole Harbour.
- 7.29. Draft Purbeck Local Plan 2018 -2034
- 7.30. A draft version of the Purbeck Local Plan 2018 -2034 was published in January 2019 and contains 4 policies of relevance to nature conservation.
- 7.31. Policy E7 is concerned with the protection of statutory designated sites, with policies E8 and E9 referring specifically to the protection of the Dorset Heathlands and Poole Harbour respectively. Policy E10 is concerned with the protection of species and habitats, as well as non-statutory designated sites.

Assessment Methodology

- 7.32. 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

- 7.33. 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, 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.

7.34. 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

7.35. A number of other key considerations include:

- 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

7.36. 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.

7.37. 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.

7.38. 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.

Study Area

7.39. 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.

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

Consultation

7.41. Discussions were held with Natural England to discuss potential impacts upon nearby Statutory Designated sites. Full details of these discussions are set out within Appendix 7.2.

Data Collection

7.42. 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.

7.43. 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, 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.

Desk Study

- 7.44. In order to compile background information on the Application Site and the surrounding area, Ecology Solutions contacted Dorset Environmental Records Centre (DERC).
- 7.45. Further information on designated sites from a wider search area was obtained from the online Multi-Agency Geographic Information for the Countryside (MAGIC) database. This information is reproduced at Annex 7.1 and included, where appropriate, on Figure 7.1.

Habitat Survey Methodology

- 7.46. 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.

Extended Phase 1 Survey

- 7.47. Ecology Solutions survey work was based around an Extended Phase 1 Survey methodology 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.
- 7.48. 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

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

Fauna

- 7.50. 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.
- 7.51. In addition, specific surveys were carried out between May and October 2022 for the presence of Badgers *Meles meles*, bats and reptiles.
- 7.52. 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

- 7.53. Specific surveys for Badgers were carried out in October 2022.

- 7.54. 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:
- 7.55. 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.
- 7.56. 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.
- 7.57. 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.
- 7.58. 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

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

Bats

- 7.60. Field surveys were undertaken within the Application Site with regard to best practice guidelines issued by the Joint Nature Conservation Committee (2004) and the Bat Conservation Trust and (2016).
- 7.61. 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

- 7.62. 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.

- 7.63. 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.
- 7.64. The probability of a building being used by bats increases if it:
- is largely undisturbed;
 - dates from pre-20th 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.
- 7.65. 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.
- 7.66. The main requirements for a winter/hibernation roost site are that it maintains a stable (cool) temperature and humidity. Sites commonly 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.
- 7.67. Field surveys were undertaken within the Site with regard to best practice guidelines issued by the Joint Nature Conservation Committee (2004) and the Bat Conservation Trust (2016).

Previous Surveys

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

Reptiles

- 7.69. 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.
- 7.70. 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.

- 7.71. 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.
- 7.72. 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.

Assumptions and Limitations

- 7.73. Surveys were carried out in line with relevant guidelines and as such, no limitations are considered applicable.

Baseline Conditions

Designated Sites

Statutory

- 7.74. 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.

- 7.75. 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.
- 7.76. 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

- 7.77. 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.
- 7.78. A number of additional statutory and non-statutory sites are located in the vicinity and these are identified on Figure 7.1.

Habitats

- 7.79. The following main habitat / vegetation types were identified within the Application Site:
- Amenity Grassland;
 - Amenity Planting;
 - Trees;
 - Hardstanding;
 - Swimming Pool; and
 - Buildings.

- 7.80. Further details regarding these habitats can be found within Appendix 7.1

Background Records

- 7.81. 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.
- 7.82. 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

- 7.83. 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

- 7.84. No evidence of Badgers was recorded within the Application Site or Wider Study Area during surveys.
- 7.85. 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

- 7.86. Surveys undertaken by Focus Ecology in 2017 recorded Badger latrines within the off-site woodland.
- 7.87. **Background Records.** The DERC returned no records of Badger from within the site. The nearest record returned of a Badger was of a sett located approximately 1.5km southeast of the Application Site in 2012.
- 7.88. Given the known presence of Badgers within the local area, a precautionary approach with regard to this species is recommended during construction.

Bats

- 7.89. The trees and amenity planting within the site likely offer some foraging and navigational opportunities for bats.

Internal/External Building Surveys

- 7.90. 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.
- 7.91. No evidence of roosting bats was recorded within, or on the exterior, of any other buildings during the survey.

Previous surveys

- 7.92. 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

- 7.93. Buildings B1, B2, B4, B5, B6 and B7 were subject to emergence surveys on 30th May 2022, 13th July 2022 and 11th August 2022 and dawn re-entry surveys on 31st May 2022, 14th July 2022 and 12th August 2022. A summary of weather conditions can be seen within Appendix 7.1.
- 7.94. During the emergence survey on 30th 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.
- 7.95. During the dawn re-entry survey on 31st 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.
- 7.96. During the emergence survey on 13th 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.

- 7.97. During the dawn re-entry survey on 14th 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.
- 7.98. During the emergence survey on 11th 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.
- 7.99. During the dawn re-entry survey on 12th 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.

Previous Surveys

- 7.100. 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.

Summary

- 7.101. 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.

7.102. **Background Records.** Records of Common Pipistrelle and Soprano Pipistrelle bat roosts were returned by the DERC from within the 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 site in 2017. These records are believed to be from the previous ecological assessment conducted by Focus Ecology Ltd in 2017.

Other Mammals

7.103. 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.

7.104. **Background Records.** The DERC returned no records of any notable other mammals within the 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.

7.105. Given the absence of aquatic habitat within the 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 chapter.

Birds

7.106. 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.

7.107. **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 citrinella* 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 *Embreiza schoeniclus* approximately 900m north of the site in 2014 and Song Thrush *Turdus philomelos* spproximately 1km southeast of the site in 2017.

- 7.108. It is considered that the trees within the Application Site offer some suitable nesting and foraging opportunities for Linnet, 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.

Previous Surveys

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

Reptiles

- 7.110. Surveys for reptiles were carried out between August and September 2022 areas of rough grassland of the Wider Study Area.
- 7.111. 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 full results from these surveys can be seen in Appendix 7.1 and on Figure 7.3.

Previous surveys

- 7.112. 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.
- 7.113. **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

- 7.114. 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*.

- 7.115. 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).
- 7.116. 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:
- 7.117. “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.”
- 7.118. **Background Records.** The DERC returned no records of Great Crested Newts from within the search area.
- 7.119. 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 chapter.

Invertebrates

- 7.120. 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.
- 7.121. **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 centrugo* in 2018.

Other Species

- 7.122. 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.

Predicted Likely Effects (Before Mitigation)

- 7.123. A number of likely effects on ecological receptors are predicted during construction and operation in the absence of any mitigation or enhancement measures. These are outlined in further detail below.

Construction

Trees

- 7.124. 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.
- 7.125. *Prior to mitigation, impacts are **adverse** at the **local level** and are of **minor-moderate significance**.*
- 7.126. Potential construction effects on Badgers such as accidental trapping/injury.
- 7.127. *Prior to mitigation, impacts are **adverse** at the **County level** and are of **negligible-minor significance**.*

Badgers

- 7.128. Potential construction effects on Badgers such as accidental trapping/injury.
- 7.129. *Prior to mitigation, impacts are **adverse** at the **County level** and are of **negligible-minor significance**.*

Bats

- 7.130. Potential disturbance from lighting on foraging and commuting routes during the construction phase.
- 7.131. *Prior to mitigation, effects will be **adverse** at the **European level** and of **moderate significance**.*

Birds

- 7.132. Potential for killing and injury of birds and / or damage or destruction of nests during clearance of vegetation/buildings.
- 7.133. *Prior to mitigation, impacts are **adverse** at the **site-local level** and of **minor significance**.*

Reptiles

- 7.134. Potential for killing or injury of reptiles during clearance of vegetation.

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

Operation

Statutory Sites

7.136. A planning application (REF: 6/2018/0566) was submitted as part of previous proposals for the proposed redevelopment on the site. During consultation, Natural England raised a number of concerns regarding the proposals considering there was a potential risk of adverse effects occurring arise to nearby European designated sites as a result of the proposals. In support of this updated application, extensive work, including updated visitor and staff surveys, have been undertaken and meetings have been held with Natural England to address any concerns. This information is set out in further detail within a shadow Habitat Regulations Assessment included at Appendix 7.2.

7.137. No adverse impacts are predicted with regard to nutrient neutrality on designated sites. A standalone nutrient neutrality statement has been submitted to support the planning application.

Amenity Grassland and Amenity Planting

7.138. 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.

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

Trees

7.140. 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.

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

Badgers

7.142. It is considered that the amenity grassland, trees and amenity planting within the Application Site offers some limited opportunities for Badgers, with large areas to be lost to the proposed development.

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

Bats

7.144. 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

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

Other Mammals

7.146. Given the losses to trees and amenity habitats, the Application Site is likely to result in a small loss of habitat for a range of common small mammals.

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

Birds

7.148. 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 for a range of common bird species.

7.149. As set out above, a number of trees, areas of amenity planting and areas of amenity grassland are to be lost within the west of the Application Site to facilitate the proposals.

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

Reptiles

7.151. 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.

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

Invertebrates

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

7.154. Impacts: Loss of suitable habitat for common invertebrates.

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

Cumulative and In-Combination Effects

7.156. There are not deemed to be any significant cumulative impacts resulting from the development, of the Application Site in combination with any other committed developments, therefore cumulative effects are negligible. Measures for the Development have been designed to offset any potential impacts such that there are no adverse residual effects both during the construction phase and the operational phase and thus negating any accumulation of significant adverse effects.

Mitigation and Enhancement

Construction

Trees

- 7.157. 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.
- 7.158. 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.

Badgers

- 7.159. 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).
- 7.160. During the construction phase of the development it is often necessary to undertake a number of additional measures to safeguard any Badgers present on a site.
- 7.161. 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 that would not be permissible on site, with all measures included as part of a Construction Environmental Management Plan (CEMP).
- 7.162. 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.

- 7.163. 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.
- 7.164. 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.
- 7.165. 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

Bats

- 7.166. 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.

Birds

- 7.167. In order to safeguard any nesting bird species within the Application Site, the clearance of any trees/demolition of suitable buildings 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.

Reptiles

- 7.168. 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.

Operation

Statutory Sites

- 7.169. While the proposals result in a slight increase in guest numbers than existing, 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.
- 7.170. A number of enhancements are proposed as part of the development, which are shown on Figure 7.5 within Appendix 7.1. 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.
- 7.171. This information is set out in further detail within the Shadow Habitat Regulations Assessment (sHRA) included at Appendix 7.2.

Amenity Grassland and Amenity Planting

- 7.172. 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.
- 7.173. In addition, new areas of heathland are to be created within the eastern Wider Study Area (as indicated on Figure 7.5 within Appendix 7.1), which will represent a further enhancement over the current situation.

Trees

- 7.174. 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.
- 7.175. 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.

Badgers

- 7.176. 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.

Bats

- 7.177. Using the sliding scale of mitigation (Figure 4 in the Bat Mitigation Guidelines 2004) 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'.
- 7.178. 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.
- 7.179. 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 northeastern, 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.
- 7.180. 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.
- 7.181. 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.
- 7.182. 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

Other Mammals

- 7.183. 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.

Birds

- 7.184. 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.
- 7.185. 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.
- 7.186. 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.

Reptiles

- 7.187. 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

Invertebrates

- 7.188. The planting of new native trees, and the creation of new areas of wildflower 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.
- 7.189. 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

Residual Effects Assessment

- 7.190. Residual effects are those that are considered likely to remain after implementation of the mitigation measures set out above.

Statutory Sites

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

Amenity Grassland and Planting

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

Trees

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

Badgers

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

Bats

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

Other Mammals

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

Birds

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

Reptiles

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

Invertebrates

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

Biodiversity Net Gain

7.200. A biodiversity net gain calculation undertaken to assess the proposals 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. Full details of this calculation are set out within Appendix 7.1.

Table 7.4: Summary of Significance of Effects - Construction

Receptor / Feature affected	Likely Effect	Sensitivity of Receptor (High, Medium, Low, Negligible)	Magnitude of change and Nature of Impact (High, Medium, Small, Negligible) and (Permanent, Temporary)	Geographic Extent (International, national, regional, county, borough, local)	Significance of Effect <u>before</u> mitigation (Major, Moderate, Minor) (Beneficial/Adverse/Negligible)	Mitigation / Enhancement measures proposed (To be secured by: Design/S106/CIL/C condition)	Significance of Residual Effects (<u>after</u> mitigation) (Major, Moderate, Minor) (Beneficial/Adverse/Negligible)
CONSTRUCTION PHASE							
Trees	Potential damage to trees during construction	Medium	Small temporary	Local	Minor-moderate adverse	Trees fenced-off during construction. Measures to mitigate dust emissions. To be secured by condition e.g. via CEMP.	Negligible
Badgers	Potential construction impacts such as trapping/injury	Low	Small temporary	County	Negligible-minor adverse	Safeguarding measures implemented during construction. To be secured by condition e.g. via CEMP/LEMP.	Negligible
Bats	Potential lighting impacts during construction	Medium	Small temporary	International	Moderate adverse	Sensitive lighting scheme during construction.	Negligible

ES Main Text - Ecology

Knoll House Hotel, Ferry Road, Studland

Receptor / Feature affected	Likely Effect	Sensitivity of Receptor (High, Medium, Low, Negligible)	Magnitude of change and Nature of Impact (High, Medium, Small, Negligible) and (Permanent, Temporary)	Geographic Extent (International, national, regional, county, borough, local)	Significance of Effect <u>before</u> mitigation (Major, Moderate, Minor) (Beneficial/Adverse/Negligible)	Mitigation / Enhancement measures proposed (To be secured by: Design/S106/CIL/C condition)	Significance of Residual Effects (after mitigation) (Major, Moderate, Minor) (Beneficial/Adverse/Negligible)
						To be secured by condition e.g. via CEMP/LEMP.	
Birds	Potential for killing/injuring birds during vegetation clearance	Low	Small temporary/permanent	Local	Minor adverse	Clearance of any suitable vegetation/buildings will be undertaken outside of the bird breeding season. To be secured by condition e.g. via CEMP/LEMP.	Negligible
Reptiles	Potential for killing or injuring reptiles during clearance of vegetation	Low	Small temporary/permanent	National	Minor adverse	Habitat manipulation exercise/small-scale in-situ relocation exercise prior to vegetation removal. To be secured by condition e.g. via CEMP/LEMP.	Negligible

Table 7.5: Summary of Significance of Effects - Operation

Receptor / Feature affected	Likely Effect	Sensitivity of Receptor (High, Medium, Low, Negligible)	Magnitude of change and Nature of Impact (High, Medium, Small, Negligible) and (Permanent, Temporary)	Geographic Extent (International, national, regional, county, borough, local)	Significance of Effect <u>before</u> mitigation (Major, Moderate, Minor) (Beneficial/Adverse/Negligible)	Mitigation / Enhancement measures proposed (To be secured by: Design/S106/CIL/Condition)	Significance of Residual Effects (<u>after</u> mitigation) (Major, Moderate, Minor) (Beneficial/Adverse/Negligible)
OPERATION							
Adjacent Statutory Sites	No impacts	Medium	Small permanent	International	Negligible	Promotion of alternative circular walk; enclosed dog-walking area; mire restoration; removal of access point to Godlingston Heath. To be secured by condition.	Minor beneficial
Amenity Grassland and Planting	Loss of habitats	Low-negligible	Negligible permanent	Local	Negligible-minor adverse	New areas of amenity grassland, wildflower grassland, green roofs, green walls; creation of new heathland in Wider Study Area.	Minor-moderate beneficial

ES Main Text - Ecology

Knoll House Hotel, Ferry Road, Studland

Receptor / Feature affected	Likely Effect	Sensitivity of Receptor (High, Medium, Low, Negligible)	Magnitude of change and Nature of Impact (High, Medium, Small, Negligible) and (Permanent, Temporary)	Geographic Extent (International, national, regional, county, borough, local)	Significance of Effect <u>before</u> mitigation (Major, Moderate, Minor) (Beneficial/Adverse/Negligible)	Mitigation / Enhancement measures proposed (To be secured by: Design/S106/CIL/Condition)	Significance of Residual Effects (<u>after</u> mitigation) (Major, Moderate, Minor) (Beneficial/Adverse/Negligible)
						To be secured by condition e.g. a LEMP.	
Trees	Loss of trees	Medium	Small permanent	Local	Minor-moderate adverse	New native tree planting; enhancements to woodland in Wider Study Area. To be secured by condition e.g. a LEMP.	Minor-moderate beneficial
Badgers	Loss of foraging habitat	Low	Negligible permanent	County	Negligible-minor adverse	Wildflower grassland and landscape planting. To be secured by condition e.g. a LEMP.	Minor beneficial
Bats	Loss of roosts. Loss of foraging / navigational habitat. Lighting spill during operation.	Medium	Medium permanent	International	Moderate adverse	Provision of new bat boxes; creation of wildflower grassland,; green roofs, green walls;	Minor-moderate beneficial

Receptor / Feature affected	Likely Effect	Sensitivity of Receptor (High, Medium, Low, Negligible)	Magnitude of change and Nature of Impact (High, Medium, Small, Negligible) and (Permanent, Temporary)	Geographic Extent (International, national, regional, county, borough, local)	Significance of Effect <u>before</u> mitigation (Major, Moderate, Minor) (Beneficial/Adverse/Negligible)	Mitigation / Enhancement measures proposed (To be secured by: Design/S106/CIL/Condition)	Significance of Residual Effects (<u>after</u> mitigation) (Major, Moderate, Minor) (Beneficial/Adverse/Negligible)
						implementation of sympathetic lighting strategy; provision of new native trees. To be secured by condition e.g. a LEMP.	
Other Mammals	Loss of habitat	Low	Negligible permanent	Local	Negligible adverse	Provision of species-rich wildflower grassland, green roofs and green walls. To be secured by condition e.g. a LEMP.	Minor-moderate beneficial
Birds	Loss of nesting and foraging habitat	Low	Negligible permanent	Local	Minor adverse	Provision of native trees, wildflower grassland, green roofs, green walls; erection of new bird boxes.	Minor beneficial

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Receptor / Feature affected	Likely Effect	Sensitivity of Receptor (High, Medium, Low, Negligible)	Magnitude of change and Nature of Impact (High, Medium, Small, Negligible) and (Permanent, Temporary)	Geographic Extent (International, national, regional, county, borough, local)	Significance of Effect <u>before</u> mitigation (Major, Moderate, Minor) (Beneficial/Adverse/Negligible)	Mitigation / Enhancement measures proposed (To be secured by: Design/S106/CIL/Condition)	Significance of Residual Effects (<u>after</u> mitigation) (Major, Moderate, Minor) (Beneficial/Adverse/Negligible)
						To be secured by condition e.g. a LEMP.	
Reptiles	Loss of habitat	Low	Small permanent	National	Minor adverse	Provision of wildflower grassland; provision of log piles. To be secured by condition e.g. a LEMP.	Minor beneficial
Invertebrates	Loss of habitat	Low	Negligible-minor permanent	Local	Minor adverse	Provision of new native trees, wildflower grassland, green roofs, green walls; provision of log piles To be secured by condition e.g. a LEMP.	Minor-moderate beneficial

Summary

7.201. This assessment has been undertaken with regard to the CIEEM guidance. All relevant policies from the NPPF and Dorset council local have been considered as part of the assessment and all survey work has been undertaken with regard to the relevant survey guidance. As such, it is considered that an accurate and robust assessment has been made. Following mitigation and enhancement measures, overall impacts are considered to be positive at the local level and will ensure no net loss in biodiversity terms.

References

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