



GLENBEIGH DEVELOPMENTS LTD

HANLYE LANE
CUCKFIELD,
WEST SUSSEX

Ecological Assessment

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CONTENTS

1	INTRODUCTION	1
2	SURVEY METHODOLOGY	2
3	ECOLOGICAL FEATURES	7
4	WILDLIFE USE OF THE SITE	9
5	ECOLOGICAL EVALUATION	15
6	PLANNING POLICY CONTEXT	23
7	SUMMARY AND CONCLUSIONS	26

PLANS

PLAN ECO1	Site Location and Ecological Designations
PLAN ECO2	Ecological Features
PLAN ECO3	Protected Species

APPENDICES

APPENDIX 1	Information obtained from MAGIC
APPENDIX 2	Examples of Suitable Bat Roosting Features
APPENDIX 3	Examples of Suitable Bird Nesting Features

1. INTRODUCTION

1.1. Background

1.1.1. Ecology Solutions were originally commissioned by Glenbeigh Development Limited to carry out an Ecological Assessment of land at Hanlye Lane, Cuckfield, West Sussex, hereafter referred to as 'application site' in August 2011. Further updated surveys were carried in the 2016 survey season including a full suite of protected species surveys.

1.1.2. The location of the application site is identified on Plan ECO1

1.2. Site Characteristics

1.2.1. The application site is located to the northeast of the village of Cuckfield in West Sussex. It is situated to the south of Hanlye Lane with this road forming the northern boundary. Existing development is present to the west of the application site with pasture land to the south and east. To the northeast of the application site is a school and to the north of Hanlye Road an area of woodland.

1.2.2. The application site largely comprises horse grazed pasture, bordered by mature hedgerows and woodland. Scrub has been allowed to develop in many areas. A small Scots pine plantation is present in the centre of the application site.

1.3. Ecological Assessment

1.3.1. This document assesses the ecological interest of the application site as a whole. The importance of the habitats present is evaluated with regard to current guidance published by the Chartered Institute of Ecology and Environmental Management (CIEEM)¹.

1.3.2. The report also sets out the existing baseline conditions for the application site, setting these in the correct planning policy and legal framework and assessing the need for any further survey work. It also highlights any potential impacts from development at the application site. Appropriate mitigation is identified that will offset any negative impacts and where possible provide suggestions for ecological enhancement of the application site, in accordance with national, regional and local planning policy.

¹ ¹ CIEEM (2016) *Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater and Coastal, 2nd Edition*. Chartered Institute of Ecology and Environmental Management, Winchester.

2. SURVEY METHODOLOGY

- 2.1. 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.

2.2. Desk Study

- 2.2.1. In order to compile background information on the application site and its immediate surroundings Ecology Solutions contacted Sussex Biodiversity Records Centre (SxBRC). SxBRC collate records from the biological recording community in Sussex.
- 2.2.2. Information received from the data search is included where relevant within the report and shown where appropriate on Plan ECO1.
- 2.2.3. Further information on designated sites was obtained from the online Multi-Agency Geographic Information for the Countryside (MAGIC)² database, and Natural England's Nature On The Map³. This information is reproduced at Appendix 1 and where appropriate on Plan ECO1.

2.3. Habitat Survey Methodology

- 2.3.1. A survey was carried out in May 2016 to ascertain the general ecological value of the land contained within the boundaries of the application site and to identify the main habitats and associated plant species, with notes on fauna utilising the application site.
- 2.3.2. The application site was surveyed based around extended Phase 1 survey methodology⁴, as recommended 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 which require further survey. Any such areas identified can then be examined in more detail.
- 2.3.3. All of the species that occur in each habitat would not necessarily be detectable during survey work carried out at any given time of the year, since different species are apparent at different seasons. However the survey was sufficient to assess the general ecological value of the habitats, given the limited botanical interest of the application site.

² <http://www.magic.gov.uk/>

³ <http://www.natureonthemap.gov.uk/>

⁴ Joint Nature Conservation Committee (2010). *Handbook for Phase 1 Habitat Survey – a Technique for Environmental Audit*. JNCC, Peterborough.

2.4. Faunal Survey

- 2.4.1. General faunal activity observed during the course of the survey was recorded, whether visually or by call. Specific attention was paid to the potential presence of any protected, rare, notable or Biodiversity Action Plan species. In addition, specific surveys were undertaken for Badgers *Meles meles* and bats.
- 2.4.2. **Bats.** All trees present within the application site were assessed for their potential to support roosting bats in May 2016. Ladders and binoculars were used where necessary during surveys.
- 2.4.3. For a tree to be classed as having some potential for roosting bats it must usually have one or more of the following characteristics:
- obvious holes, e.g. rot holes and old woodpecker holes;
 - dark staining on the tree below a hole;
 - tiny scratch marks around a hole from bats' claws;
 - cavities, splits and / or loose bark from broken or fallen branches, lightning strikes etc; and / or
 - dense covering of mature Ivy over trunk.
- 2.4.4. **Badgers.** Specific surveys were undertaken to search for evidence of Badgers in May 2016, and comprised two main elements. The first of these was a thorough search for evidence of Badger setts. For any setts that were 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 from 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 and the remains of the spoil heap.
- 2.4.5. Secondly, Badger activity such as well-worn paths and 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, if any, by Badgers.
- 2.4.6. **Reptiles.** Specific surveys to identify the presence or absence of reptiles within the application site were undertaken between June and July 2016.

- 2.4.7. Following an initial assessment to identify areas of suitable reptile habitat within the application site, refugia surveys were undertaken. A total of 112 'tins' (0.5 x 0.5 metre squares of heavy roofing felt which are often used as refuges by reptiles) were distributed throughout all suitable reptile habitat within the application site which mostly consisted of field margins within the application site boundary.
- 2.4.8. These tins were left in place for two weeks to 'bed in' and subsequently surveyed for reptiles beneath or upon the tins during suitable weather conditions.
- 2.4.9. Suitable weather conditions to carry out surveys are when the air temperature is between 9 and 18°C. Heavy rain and windy conditions should be avoided.
- 2.4.10. 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 and raise their body temperature which allows them to forage earlier and later in the day.
- 2.4.11. **Amphibians.** The application site does not support any waterbodies that were considered to offer potential opportunities for breeding amphibian species (including Great Crested Newts *Triturus cristatus*). However a single waterbody is present within 500m of the application site that was considered to offer limited potential for breeding amphibian species and as such were to subject to detailed aquatic surveys. This waterbody comprised a large amenity lake adjacent to residential development to the north-west of the application site.
- 2.4.12. In addition to this waterbody, a second waterbody was identified within the woodland to the south of the application site however this was not considered to offer breeding potential for amphibian species due to it being dry at the time of survey in May 2016 (i.e. within the GCN breeding season).
- 2.4.13. As such, detailed aquatic surveys were undertaken by Ecology Solutions in May 2016 to ascertain the presence or absence of breeding amphibians.
- 2.4.14. All of the surveys were undertaken in suitable weather conditions in accordance with the Natural England guidelines⁵ to determine the presence or absence of Great Crested Newts. Surveys undertaken by Ecology Solutions utilised three methods per visit (torch survey, bottle-trapping and egg searches), where possible.
- 2.4.15. Suitable survey weather conditions are deemed to be those nights when the night-time air temperature is more than 5°C, with little or

⁵ English Nature (2001) *Great Crested Newt Mitigation Guidelines*. English Nature, Peterborough.

no wind, and no rain, and surveys were conducted during such conditions.

- 2.4.16. Torch counting involved the use of high-powered torches to find and, if possible, count the number of adults of each amphibian species. As recommended by Natural England the entire margin of each waterbody was walked once, slowly checking for Great Crested Newts.
- 2.4.17. Bottle-trapping involved setting traps made from two litre plastic bottles around the margin of each waterbody, and leaving the traps set overnight before checking them the following morning. A density of at least one trap per two metres of shoreline was utilised, where possible, as recommended by Natural England.
- 2.4.18. In addition an egg search was undertaken of any aquatic vegetation to search for any evidence of breeding Great Crested Newts.
- 2.4.19. **Hazel Dormice.** Specific surveys to ascertain the presence or absence of Hazel Dormice were undertaken between May and November 2016.
- 2.4.20. The survey technique involves the erection of nest tubes within all hedgerows considered to be species-rich or of potential value to Dormice. A total of 50 nest tubes were put up in the hedgerows around the boundaries of the application site.
- 2.4.21. Nest tubes were placed in accordance with the guidance provided by the Mammal Society and Natural England⁶ and as recommended in the Dormouse Conservation Handbook⁷. Tubes were placed within hedgerows at approximately 10 metre intervals where suitable locations were identified. The nest tubes were attached with wire ties underneath suitably sturdy horizontal branches and positioned on average at approximately 1.5 metres above ground level.
- 2.4.22. Following deployment in late May 2016, monitoring surveys were undertaken between May and November 2016, with checks undertaken at monthly intervals.
- 2.4.23. During the surveys Hazel *Corylus avellana* nut checks were also undertaken to look for past evidence of Dormouse foraging. Individual nuts were collected underneath the hedgerows and were assessed to see if any had characteristic Dormouse gnaw holes.
- 2.4.24. The survey has been scored for effort according to the method developed from the South West Dormouse Project (Chanin and Woods 2003). The system used provides an overall score that reflects the chances of Dormice being discovered if present, and

⁶ Chanin P. & Woods M. (2003). Research Report 524, 'Surveying Dormice Using Nest Tubes – Results & Experiences from the South West Dormouse Project'. English Nature, Peterborough.

⁷ Bright, P, Morris, P. & Mitchell-Jones, T. (2006). *The Dormouse Conservation Handbook*. Second Edition. English Nature, Peterborough.

thus provides an indicator of 'thoroughness' of a survey. This score is calculated based on the number of tubes used and the number of months the tubes were in place.

- 2.4.25. The months of the year are weighted according to the likelihood of recording dormice as set out below.

Month	Weighting
April	1
May	4
June	2
July	2
August	5
September	7
October	2
November	2

Table 1: Monthly Score Weighting (Chanin & Woods 2003)

- 2.4.26. A score of 20 (or above) is deemed a thorough survey, and a score of 15 to 19 may be regarded as adequate where circumstances do not permit more time or more tubes (particularly if other survey methods have also proved negative).
- 2.4.27. A survey with 50 nest tubes checked between May and November would provide a score of 24. It is also noted that the survey included all of the most optimal months for Dormouse surveys.

3. ECOLOGICAL FEATURES

3.1. The application site was subject to an ecological survey in May 2016, the optimal period for habitat surveys to be undertaken. The vegetation present enabled the habitat types to be satisfactorily identified and an accurate assessment of the ecological interest of the habitats to be undertaken.

3.2. The following main habitat / vegetation types were identified:

- Semi-improved Neutral Grassland;
- Woodland;
- Scrub;
- Hedgerows and Trees;
- Bare Ground

3.3. The location of these habitats is shown on Plan ECO2.

3.4. Each habitat present is described below with an account of the representative plant species present.

3.5. Semi-improved Neutral Grassland

3.5.1. The majority of the application site comprises semi-improved neutral grassland that is grazed by horses. Grass species present in the sward include Cock's-foot *Dactylis glomerata*, Creeping Bent *Agrostis capillaris*, Red Fescue *Festuca rubra* and False Oat-grass *Agrostis stolonifera*. The herbaceous component included for White Clover *Trifolium repens*, Dandelion *Taraxacum officinale* agg., Ribwort Plantain *Plantago lanceolata*, Creeping Buttercup *Ranunculus repens*, Common Mouse-ear *Cerastium fontanum*, Common Sorrel *Rumex acetosa*, Ragwort *Senecio jacobaea*, Selfheal *Prunella vulgaris*, Common Knapweed *Centaurea nigra* and Creeping Thistle *Cirsium arvense*.

3.6. Woodland

3.6.1. There is a small plantation in the centre of the application site that consists of mature Scot's Pine *Pinus sylvestris* with an understorey of, Hawthorn *Crataegus monogyna*, Blackthorn *Prunus spinosa*, Dog Rose *Rosa canina*, Elder *Sambucus nigra* and Bramble *Rubus fruticosus*. Some of the Pine trees have suffered some damage possibly by strong winds.

3.6.2. An area of woodland is present outside of the application site immediately adjacent to the southeast corner. It is designated as ancient woodland. It contained species such as Oak *Quercus Robur*, Beech *Fagus sylvatica*, Holly *Ilex aquifolium*, Hazel *Corylus avellana*, Bramble *Rubus fruticosus* and Honeysuckle *Lonicera periclymenum*. The ground flora is dominated by Ivy *Hedera helix*, but there was evidence of other woodland flora such as Cow Parsley *Anthriscus sylvestris*, Red Campion *Silene dioica*, Wood Avens *Geum urbanum* and Greater Stitchwort *Stellaria holostea*.

3.7. Scrub

- 3.7.1. There are some areas of scrub encroachment associated with the hedgerows surrounding the application site. There are also extensive areas of scattered scrub especially within the southern field within the application site. Species recorded include Bramble, Blackthorn and Dog Rose.

3.8. Hedgerows and Trees

- 3.8.1. There are a number of hedgerows along field boundaries within the application site as shown on Plan ECO2. The hedgerows on the whole are unmanaged and most of them are uncut and gappy in nature. Species recorded within the hedgerows include Oak, Ash, Hazel, Blackthorn, Hawthorn, Elder, Field Maple *Acer campestre* and Dog-rose. There are a number of standard trees within the hedgerows, many of which have potential for roosting bats.

3.9. Bare Ground

- 3.9.1. There are several areas of bare ground within the application site, the majority of these contain large amounts of debris and shows signs that the area has been used for extensive bonfires as well as material storage. In addition to this, a haul route is present across the southern field within the application site which appears to be regularly used and free from vegetation growth.

4. WILDLIFE USE OF THE SITE

- 4.1. During the survey general observations were made of any faunal use of the application site with specific attention paid to the potential presence of protected or notable species. Specific surveys were also undertaken with regard to bats, Badgers, reptiles, Dormouse and Great Crested Newts.

4.2. Bats

- 4.2.1. No structures are present within the application site and moreover there are no structures along the application site boundary that are considered to provide suitable opportunities for roosting bats.
- 4.2.2. There are a number of trees on application site that have some potential to support roosting bats. These are mainly associated with the hedgerows, especially through the central hedgerow that runs across the application site. Initial inspections of these trees found no obvious signs of use around these features, such as in the form of staining or droppings.
- 4.2.3. The hedgerows within the application site offer the potential as commuting and foraging resources for bats.
- 4.2.4. In order to ascertain the use of the application site by foraging and commuting bats, activity surveys were undertaken. A total of three bat activity surveys were undertaken at the application site, in line with the methodology outlined in Section 2 above. Table 1 below outlines the weather conditions during each survey visit.

Date	Weather Conditions	Start / Finish Time
24.06.2016	15C, 40% cloud cover, dry, light breeze	21:09 / 23:25
26.07.2016	19C, 100% cloud cover, dry, still	20:40 / 23:57
07.09.2016	22C, 60% cloud cover, dry, still	19:16 / 21:31

Table 1: Weather conditions during bat activity surveys

- 4.2.5. The activity survey undertaken on the 24nd June recorded low to moderate numbers of Common Pipistrelle *Pipistrellus pipistrellus* bats during the transects undertaken, with a total of 286 registrations recorded over the two transects. This bat activity was largely confined to linear vegetative features within the application site such as hedgerows and treelines as well as the woodland edge to the south of the application site. Lower levels of activity were attributed to other common species including Soprano Pipistrelle *Pipistrellus pygmaeus*, Brown Long Eared *Plecotus auritus*, as well as Noctule *Nyctalus noctula* bats with registrations

of these not exceeding single figures. No other bat species were recorded during these surveys.

- 4.2.6. The activity survey undertaken on the 26th July yielded similar results again, recording low to moderate numbers of bat registrations primarily pertaining to Common Pipistrelle bats (234 registrations) with low numbers of Soprano Pipistrelle (8 registrations), Brown Long Eared (3 registrations) and a single registration of a *Myotis Myotis sp.* bat also recorded during the transects.
- 4.2.7. The activity survey undertaken on the 7th September detected similar numbers of bat registrations of Common Pipistrelle, Soprano Pipistrelle and Brown Long eared as detected during previous surveys onsite during the transects walked. Again the bat activity recorded within the application site was concentrated around linear vegetative features associated with field boundaries, with higher densities recorded around trees toward the east of the application site.
- 4.2.8. Following the activity survey undertaken on the 26th July, bat detectors were deployed overnight in locations toward the east and south of the application site adjacent to the field boundaries of the application site (marked as D1 and D2 on Plan ECO3). The detector recorded low numbers of Common Pipistrelle and Soprano Pipistrelle throughout the night, as well as a single registration of Brown Long eared bat.
- 4.2.9. Areas of relatively higher bat activity, as well as the transect routes adopted during the activity surveys are also depicted on Plan ECO3.
- 4.2.10. **Background information.** The desk study undertaken with SxBRC returned a small number of bat records from the local area. The closest record was of a single adult female Brown Long-eared bat returned from a location approximately 0.3km west of the application site at its closest point from 2015.

4.3. Badgers

- 4.3.1. No Badger setts were observed during the survey undertaken within the application site. A potential disused Badger sett located just to the east of the application site within an area of thick vegetation. It was a single entrance and at the time of survey showed signs of use by Rabbits. A number of paths were observed within the application site, but as footpaths run through the application site these could have been attributed to dogs and walkers, with nothing to indicate use by Badgers. No Latrines or obvious Badger foraging signs were observed within the application site.

- 4.3.2. The neutral grassland offers suitable foraging habitat for Badgers, however given the size of the application site and the absence of any obvious use of the application site by Badgers, there is nothing to indicate that the local social group would be in any way reliant on the habitats present within the application site.
- 4.3.3. Badger Records were not returned as part of the data search as SxBRC keep them confidential in order to prevent persecution to this species. That being said, historic records returned from Sussex Badger Trust reported a sett located approximately 140m to the south east of the application site boundary from 1971.

4.4. Birds

- 4.4.1. The hedgerows, trees and woodland within the application site offer suitable foraging and nesting habitats for bird species.
- 4.4.2. Species noted within the application site during the habitat survey were Wood Pigeon *Columba palumbus*, Blackbird *Turdus merula*, Blue Tit *Parus caeruleus*, Great Tit *Parus major*, Starling *Sturnus vulgaris*, Chaffinch *Fringilla coelebs*, Great Spotted Woodpecker *Dendrocopos major*, Goldfinch *Carduelis carduelis*, Robin *Erithacus rubecula*, Jackdaw *Corvus monedula* and Wren *Troglodytes troglodytes*.

Background information. The desk study undertaken with SxBRC did not return any records of protected or notable species within the application site however a number of records were returned from within the search area. The closest of which include Red List species Herring Gull *Larus argentatus* recorded approximately 0.4km to the south of the application site in 2015, Turtle Dove *Streptopelia turtur* recorded approximately 1.4km to the north-east of the application site in 2013 and Lesser Redpoll *Acanthis cabaret* recorded approximately 1km to the south west of the application site in 2010.

4.5. Reptiles

- 4.5.1. As a result of the grazed nature of the neutral grassland fields, there are limited opportunities for reptiles within the application site. However there is some potential that the field margins and areas of scrub edge could provide habitats for this group.
- 4.5.2. As such, a total of 112 tins were distributed throughout the areas of suitable reptile habitat with the application site (see Plan ECO3). Checks of these refugia were undertaken between June and July 2016 during suitable weather conditions, in line with the methodology detailed in Section 2 above. No reptile species were recorded during these surveys, as detailed in Table 2 below.

Date	Survey Number	Weather Conditions	Reptiles Recorded
06.06.16	1	5% cloud cover, 16°C	None
10.06.16	2	10% cloud cover, 16°C	None
20.06.16	3	100% cloud cover, 18°C	None
22.06.16	4	10% cloud cover, 22°C	None
27.06.16	5	10% cloud cover, 18°C	None
12.07.16	6	100% cloud cover, 16°C	None
21.07.16	7	75% cloud cover, 23°C	None

Table 2: 2016 Reptile Survey Results (Summary)

- 4.5.3. No reptiles were recorded within the application site during any of the survey visits undertaken in 2016. Moreover, no reptiles were recorded to be present underneath natural refugia (such as brash or logs), which were also checked during surveys undertaken at the application site.
- 4.5.1. From these findings it is considered that the application site does not support any reptile species and as such it is not considered that the development proposals have the potential to impact on this species and they have not been considered further in this ecological assessment.
- 4.5.2. **Background Information.** Information received from SxBRC returned no reptile records within the application site however a small number of records were returned from within the search area, the closest of which relate to Grass Snake *Natrix natrix* located approximately 0.2km to the south west of the application site and dating to 2010.

4.6. Amphibians

- 4.6.1. As outlined above, a single pond is present within 500m of the application site, with this being located 10 metres to the north west of the application site.
- 4.6.2. Notwithstanding that this feature was identified to support a population of fish (and was as such considered to be of very limited value for breeding amphibians, aquatic surveys were undertaken on a precautionary basis to ascertain the presence or absence of amphibian species. All surveys were undertaken in line with the methodology outlined in Section 2 above, with surveys undertaken during suitable weather conditions and during the optimal period.
- 4.6.3. The results of the survey are summarised in Table 4 below.

Date	Survey Number	Weather Conditions	Amphibians Recorded
18.05.16	1	100% cloud, rain, light wind 14°C	None
24.05.16	2	50% cloud, dry, still 16°C	None
30.05.16	3	50% cloud, dry, warm 10°C	1 Common Toad
08.06.16	4	0% cloud, humid 15°C	2 Smooth Newt

Table 4: 2016 Great Crested Newt Survey Results (Summary)

- 4.6.4. No Great Crested Newts were recorded during the surveys undertaken at the application site; however a number of Smooth Newts *Lissotriton vulgaris* and Common Toad *Bufo bufo* were recorded during the survey effort.
- 4.6.5. Checks of suitable terrestrial habitats present within the application site (including the significant number of artificial tins utilised as part of the reptile survey, in addition to natural refugia such as logs and brash piles) did not record the presence of any amphibian species, including Great Crested Newts.
- 4.6.6. On the basis of the surveys undertaken, it is considered that the application site is not utilised by Great Crested Newts, and therefore no further consideration has been given to this species within this Ecological Assessment.
- 4.6.7. **Background Information.** Information received from SxBRC returned no amphibian records within the application site however a small number of records were returned from within the search area, the closest of which relate to Great Crested Newt located approximately 1.5km to the south-east of the application site and dating to 2015.

4.7. Hazel Dormice

- 4.7.1. The hedgerows around the boundaries of the application site support a range of species and are linked to similar habitats in the wider area, including an area of ancient woodland to the south of the application site. Given that the desk study returned records of Hazel Dormouse within close proximity to the application site (approximately 0.3km west from the application site in 2007), in order to ascertain the presence or absence of this species specific survey work was undertaken in 2016.
- 4.7.2. Nest tube surveys were undertaken of all hedgerows within the application site in line with the methodology outlined in Section 2 above. In line with guidance, monthly checks were undertaken in each of May, June, July, August, September, October and November 2016.

- 4.7.3. No evidence of Hazel Dormice was recorded during the nest tube surveys undertaken between May and November. In addition no evidence of Dormice was recorded in the Hazel nut checks undertaken between May and November.
- 4.7.4. Given that no evidence of the presence of Dormice was recorded during the specific surveys undertaken, it is considered that the application site does not support the species. As such Dormice have not been considered further in this Ecological Assessment.
- 4.7.5. **Background Information.** The desk study undertaken with SxBRC returned a number of dormouse records from the local area. The closest of these records was returned from a location approximately 0.3km west of the application site at its closest point from 2007.

4.8. Invertebrates

- 4.8.1. The application site is expected to support a range of common invertebrate species with diversity limited due to the managed nature of the majority of the application site.
- 4.8.2. **Background Information.** The desk study undertaken with SxBRC returned a single record of notable BAP species Ghost Moth *Hepialus humuli* was returned from within the application site in 2005 In addition to this a number of records of protected/notable invertebrate species were returned from the local area. The closest of these records arise from Millennium Wood located approximately 0.2km from the application site. This area holds recorded populations of White Admiral *Limenitis Camilla*, Cinnabar *Tyria jacobaeae* and Small Phoenix *Ecliptopera silaceata*.

5. ECOLOGICAL EVALUATION

5.1. The Principles of Site Evaluation

- 5.1.1. The latest guidelines for ecological evaluation produced by CIEEM proposes an approach that involves professional judgement, but makes use of available guidance and information, such as the distribution and status of the species or features within the locality of the project.
- 5.1.2. The methods and standards for site evaluation within the British Isles have remained those defined by Ratcliffe⁸. These are broadly used across the United Kingdom to rank sites, so priorities for nature conservation can be attained. For example, current Site of Special Scientific Interest (SSSI) designation maintains a system of data analysis that is roughly tested against Ratcliffe's criteria.
- 5.1.3. In general terms, these criteria are size, diversity, naturalness, rarity and fragility, while additional secondary criteria of typicalness, potential value, intrinsic appeal, recorded history and the position within the ecological / geographical units are also incorporated into the ranking procedure.
- 5.1.4. Any assessment should not judge sites in isolation from others, since several habitats may combine to make it worthy of importance to nature conservation.
- 5.1.5. Further, relying on the national criteria would undoubtedly distort the local variation in assessment and therefore additional factors need to be taken into account, e.g. a woodland type with a comparatively poor species diversity, common in the south of England may be of importance at its northern limits, say in the border country.
- 5.1.6. In addition, habitats of local importance are often highlighted within a local Biodiversity Action Plan (BAP). The Sussex BAP highlights a number of habitats and species. These are referred to below where relevant.
- 5.1.7. Levels of importance can be determined within a defined geographical context from the immediate site or locality through to the International level.
- 5.1.8. The legislative and planning policy context are also important considerations and have been given due regard throughout this assessment.

⁸ Ratcliffe, D A (1977). *A Nature Conservation Review: the Selection of sites of Biological National Importance to Nature Conservation in Britain*. Two Volumes. Cambridge University Press, Cambridge.

5.2. Habitat Evaluation

Designated sites

- 5.2.1. **Statutory sites.** There are no statutory designated sites of nature conservation interest within or adjacent to the site.
- 5.2.2. The closest statutory designated site is Blunts and Paiges Wood LNR which is located approximately 0.7km to the south-east of the application site at its closest point. Blunts and Paiges Wood LNR comprises an area of ancient woodland and meadows.
- 5.2.3. Given the separation of this designated site from the site it is not considered that any direct impacts would result on this site. Moreover it is considered that the adoption of standard engineering protocols and best practice during construction will ensure that potential indirect adverse effects on non-statutory designated sites in the local area will be fully mitigated.
- 5.2.4. Moreover, given that the LNR is actively managed by Mid Sussex District who promote recreational use within the application site, it is not considered that any potential minor increases in recreational use of the application site within the operational phase of the development would have the potential to result in any significant adverse impacts on this LNR.
- 5.2.5. The nearest Site of Special Scientific Interest (SSSI) designated on account of its ecological interest is Cow Wood and Harry's Wood SSSI is over 5km from the application site and the Ashdown Forest Special Area of Conservation and Special Protection Area are located over 11km from the application site.
- 5.2.6. Due to this distance and the separation of the application site from statutory designated sites it is not considered that development at the application site would have a significant adverse effect on this or any other statutory sites.
- 5.2.7. **Non-statutory sites.** There are no non statutory designated sites of nature conservation interest within the application site.
- 5.2.8. The nearest non-statutory site is Blunts and Paiges Woods Site of Nature Conservation Importance (SNCI), situated approximately 0.5km to the southeast of the site. Part of this site is also designated as the Blunts and Paiges Woods Local Nature Reserve (LNR).
- 5.2.9. As set out above in relation to Blunts and Paiges Wood LNR, it is considered that following the adoption of standard engineering protocols and best practice during construction, adverse impacts can be avoided on this non-statutory site.
- 5.2.10. Due to distance between the application site and any other non-statutory sites, it is considered that, following the adoption of best

practice measures during construction, significant adverse impacts will be avoided.

- 5.2.11. **Ancient woodland.** An area of woodland to the southeast of the application site is designated as ancient woodland, the species component of which is discussed in section 3 of this document.
- 5.2.12. In order to ensure that adverse impacts are avoided on this habitat, the area of ancient woodland should be buffered by an area of landscaping, with no built form or infrastructure delivered within this buffer area.
- 5.2.13. This buffer would fully accord with the Natural England's Standing Advice on Ancient Woodland where it is recommended that development be avoided within 15m radius of ancient woodland.
- 5.2.14. It is further recommended that a sensitive lighting regime is adopted to ensure that adverse light spill is avoided on this ancient woodland habitat.

Habitats within the application site

- 5.2.15. The majority of habitats within the application site hold low ecological value, comprising significant areas of short-grazed, species-poor grassland, bramble dominated scrub and bare ground. Given the limited ecological value of these habitats, it is not considered that any specific mitigation would be required for their loss.
- 5.2.16. The habitats / features that hold relatively higher value within the site are the hedgerows, trees and to some extent the area of plantation woodland within the application site.
- 5.2.17. The hedgerows within the application site vary from gappy in nature to being of good structural composition and support a small range of native species. However it is considered that none of the hedgerows present would be classed as important (based on ecological criteria) within the Hedgerows Regulations 1997.
- 5.2.18. Notwithstanding the above, the hedgerows present are of relatively greater ecological value in the context of the application site, largely due to the opportunities they offer faunal groups such as foraging/commuting bats and nesting/foraging birds.
- 5.2.19. As such, it is recommended that areas of hedge and associated standard trees be retained, where possible, within any forthcoming planning applications.
- 5.2.20. However if lengths of hedgerow do require removal then it is recommended that compensatory planting be undertaken using native species of local provenance wherever possible. Replacement planting would also contribute towards targets in the Sussex Biodiversity Action Plan (BAP) for Hedgerows. It is

considered that this will be wholly deliverable within any emerging proposals that are formed for the application site.

- 5.2.21. Some of the trees within the application site particularly through the centre are mature trees that have value in their own right but also contain features for nesting birds and roosting bats. Where possible, these trees should be retained as part of emerging development proposals. If any of the mature trees are to be lost to a proposal then further survey effort in regard to bats, would be necessary prior to their loss, as discussed in more detail below. Again, should trees (including the area of woodland) be lost to the development proposals, it is considered that these losses may be adequately mitigated for through the provision of new, native landscape planting elsewhere on within the application site
- 5.2.22. Creation of new habitats of conservation importance within the application site in areas of open space will offer further opportunities to enhance the ecological value and biodiversity of the application site in accordance with guidance set out by the NPPF (see policy section 6 below). It is recommended that new planting utilises native species of local provenance to maximise benefits to wildlife. For example the creation of wildflower grassland within the open space would increase the biodiversity of the application site and will contribute to the aims of the Sussex BAP.
- 5.2.23. It is considered that the adoption of the above recommendations would ensure that emerging development proposals for the application site would retain and indeed enhance the ecological value of the application site following development.

5.3. Faunal Evaluation

Bats

- 5.3.1. **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 2010 ("the Habitats Regulations"). These include provisions making it an offence:
- Deliberately to kill, injure or take (capture) bats;
 - Deliberately to disturb bats in such a way as to:-
 - (i) be likely to impair their ability to survive, to breed or reproduce, or to rear or nurture their young, or to hibernate or migrate; or
 - (ii) affect significantly the local distribution or abundance of the species to which they belong;
 - To damage or destroy any breeding or resting place used by bats;
 - Intentionally or recklessly to obstruct access to any place used by bats for shelter or protection.

- 5.3.2. 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.
- 5.3.3. The words deliberately and intentionally include actions where a court can infer that the defendant knew that the action taken would almost inevitably result in an offence, even if that was not the primary purpose of the act.
- 5.3.4. The offence of damaging or destroying a breeding site or resting place (which can be interpreted as making it worse for the bat) is an absolute offence. Such actions do not have to be deliberate for an offence to be committed.
- 5.3.5. European Protected Species licences are available from Natural England in certain circumstances, and permit activities that would otherwise be considered an offence.
- 5.3.6. Licences can usually only be granted if the development is in receipt of full planning permission and it is considered that:
- (i) There is no satisfactory alternative; or
 - (ii) The action authorised will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in their natural range.
- 5.3.7. **Application Site Evaluation.** There are a number of trees within the application site that have potential to support roosting bats however no evidence of roosting bats was identified during initial inspections of these features..
- 5.3.8. Whilst some of the habitats present within the application site, such as the hedgerows and trees, are considered to be of some value to commuting and foraging bats, they are not considered to be of significant interest, particularly given the presence of improved opportunities in the wider area (open countryside, woodland). Activity surveys undertaken at the application site between June and September 2016 identified limited bat activity within the application site with usage confined to areas of offsite woodland and linear vegetative features.
- 5.3.9. **Mitigation and Enhancements.** If the mature trees identified to have potential for roosting bats are to be affected by the emerging development proposals (e.g. require felling or arboricultural works) it is recommended that further detailed survey work (such as a tree climbing survey or emergence survey) should be undertaken immediately prior to any works in order to ascertain whether any bats are roosting in the trees. Should any evidence of roosting bats be found, the necessary works would need to be undertaken under a licence from Natural England.

- 5.3.10. It is recommended that any lighting strategy proposed for the application site is designed to minimise light spill, particularly within any areas of public open space and on the woodland edge to the south east of the Application Site. It is recommended that hoods and cowling be used to direct light away from the hedgerows and central open area to limit light intrusion to these areas.
- 5.3.11. It is considered that the retention of linear features (hedgerow) where possible, alongside the provision of new areas of hedge and tree planting will retain and indeed improve opportunities for commuting bats within the Application Site.
- 5.3.12. In order to provide enhanced roosting opportunities within the application site, emerging development proposals could include for the provision of bat roosting boxes on retained trees within the application site. Suitable examples of bat roosting features are provided at Appendix 2. These boxes require minimal maintenance and are suitable for the species recorded at the application site. To maximise the uptake of these features by bats, it is recommended that each be located at a height of 15-20ft, away from potential predators, adjacent to foraging opportunities and should not be impacted upon by lighting.
- 5.3.13. The provision of roosting opportunities within the application site will further enhance the application site for bats and will provide benefits for priority species on the national BAP.

Badgers

- 5.3.14. **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 south.
- 5.3.15. 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’ is defined by Natural England as any use within the preceding 12 months.
- 5.3.16. 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.
- 5.3.17. **Application Site Evaluation.** There is no evidence recorded of use of the application site by badgers and as such there is nothing to indicate that the site is of particular importance to this species. That being said, the semi-improved neutral grassland and scrub habitats present within the application site would offer suitable foraging opportunities for Badgers. A single entrance potential

Badger sett is located to the east of the application site and during several site visits appeared to be disused and occupied by rabbits. A sett is known to be present offsite to the southwest.

- 5.3.18. **Mitigation and Enhancements.** No specific mitigation would be required with regard to Badgers.
- 5.3.19. However pre-commencement checks are recommended if there is a significant lapse in time between the current surveys and a start to development onsite as this species can readily excavate new setts in short periods of time.
- 5.3.20. It is considered that the provision of significant new areas of species rich grassland, trees and hedgerows within the application site (to include a variety of native fruiting species) will provide enhanced opportunities to foraging Badgers relative to the existing situation.
- 5.3.21. It is considered that with the adoption of the above recommendations, which would be easily deliverable within a development, there would be no significant adverse impacts on Badgers within the application site.

Birds

- 5.3.22. **Legislation.** Section 1 of the Wildlife and Countryside Act is concerned with the protection of wild birds, whilst Schedule 1 lists species are protected by special penalties.-
- 5.3.23. **Application Site Evaluation.** No Schedule 1 species were recorded within the application site during the survey. There are opportunities for nesting birds, in terms of the trees, woodland, hedgerows and scrub within the application site although the onsite habitat is not considered to be of any particular significance for bird species.
- 5.3.24. **Mitigation and Enhancements.** As all species of birds receive general protection whilst nesting, to avoid a possible offence, it is recommended that any clearance of suitable nesting vegetation (including tree felling) be undertaken outside of the breeding season (March to July inclusive) or that checks be made for nesting birds by an ecologist immediately prior to removal.
- 5.3.25. Through the retention of existing vegetation, and the provision of new landscape planting, it is considered that any development proposals for the application site would provide an opportunity to enhance the value of the application site for nesting and foraging birds.
- 5.3.26. As a further enhancement, a number of bird boxes will be incorporated into new buildings on application site, suitable examples of which are provided at appendix 3. Where possible, additional bird nesting boxes will also be erected on retained and planted trees within the application site and will provide further

nesting opportunities for a range of species. Again, suitable examples of these bird boxes are detailed at appendix 3.

- 5.3.27. It is considered that with the adoption of the above recommendations, which would be easily deliverable within a development, there would be no significant adverse impacts on birds within the application site.

6. PLANNING POLICY CONTEXT

- 6.1. The planning policy framework that relates to nature conservation for Hanlye Lane, Cuckfield, West Sussex is issued at three main administrative levels: nationally through the National Planning Policy Framework (NPPF); and at the local level through the Mid Sussex Local Plan (2004) and the emerging Mid Sussex District Plan. Furthermore, additional consideration is given to the Cuckfield Neighbourhood Plan (October 2014).
- 6.2. Any proposed development will be judged in relation to the policies contained within these documents.

6.3. National Policy

National Planning Policy Framework

- 6.3.1. The National Planning Policy Framework (NPPF) sets out the Government's requirements for the planning system and was recently adopted on 27th March 2012. It replaces previous national planning policy, including Planning Policy Statement 9 (Biodiversity and Geological Conservation) [PPS9] which was published in 2005.
- 6.3.2. The key element of the NPPF is that there should be '*a presumption in favour of sustainable development, which should be seen as a golden thread running through both plan-making and decision-taking*' (paragraph 14).
- 6.3.3. The NPPF also considers the strategic approach which Local Authorities should adopt with regard to the protection, enhancement and management of green infrastructure, priority habitats and ecological networks, and the recovery of priority species.
- 6.3.4. Paragraph 118 of the NPPF comprises a number of principles which 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 SPAs, possible SACs, 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 the need for, and benefits of, the development in that location clearly outweigh the loss.
- 6.3.5. 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.

6.4. Local Policy

Mid Sussex Local Plan 2004 (adopted May 2004)

- 6.4.1. Policy guidance concerning development and nature conservation at the local level is provided within the Mid Sussex Local Plan 2004 (adopted May 2004). The Local Plan policies have been saved until such a time as they become replaced by the Mid Sussex District Plan (see below).
- 6.4.2. Two policies within the Mid Sussex Local Plan are relevant to nature conservation. Policy **C5** concerns the protection of statutory and non-statutory designated sites, ancient woodland and features such as wildlife corridors. Policy **C6** is concerned with the protection of woodlands, hedgerows, trees and other important wildlife habitat.

Mid Sussex District Plan (will form part of the Local Development Framework (LDF))

- 6.4.3. The District Plan will, once adopted, become the main planning document which guides development in the borough up until 2031. This Plan is currently undergoing examination by the Government and is predicted to be adopted in 2017. There are 3 policies within the submission draft of this Plan that relate to biodiversity and nature conservation and which are of relevance to the emerging development proposals.
- 6.4.4. Policy **DP36** aims to protect valued landscape for their visual, historical and biodiversity qualities and relates to the protection and enhancement of trees woodland and hedgerows and the encouragement of new planting.
- 6.4.5. Policy **DP37** relates to biodiversity and the protection of natural habitats (including designated sites) and protected species. Its aim is to avoid the net loss of biodiversity and pursue opportunities for gain through protection of natural area and provide good wildlife corridors and green networks.
- 6.4.6. Policy **DP38** aims to ensure that new development contributes to the protection, enhancement and creation of new green space within the district in order to develop a connected network of multi-functional greenspace including links with rivers and floodplains. Furthermore this policy seeks to promote the restoration, management and expansion of priority habitats in the district.
- 6.4.7. Policy **DP15** is solely related to the Ashdown Forest Special Area of Conservation (SAC) and Special Protection Area (SPA). This is only relevant for development within 7km of the Ashdown Forest SAC or SPA and is therefore not relevant to this application site.

Cuckfield Neighbourhood Plan (adopted October 2014)

- 6.4.8. The Cuckfield Neighbourhood Plan adopted in October 2014 by the Mid Sussex District Council constitutes part of the Development Plan alongside the District Council's Local Plan and aims to give local people more say about what goes on in their area. There is a single policy that relates to biodiversity and nature conservation
- 6.4.9. Policy **CNP4** aims to protect and enhance biodiversity by ensuring protection is upheld for designated sites, protected species and ancient or species-rich hedgerows grasslands and woodlands. This included promoting mitigation, preservation and restoration of wildlife habitats providing a net gain in flora and fauna over the existing situation.

6.5. Discussion

- 6.5.1. Recommendations have been put forward in this report that would fully safeguard the existing ecological interest of the application site, and wherever possible, measures to enhance ecological and biodiversity value have been set out, in line with the NPPF, policy **C5** of the Mid Sussex Local Plan and **DP36**, **DP37** and **DP38** of the District Plan as well as **CNP4** of the Neighbourhood Plan.
- 6.5.2. The proposals will not impact adversely upon any statutory or non-statutory designated sites of nature conservation in the vicinity and thus the proposals accord with policies **C5**, **DP36** and **DP37** of the Local Plan and District Plan as well as **CNP4** of the Neighbourhood Plan.
- 6.5.3. Where appropriate, the development includes measures which will achieve biodiversity gains for habitats and protected species over the existing situation. As such, the proposed development is in line with national, local policy.
- 6.5.4. In conclusion, implementation of the measures set out in this report and mitigation, as appropriate, will ensure that the development proposals fully accord with national, regional, county and local planning policy for ecology and nature conservation.

7. SUMMARY AND CONCLUSIONS

- 7.1. Ecology Solutions were commissioned by Glenbeigh Development Limited to carry out an Ecological Assessment of land at Hanlye Lane, Cuckfield, West Sussex in August 2011 followed by further update surveys during the 2016 survey season.
- 7.2. There are no statutory designated sites of nature conservation interest within or adjacent to the site. The nearest statutory designated site is Blunts and Paiges Woods Local Nature Reserve (LNR) and is located approximately 0.7km from the application site at its closest point. Ashdown Forest Special Area of Conservation and Special Protection Area is located over 11km from the application site and as such is not considered further within this assessment.
- 7.3. Due to this distance and the separation of the application site by agricultural land it is not considered that any development at the application site would affect the statutory sites.
- 7.4. There are no non statutory designated sites of nature conservation interest within the site. The nearest non-statutory site is Blunts and Paiges Woods Site of Nature Conservation Importance (SNCI) situated approximately 0.5km to the southeast of the site. Part of this site is also designated as the Blunts and Paiges Woods Local Nature Reserve (LNR).
- 7.5. An area of ancient woodland lies adjacent to the southwest corner of the application site and as such any development will accord with Natural England's standing advice in regards to ancient woodland.
- 7.6. The majority of the habitats within the application site generally hold very limited ecological value, with the application site primarily comprising intensively horse grazed grassland fields and scattered scrub. The habitats of greater ecological value within the context of the application site itself are the hedgerows and mature trees as well as, to some extent, the small area of plantation woodland.
- 7.7. It is considered that there is significant opportunity for new habitat creation and ecological enhancement of the application site through suitable landscape schemes which would more than mitigate for any loss of existing habitat onsite.
- 7.8. A suite of protected species surveys and assessments have been undertaken. The hedgerows and trees offer limited nesting and foraging opportunities for birds, and also offer limited suitable foraging and navigational resources for bats with some trees also offering potential roosting opportunities for local bat species. Surveys for Great Crested Newts, Reptiles and Dormouse found no evidence of these protected species within the application site.
- 7.9. Appropriate mitigation and enhancement measures have been proposed, including measures to safeguard nesting birds as well as for further surveys in respect of roosting bats. Subject to the implementation of mitigation measures as outlined above in respect of

these species, opportunities will be retained and moreover enhanced post-development.

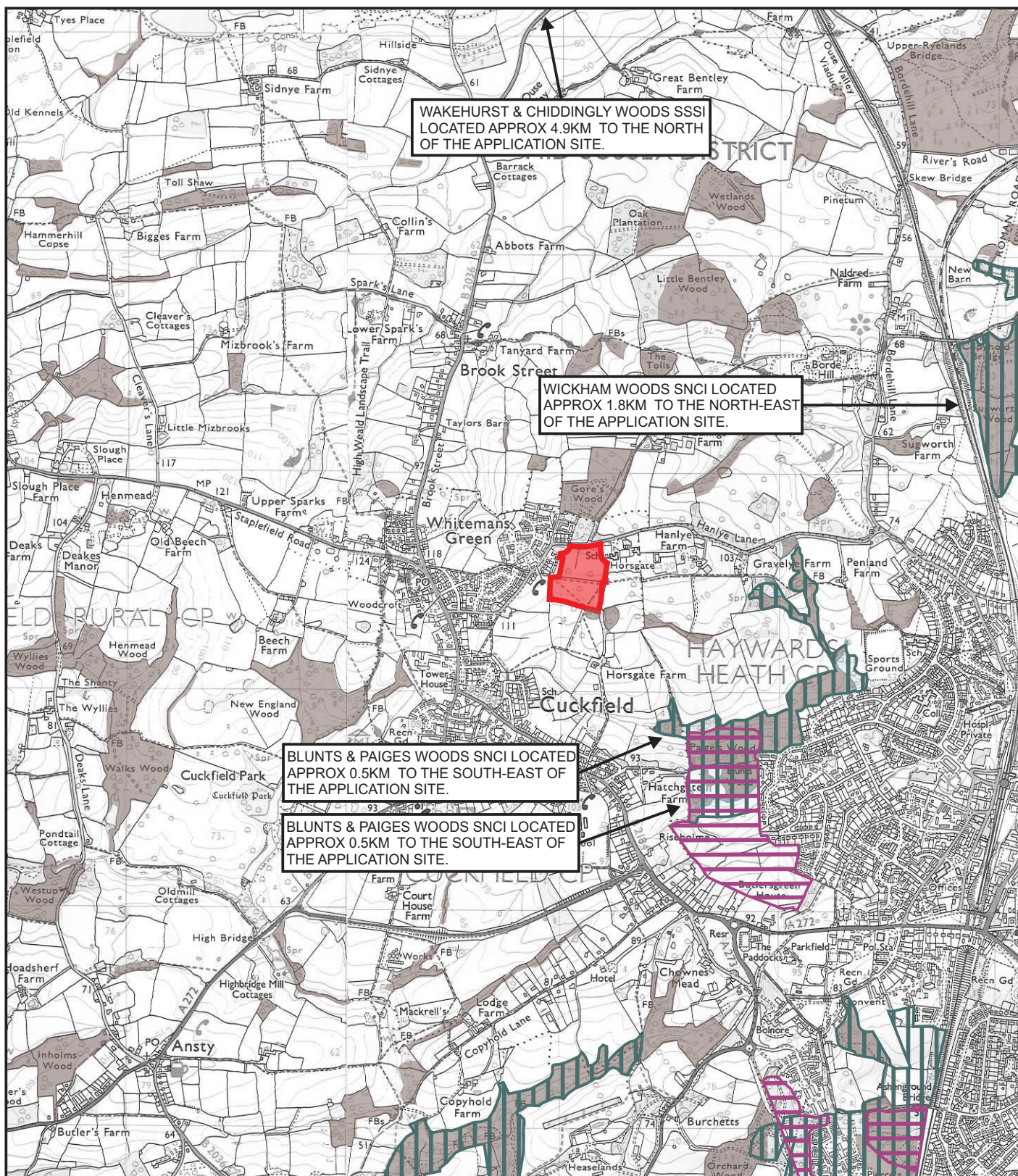
- 7.10. From Ecology Solutions' site survey and the background information obtained, there is no evidence to suggest that there are any overriding ecological constraints which would prevent an appropriate planning application coming forward for the application site. With the implementation of the recommendations in this report, it is considered that any forthcoming proposals may conform to relevant national and local policy with respect to nature conservation and biodiversity and further realise an enhancement over the current situation.

PLANS AND APPENDICES





PLANS

PLAN ECO1

Application Site and Ecological Designations



KEY:

-  SITE LOCATION
-  LOCAL NATURE RESERVE (LNR)
-  SITE OF NATURE CONSERVATION IMPORTANCE (SNCI)
-  ANCIENT WOODLAND



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5313: HANLYE ROAD, CUCKFIELD
WEST SUSSEX










PLAN ECO1: SITE LOCATION
& ECOLOGICAL DESIGNATIONS

PLAN ECO2

Ecological Features



KEY:

-  SITE BOUNDARY
-  SEMI-IMPROVED GRASSLAND
-  WOODLAND
-  SCRUB
-  BARE GROUND
-  SCATTERED SCRUB
-  POND
-  DRY POND
-  TREE
-  HEDGEROW
-  ANCIENT WOODLAND



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5313: HANLYE LANE, CUCKFIELD,
WEST SUSSEX






PLAN ECO2:
ECOLOGICAL FEATURES

PLAN ECO3

Protected Species



KEY:

-  SITE BOUNDARY
-  LOCATION OF OVERNIGHT DETECTORS DEPLOYED 26.07.16
-  LOCATION OF HIGHER BAT ACTIVITY
-  AREAS OF SUITABLE HABITAT SUBJECT TO DORMOUSE NEST BOX INSTALLATION
-  AREAS OF SUITABLE HABITAT SUBJECT TO REPTILE TINNING



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5313: HANLYE LANE, CUCKFIELD, WEST SUSSEX

PLAN ECO3:
PROTECTED SPECIES

APPENDICES

APPENDIX 1

Information obtained from MAGIC



Legend

- Local Nature Reserves (England)
- National Nature Reserves (England)
- National Parks (England)
- Sites of Special Scientific Interest (England)
- Ancient Woodland (England)**
 - Ancient and Semi-Natural Woodland
 - Ancient Replanted Woodland

Projection = OSGB36

xmin = 525700

ymin = 123200

xmax = 535900

ymax = 128300

Map produced by MAGIC on 6 March, 2017.

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APPENDIX 2

Examples of Suitable Bat Roosting Features

Bat Boxes

Schwegler bat boxes are made from 'woodcrete' and have the highest rates of occupation of all types of box.

The 75% wood sawdust, clay and concrete mixture is ideal, being durable whilst allowing natural respiration and temperature stability. These boxes are rot and predator proof and extremely long lasting.

Boxes can be hung from a branch near the tree trunk or fixed using 'tree-friendly' aluminum nails.



2F Bat Box

A standard bat box, attractive to the smaller British bat species. Simple design with a narrow entrance slit on the front.

Woodcrete construction, 16cm diameter, height 33cm.



1FD Bat Box

A larger than standard bat box, with two additional roughened wooden panels inside to be used by the bats as perches.

Woodcrete construction, 16cm diameter, height 36cm.



contact numbers

sales office 0870 903 4010

design advice 0870 903 4018

technical services 0870 903 4017

literature and samples 0870 903 4030

ideas into action

eco habitats for bats



Features & Benefits

Enclosed bat box (A & B)

- Designed with the Pipistrelle Bat in mind
- Available in all brick types
- Attractive motif
- Discrete home for bats
- Various sizes
- Several roosting zones are created inside the box
- Bats are contained within the Bat Box itself
- Maintenance free as the entrance is at the bottom
- Ideal for new build & conservation work

Free Access Option (C)

- Discrete Single Bat brick
- Easy to install
- Allows bats to create a natural home habitat within the cavity of the building

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eco habitats for bats

IBSTOCK[®]
innovators in clay

A



Eco Habitats for Bats - Technical Data: A

Sizes	215mm x 215mm or 215mm x 290mm
Durability	F2 S2 - Fully Frost Resistant

B



Eco Habitats for Bats - Technical Data: B

Sizes	215mm x 215mm or 215mm x 290mm
Durability	F2 S2 - Fully Frost Resistant

C



Eco Habitats for Bats - Technical Data: C

Size	215mm x 65mm
Durability	F2 S2 - Fully Frost Resistant

APPENDIX 3

Examples of Suitable Bird Nesting Features

Bird Boxes

Schwegler bird boxes have the highest rates of occupation of all types of box. They are designed to mimic natural nest sites and provide a stable environment with the right thermal properties for chick rearing and winter roosting. Boxes are made from 'Woodcrete'. This 75% wood sawdust, clay and concrete mixture is breathable and very durable making these bird boxes extremely long lasting.



1B Bird Box

This is the most popular box for garden birds and appeals to a wide range of species. The box can be hung from a branch or nailed to the trunk of a tree with a 'tree-friendly' aluminium nail.

Available in four colours and three entrance hole sizes. 26mm for small tits, 32mm standard size and oval, for redstarts.

2H Bird Box

This box is attractive to robins, pied wagtails, spotted flycatcher, wrens and **black redstarts**.

Best sited on the walls of buildings with the entrance on one side.

Schwegler boxes have the highest occupation rates of all box types. They are carefully designed to mimic natural nest sites and provide a stable environment for chick rearing and winter roosting. They can be expected to last 25 years or more without maintenance.



2M Bird Box

A free-hanging box offering greater protection from predators.

Supplied complete with hanger which loops and fastens around a branch.

With standard general-purpose 32mm diameter entrance hole.

Schwegler boxes have the highest occupation rates of all box types. They are carefully designed to mimic natural nest sites and provide a stable environment for chick rearing and winter roosting. They can be expected to last 25 years or more without maintenance.

Bird Boxes

Schwegler bird boxes have the highest rates of occupation of all types of box. They are designed to mimic natural nest sites and provide a stable environment with the right thermal properties for chick rearing and winter roosting. Many boxes are made from 'Woodcrete'. This 75% wood sawdust, clay and concrete mixture is breathable and very durable making these bird boxes extremely long lasting.

1SP Sparrow Terrace



House sparrows are gregarious and prefer to nest close to each other, so this woodcrete box provides room for three families under one roof. Made from long-lasting, breathable woodcrete. No maintenance required.

Colour: stone or brown.

Dimensions 245 x 430 x 200 mm.

Weight 13kg.

*Designed for fixing to walls
(not suitable for fences or sheds
due to the weight of the box).*

No 17B Swift Box

This nest box is suitable for fixing high under the eaves or under the guttering of a building, either within or attached to external walls. Installation of several units on nearby buildings can assist in the rapid formation of Swift colonies.

Plant fibre and woodcrete.

Interior dimensions 14 x 20 x 30 cm.

Exterior dimensions 15 x 21 x 34 cm



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