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Bat Scoping Report

Southgate Stud, Warninglid

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Report Summary

1. The Ecology Co-op was commissioned by Mr M Allen to undertake a Bat Scoping Assessment at Southgate Stud, Warninglid. The purpose of this report is to present the findings of the appraisal and identify potential ecological constraints and opportunities in relation to a proposal to convert the existing stables and outbuildings into a single residential dwelling.
2. An assessment of the site was carried out by Sam Lunn BSc, MSc, ACIEEM and Natural England Level 2 class bat licence holder and assisted by Patrick Kitchener BSc, MRes and QCIEM on the 20th May 2021. This included a ground-based external inspection of the buildings, an internal inspection of potential roost features, such as enclosed loft spaces (subject to access), and an appraisal of the surrounding habitats, to evaluate the site for its potential to support bats. All bat species are European Protected Species (Annex IV, 'Habitats Directive').
3. This site is situated in a rural area outside the village of Warninglid. It comprises of a stable block and storage shelters. The site is used for stabling horses and grazing fields are located on the south boundary. A small woodland parcel is found on the east boundary which provides connectivity to a larger area of ancient woodland 300m to the north. The site is within the High Weald Area of Outstanding Natural Beauty (AONB).
4. The buildings were assessed as having negligible suitability to support roosting bats, there were only a limited number of features that could be potentially suitable for roosting bats and these were seen as sub-optimal due to the building context and construction. Furthermore, the features were further assessed using an endoscope and were all heavily cobwebbed, indicating no recent access by roosting bats. Habitat to be affected by the proposals, largely comprised of concrete hard-standing and was considered to be of negligible potential value to bats for foraging/commuting/dispersal purposes.
5. Therefore, in accordance with current guidelines, no further surveys of the stables or storage shelters are recommended, however, it is recommended that a suitably qualified and licensed ecologist is present during the construction works of the property to check the small number of features with an endoscope for any recent activity/change. Should any bats or signs of bats be identified, the work would have to cease until appropriate surveys have been undertaken and an EPS licence obtained to legally proceed with the development.
6. No further surveys are recommended for other protected species but pre-cautionary measures should be taken in regards to nesting birds. The site lies within the High Weald AONB and should look to conserve and enhance the area by introducing ecological enhancements, into the development and reducing the impacts of artificial light on nocturnal wildlife through a lighting management plan.



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1 INTRODUCTION

1.1 Purpose of the Report

The Ecology Co-op has been commissioned to undertake a bat scoping assessment of Southgate Stud, Warninglid by Mr M Allen. This report presents the findings of a walkover survey and building/tree inspection for occupation by bats, undertaken by Sam Lunn BSc, MSc, ACIEEM and Natural England Level 2 bat survey class licence holder and assisted by Patrick Kitchener on the 20th May 2021. Whilst this report has maintained a focus on assessing potential impacts upon roosting bats and bat activity within the proposal's zone of influence, it has also considered the potential for any other protected/notable species and/or habitats to be adversely affected. The proposal for the site comprises the conversion of the existing stable block and outbuildings to a single residential dwelling. Recommendations for further surveys that are likely to be required to inform a planning application and Ecological Impact Assessment are provided, if necessary. Where appropriate, measures to avoid, mitigate and/or compensate for significant adverse effects are outlined.

1.2 Background

The site is located at Southgate Stud, Cuckfield Lane, Warninglid, RH17 5SN. The central grid reference for the site is TQ 25912 25999. An aerial view of the site can be seen in Figure 1.

The site comprises of a stable block, an open storage shelter and a small wooden stable. The proposed development plans include the renovation of the main stable block into a single residential dwelling together with hard and soft landscaping works. The location of the study is based on a site plan provided by WPS planning and are illustrated in Figure 2.



Figure 1. Aerial image showing the location of Southgate Stud, Warninglid (indicated with a red outline). Image produced courtesy of Google maps (map data ©2021 Google).

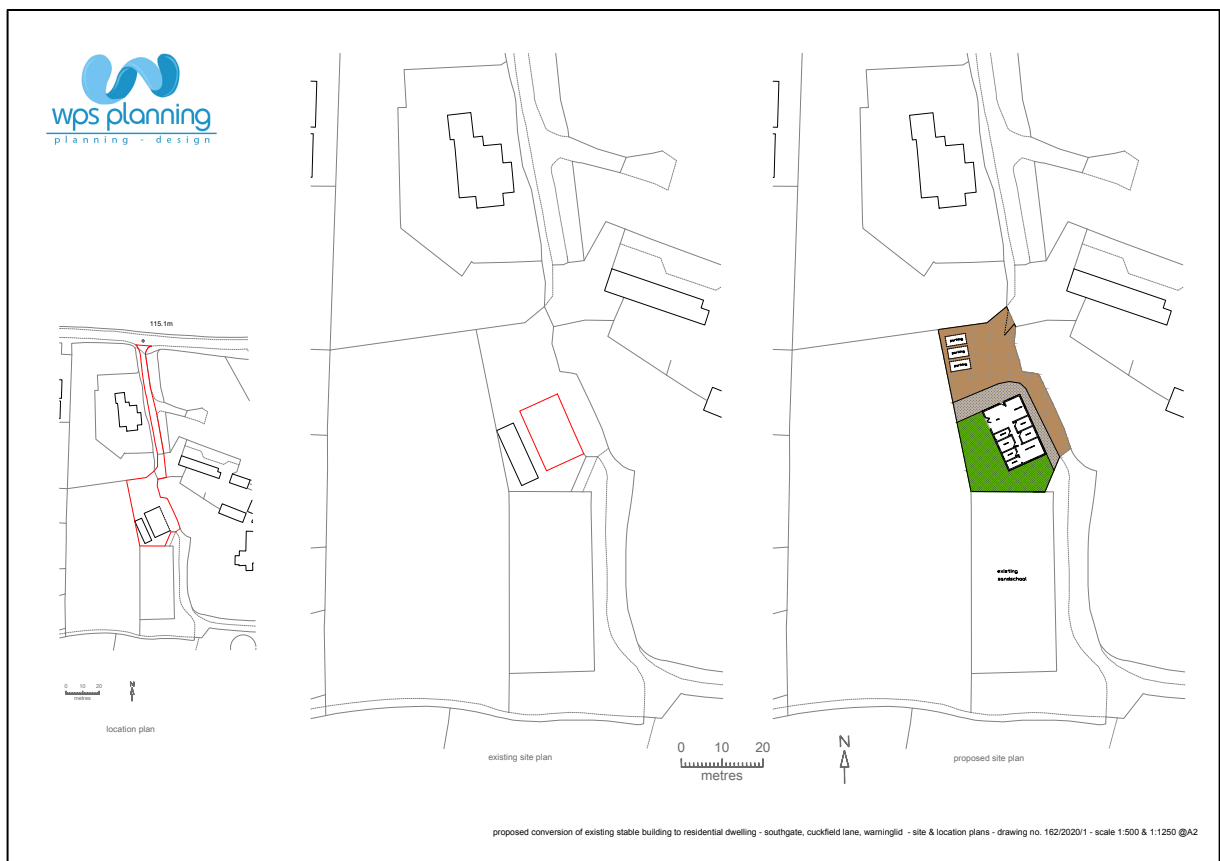


Figure 2. Development plans for Southgate Stud, existing (Left) and proposed (right).



1.3 Policy and Legislation

Legal protection applying to all bat species in the UK and any other species relevant to this appraisal, is outlined in Appendix 1 of this report.

The results of this survey will be used to determine the need for further surveys, impact avoidance measures and/or an appropriate mitigation/compensation strategy to ensure compliance with UK wildlife legislation, policy and best practice.

2 METHODOLOGY

The methodologies used for this survey are in accordance with the bat survey guidelines produced by the Bat Conservation Trust¹. Where there has been any deviation from the guidelines due to any site-specific constraints or other circumstances, reasoning and justification has been provided. This survey has also considered the Guidelines for Preliminary Ecological Appraisal produced by CIEEM², where the potential for impacts to species other than bats has been identified.

2.1 Desk Study

A search of on-line mapping resources has been undertaken to characterise the local context of the site with respect to semi-natural habitats and linear features of value to foraging and commuting bats.

The MAGIC website resource (www.magic.gov.uk) has been used to identify the location of designated sites for nature conservation within 2km and European Protected Species (EPS) licences granted within a 1km radius of the survey site. Priority habitats and ancient woodland, upon the site and within the proposal's zone of influence, have also been identified due to their ecological value and potential to act as important foraging resources for bats.

Priority habitats and ancient woodland are classified as habitats of principal importance. Habitats of principal importance are listed in Section 41 of the Natural Environment and Rural Communities (NERC) Act, 2006³, which places a duty on Local Planning Authorities to have due regard to biodiversity.

2.2 Field Survey

2.2.1 Roosting Potential

Bats can use a wide range of features for roosting purposes including loft spaces, cavity walls, loose

¹ Collins, J.(ed.) (2016) *Bat Surveys for Professional Ecologists: Good Practice Guidelines* (3rd edn). The Bat Conservation Trust, London.

² CIEEM (2017) *Guidelines for Preliminary Ecological Appraisal*, 2nd edition. Chartered Institute of Ecology and Environmental Management, Winchester.

³ HM Government (2006). Natural Environment and Rural Communities Act 2006. Available online at: <https://www.legislation.gov.uk/ukpga/2006/16/section/41>.



tiles, mortice joints and cracks/gaps in a variety of built structures. They can also be found in trees with holes, splits, cracks, cavities, ivy and loose bark.

A detailed building inspection was carried out, looking for potential access points and Potential Roosting Features (PRFs) that bats could use and any evidence indicating the presence of bats using the building, such as rub marks, feeding remains, staining or droppings. This included a ground-based external inspection around the building and internal inspection of PRFs, such as enclosed loft spaces or roof voids or basements, where safe access was possible. A high-powered torch and an endoscope was used for the internal and external assessment to assess any crevices or gaps found during the survey.

The suitability of each feature, or group of features, to support roosting bats has been assessed as either negligible, low, moderate, or high, in accordance with best practice guidance¹ (see Table 1) Any evidence confirming the presence of bats was clearly recorded including photos and samples taken (e.g. droppings), where appropriate. Further surveys have been recommended in accordance with best practice guidance and the surveyors professional judgement, where evidence of a bat roost or PRFs have been identified that would be adversely impacted by the proposal and where precautionary mitigation alone cannot ensure that bats would not be potentially disturbed or harmed.

Table 1. Guidelines for assessing suitability of structures (buildings and trees etc) to support bat roosts

Suitability	Description of roosting habitats
Negligible	A structure that does not support any features that could be used by roosting bats.
Low	A structure that has one or more potential roosting features that could support individual roosting bats opportunistically. These features however lack the space, shelter or appropriate conditions, to support larger numbers of bats (such as a maternity roost).
Moderate	A structure with one or more potential roost sites that could be used by bats due to their size, shelter and suitable conditions for roosting, but are unlikely to support a roost of high conservation significance.
High	A structure with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potential for longer periods of time due to their size, shelter, protection and conditions.

2.2.2 Hibernation Potential

The structure and its associated features were assessed for their suitability to be used by hibernating bats. The assessment was carried out in accordance with guidelines produced by BatAbility⁴ and the bat survey guidelines produced by the Bat Conservation Trust¹. To determine the potential for features to support hibernating bats the following aspects were considered:

- The suitability of features to support roosting bats or to allow access for roosting bats;
- The temperature and humidity conditions likely to be present within the feature during the winter period and the suitability in this respect for it to be used by bats for hibernating;
- The surrounding habitat, in terms of its potential for use by bats outside of the hibernation period for commuting and/or foraging purposes; and
- The presence of known roosts within the structure, or adjacent structures, or surrounding area during the active season.

⁴ Middleton. N. (2019). *Assessing Sites for Hibernation Potential. A Practical Approach, including a Proposed Method & Supporting Notes. Version' Draft/V2.2019.* BatAbility.



The potential for use by hibernating bats for each feature, or group of features was assessed as either negligible, low, moderate, or high, in accordance with best practice. Further surveys are recommended where appropriate, considering the feasibility of a hibernation survey for certain PRFs.

2.2.3 Foraging and Commuting Potential

The habitats surrounding the site and wider landscape were broadly assessed for their potential to support foraging and commuting bats, and were categorised as negligible, low, moderate or high potential suitability in line with published guidance¹.

2.3 Other Protected and/or Notable Species

Any birds identified, or evidence of nesting birds discovered during the site visit, were recorded. Special attention was paid to notable species such as red-listed Birds of Conservation Concern⁵ and those species afforded special protection on Schedule 1 of the Wildlife and Countryside Act (1981), such as barn owl *Tyto alba* and swallow *Hirundo rustica*.

Whilst this survey has focussed on bats and no specific searches were made with respect to other protected/notable species, any evidence of such species that was encountered during the site visit was also recorded.

3 RESULTS/OBSERVATIONS

3.1 Desk Study and Granted EPS Licences

Southgate Stud lies within the High Weald Area of Outstanding Natural Beauty (AONB) (See Figure 3). It protects large areas of interconnected ancient woodland, hedges, and heathland habitat. It does not cite bats as a specific designated feature but protects high quality habitat for roosting, foraging and commuting bats. It is designated to conserve and enhance natural beauty and managed accordingly.

The High Weald AONB is mentioned within the Mid-Sussex planning policy. It states small scale proposals that are compatible with the conservation and enhancement of natural beauty will be supported, for full details see Appendix 1.

⁵ Eaton et al. (2015). *Birds of Conservation Concern 4: the population status of birds in the UK, Channel Islands and Isle of Man*.

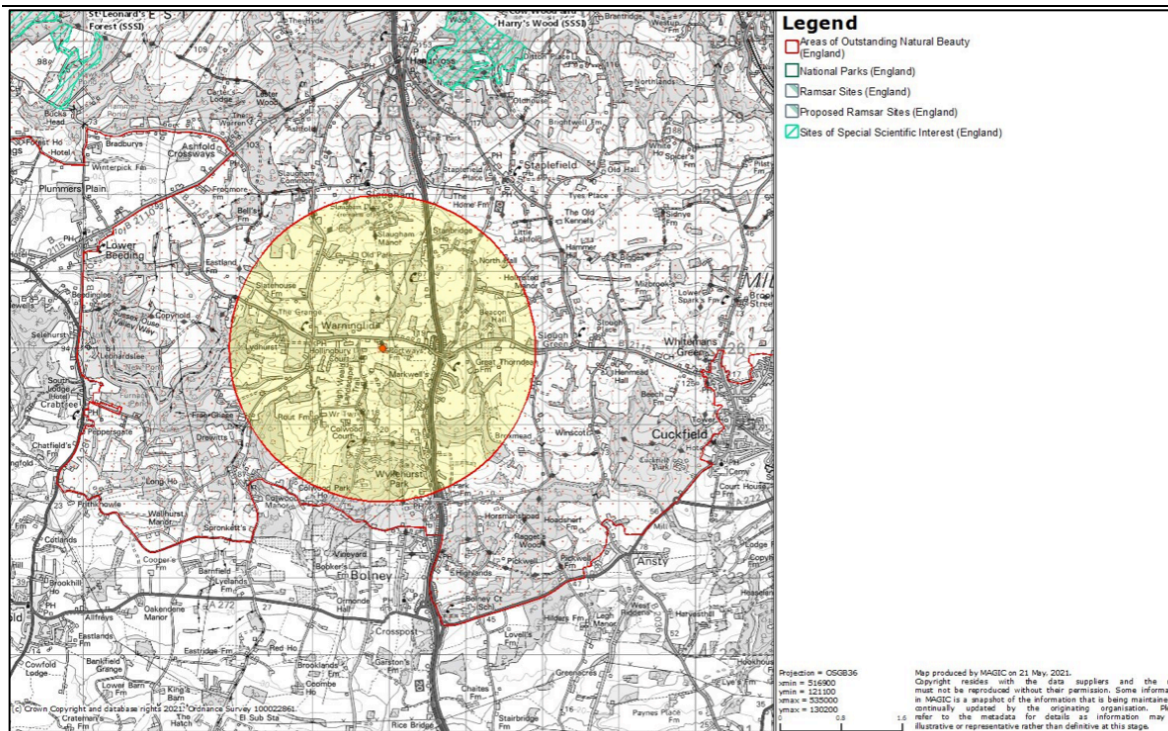


Figure 3. Designated sites within a radius of 2km of the application site (centered red dot). Images produced courtesy of Magic maps (<http://www.magic.gov.uk/>, contains public sector information licensed under the Open Government Licence v3.0).

Deciduous woodland, a UK BAP Priority Habitat is located in close proximity to Southgate Stud, approximately 500m to the south there are small scattered areas of woodland, and approximately 300m north a large area of priority/ancient woodland is present (See Figure 4). This habitat forms a high value for foraging and commuting bats.

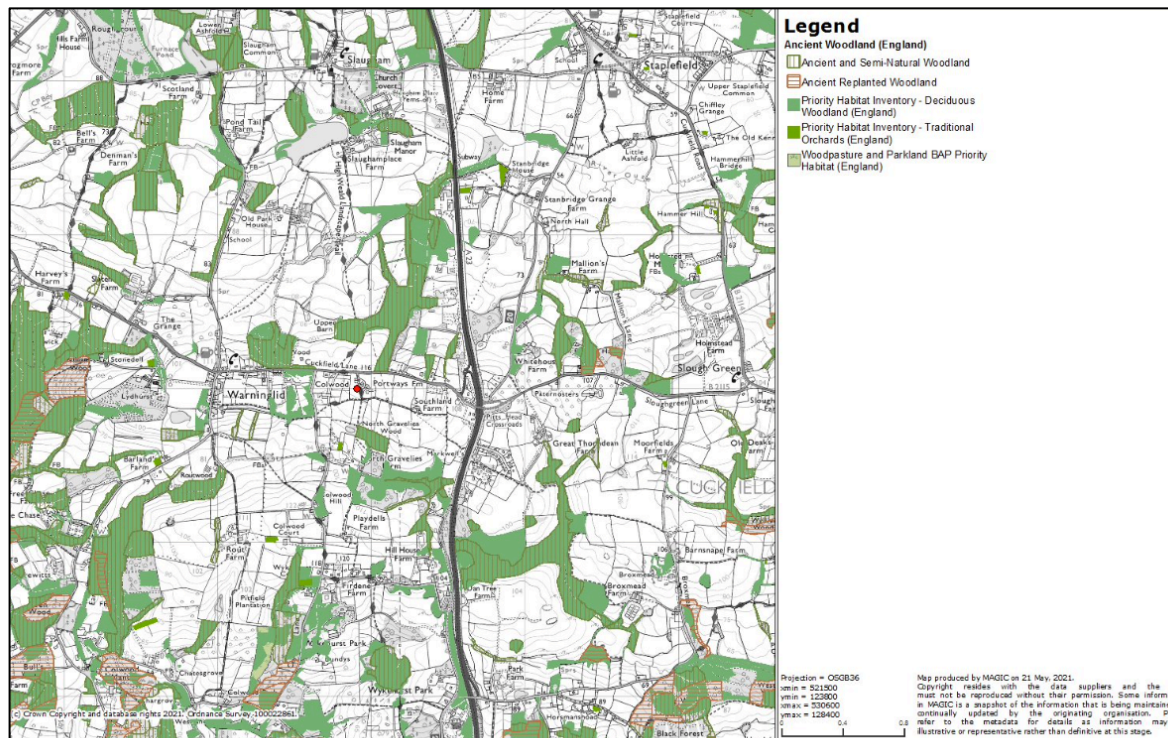


Figure 4. Ancient and semi-natural woodland/ancient replanted woodland relative to Southgate Stud (centered red



dot). Image produced courtesy of Magic maps (<http://www.magic.gov.uk/>, contains public sector information licensed under the Open Government Licence v3.0).

There are no EPS licenses within 1km of Southgate Stud, Warninglid (See Figure 5). The nearest EPS license lies approximately 2.3km north-east and concerns the destruction of a breeding place for common pipistrelle *Pipistrellus pipistrellus* and brown long-eared bats *Plecotus auritus*.

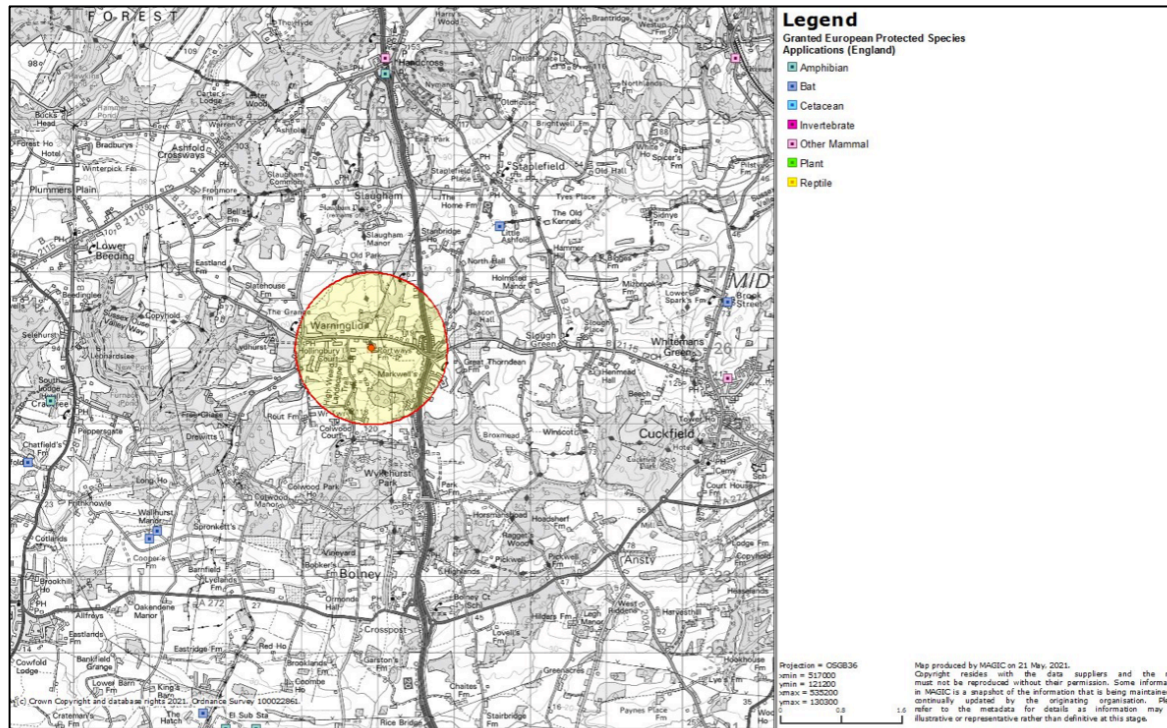


Figure 5. European Protected Species Licences within a radius of 1km of the application site (purple indicates EPS licence for bats, green indicates EPS licences for great crested newts, pink indicates EPS licences for dormice). Images produced courtesy of Magic maps (<http://www.magic.gov.uk/>, contains public sector information licensed under the Open Government Licence v3.0).

3.2 Site Context and Surrounding Habitat

This site is located in a rural location near the village of Warninglid and is currently used as stabling for horses. The immediate ground surrounding the site and within the zone of development is concrete hard-standing (See Photo 1). The north boundary connects to a private garden, the west boundary grazing fields and the south boundary a sand school. On the east boundary there is a small parcel of woodland, providing a linear feature for commuting and foraging bats, this surrounding habitat is important to bats but considered to be of low importance due its size but does provide interconnectivity with a large area of deciduous and ancient woodland 300m north (See Photo 1).

3.3 Inspection for Bats

3.3.1 Roost Potential



The building inspection of the stable block identified no direct evidence of bats, however, a limited number of features were evident which could potentially be suitable but were viewed as being sub-optimal. This is likely due to the materials and methods used in construction.

The roof is a mixture of corrugated plastic, metal and asbestos which provide poor thermal regulatory properties to the building. There is a lack of any wall and roof cavities and where they exist, they are small and generally heavily cob-webbed. The stables are in use and the lack of any void creates an area of high disturbance.

The features that were recorded are described in Table 4 below and illustrated in the following photographs section.

Table 2. Assessment of Potential Roosting Features (PRFs)

Building section	Description of features	Assessment of suitability (Collins 2016)
Stable block – North elevation	The gable face was brick built with open eaves giving access into the main stable block area which is seen as not suitable for roosting bats (See stable block -east elevation). On the west end of the north elevation the roof of the porch provides access into a small roof cavity separated by a plywood board (See Photo 2). This was further assessed using an endoscope and was seen as unsuitable as there was no roof lining and was against corrugated metal roof. There is a small gap in the middle of the elevation by the eaves. This was also assessed using an endoscope, no evidence of bats was found and provided no access to the wall or roof cavity (See Photo 2).	Negligible bat roost suitability
Stable block – East elevation	The open face of the stable provides access to an internal space used for stabling (See Photo 3). There is no loft void and the space opens up to the roof creating a space of L (10m) W (4m) H (3m). The timber beams are bolted into the concrete beams and there are no cracks or crevices suitable for bats. Furthermore, the frame is heavily cob-webbed suggesting it is unlikely to be used for bats. The corrugated plastic and asbestos roof means the building has poor thermal regulatory properties further reducing its potential (See Photo 3).	Negligible bat roost suitability
Stable block – South elevation	A wooden cladded shed with a felted roof has been attached at the south elevation (See Photo 4). The cladding is generally tightly fitted and no obvious gaps were recorded. There was a single gap at the join of the extension which may provide some potential but was assessed using an endoscope and no evidence of bats was found (See Photo 4).	Negligible bat roost suitability
Stable block – West elevation	The west elevation is brick built with a corrugated metal roof (See Photo 5). There is a single wooden panel running under the eaves of the property where a gap is evident but provides no access to the roof cavity and is heavily cobwebbed. There is an open stable providing internal access to a room where there is a gap in the breeze block wall into a small wall cavity. This feature was further assessed using an endoscope and was heavily cob-webbed and no evidence of bats was found (See Photo 5).	Negligible bat roost suitability
Storage shelter	An open storage shelter is located east of the main stable block (See Photo 6). There are no features suitable for roosting bats and only likely	Negligible bat roost suitability



Building section	Description of features	Assessment of suitability (Collins 2016)
	to be used, and if at all likely only as a feeding perch.	
Wooden shed stabling	There is a further wooden stable shed south of the main stable block which is unlikely to support roosting bats. The walls are wooden cladded and while there are gaps between boards the top half is single skin and the bottom half is backed by plywood, however, there is a 6 inch gap making it unsuitable for crevice roosting bats (See Photo 7)	Negligible bat roost suitability

Overall, the bat roost suitability at this site is assessed as negligible, while there were a limited number of gaps for crevice roosting bats they were further assessed using an endoscope and were seen to be sub-optimal due to the context and state of the building.

There were no trees contained within the boundary of the site and tree roosting bats would therefore not be a constraint to development.

3.3.2 Hibernation Potential

Each feature was assessed for its hibernation potential. The potential for each structure is described in Table 3 below and illustrated in the following photographs section.

Table 3. Assessment of hibernation roost potential

Building section	Description of features	Assessment of hibernation potential ^{1 & 3}
Stable block – North elevation	No bat roosts were found within the structure and the small gap under the porch giving access into a small roof cavity is unlikely to be used by hibernating bats (See Photo 2). The gap is between plywood and the corrugated metal roof, which has poor thermal properties, the roof is not lined and is currently heavily cobwebbed.	Negligible potential
Stable block – East elevation	No features suitable for hibernating bats, the open face makes the area cold and draughty, there is no cracks or crevices in the timber framework, the area is in regular use and any bat is likely to be disturbed regularly.	Negligible potential
Stable block – South elevation	No features suitable for hibernating bats, the storage shelter is regularly accessed, there is no loft voids and there is no wall cavity.	Negligible potential
Stable block – West elevation	No evidence of any bat roosts were found during the survey but a gap between the breeze block wall and plywood board provided some opportunity for bats (See Photo 5). However, after further assessment using an endoscope it is currently heavily cob-webbed.	Low potential
Storage shelter	No features suitable for hibernating due to the building being open on three sides.	Negligible potential
Wooden shed stabling	No features suitable for hibernating bats, the building is in regular use, there is no loft voids and is wall cavity.	Negligible potential

3.4 Foraging and Commuting Potential

The main stable block on the site proposed to be renovated is surrounded by concrete hard-standing.



However the area adjacent to the east boundary supports a small woodland parcel which provides good connectivity to an area of deciduous and ancient woodland 300m North. This provides a valuable foraging and commuting resource for bats; however, the area is small in size which limits its potential value to bats.

3.5 Other Protected and/or Notable Species

The open face of the stables and outbuildings has the potential to support the occasional nest of common bird species such as blackbird *Turdus merula* or chaffinch *Fringilla coelebs*. There are a few access points under the eaves of the building large enough to accommodate house sparrow *Passer domesticus* and starling *Sturnus vulgaris*, which commonly nest in buildings, though no evidence of their use was found.

The proposed zone of impact is comprised of buildings and concrete hard-standing. There are no waterbodies and upon or adjacent to the site. The habitats are not considered to have value for reptiles, amphibians, badgers, and any other protected species.

3.6 Survey Limitations

An initial site assessment such as this is only able to act like a 'snapshot' to record any flora or fauna that is present at the time of the survey. It is therefore possible that some species may not have been present during the survey, but may be evident at other times of the year. Bats will commonly roost in small inaccessible crevices, such as spaces underneath ridge tiles that are impossible to inspect during a scoping assessment. For this reason, habitats and features are assessed for their potential to support bats, even where no direct evidence (such as droppings) has been identified.

There were considered to be no limitations to this survey. All loft voids were accessible and inspected in full and all aspects of the building and the trees due for removal could be observed fully during the survey.



3.7 Photographs



Photograph 1. The north elevation looking towards the east boundary. Note the location of a small woodland parcel adjacent to the site.



Photograph 2. The gaps suitable for bats on the northern elevation. Note the right and bottom locations were further assessed using an endoscope.



Photograph 3. The eastern elevation of the stable block. Note the internal cobwebbing and lack of cracks or crevices.



Photograph 4. The attachment of a further storage area on the south elevation. Note the gap where it joins the existing stables.

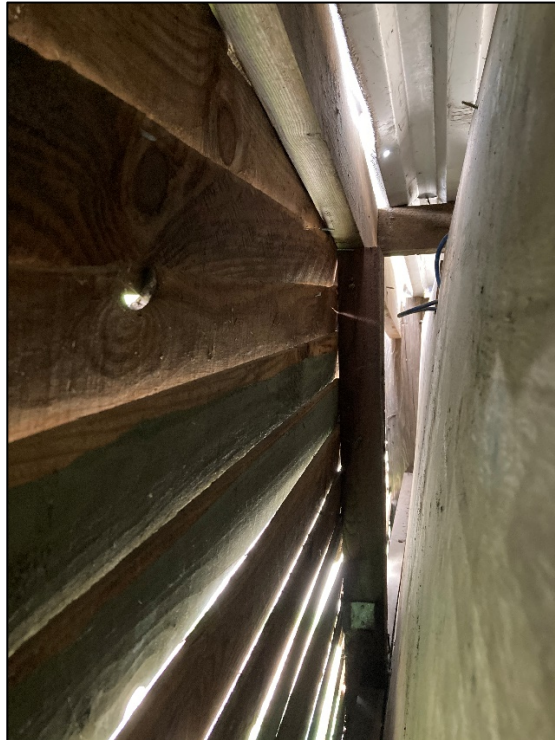


Photograph 5. A view of the western elevation. Note the cobwebbing under the eaves and the large gap between the breezeblock and the roof giving access to a small wall cavity which was heavily cobwebbed.



Photograph 6. The storage shelter located west of the main stable block.





Photograph 7. The additional wooden stabling located south of the main stable block. Note the boarding is only on the bottom half of the building, the gaps in the cladding and the space between the board behind limiting its potential for roosting bats.



4 ECOLOGICAL CONSTRAINTS AND OPPORTUNITIES

4.1 Designated Sites

Southgate Stud lies within the High Weald Area of Outstanding Natural Beauty (AONB) (See Figure 3). It protects large areas of interconnected ancient woodland, providing a high-quality habitat for foraging and commuting bats. The designated area is mentioned within the Mid-Sussex planning policy, and it is generally expected that small scale proposals within the High Weald AONB are compatible with the conservation and enhancement of the area (See Appendix 1). The proposals for this project are small in scale comprising of renovation of a stable block into a single residential building being planned, however, the design should look to conserve and enhance the area.

Furthermore, as it lies within an AONB all precautions must be taken during construction to avoid discharges and spills to the ground and potential pollution. Best working practices relating to dust suppression through damping and surface water management will help to minimise this risk.

4.2 Bats

4.2.1 Roost Potential

In accordance with the Bat Conservation Trust guidelines, the overall suitability of the buildings on site to support bats is rated as negligible. In this instance no further surveys are recommended. However, as a precautionary measure a licensed bat ecologist should be present to inspect and oversee when the renovation of the building occurs, to include using an endoscope to assess the few features that exist, so that in the highly unlikely event a bat is present the risk of injury/killing or destruction of a roost is avoided. In the event a bat was to be discovered, the feature should be made good where possible and works would need to cease immediately. Work would likely not be able to continue until an EPS mitigation licence has been obtained. It is likely that any license application would need to be supported by further surveys to classify the nature of the roost (day/maternity/transitional).

4.2.2 Hibernation Potential

All buildings were generally recorded as negligible potential to support hibernating bats, though one feature on the west elevation provided low potential. A gap between the breeze block wall and roof providing access into a small wall cavity. This was further assessed using an endoscope and was heavily cobwebbed, indicating it is unlikely to have been used recently by roosting bats. Therefore, in this instance, no further surveys for winter roost potential are recommended. Instead, mitigation must be implemented to reflect the risk that bats may be using this building for hibernating during the winter. This must include timing the works to the building between in the period between mid-March and the end of October to avoid disturbing bats that could be in hibernation. Also, a licensed bat ecologist needs to inspect the gap with an endoscope prior to the renovation and conversion of the building.



4.2.3 Foraging and Commuting Suitability

The woodland edge habitat on the east boundary of the site is likely to be used by foraging and commuting bats as part of a wider resource across the landscape. It is therefore important that the potential for disturbance from artificial lights is considered, especially on the east boundary. The proposed development should include an 'ecologically sensitive lighting scheme' in accordance with guidance produced by the Bat Conservation Trust (summarised in Appendix 2).

4.3 *Other Protected and/or Notable Species*

Since the site comprises entirely of buildings and is surrounded by paved ground, the risk of impacts on reptiles, amphibians, badgers, and any other protected species is considered negligible in this case and no other surveys are considered necessary.

Though no evidence of nesting birds was recorded during the survey, the buildings do have potential to support nesting birds such as house sparrow and swallow. The construction work to the buildings should be timed outside of the nesting bird season (1st March – 31st August). If this is not possible, the buildings should first be subject to nesting bird checks by a suitably qualified ecologist as appropriate to the works. If an active nest is identified, a minimum exclusion zone for all works within 5 meters radius of the nest must be established to protect it from disturbance, until the young have fledged.

4.4 *Biodiversity Enhancement Opportunities*

The proposed development represents an opportunity to enhance the site for several protected species. Furthermore, as the site lies within the High Weald AONB such enhancement measures are in line with the recommendations of the NPPF and the local planning policy, as such these enhancements would be considered favourably when determining the planning application.

The developer is encouraged to consider including integral bat roosting opportunities into the new building fabric such as bat tiles and internal voids/access points for bats. For example, three Schwegler 2FR bat tube could be built into the south, west and east facing elevations, or access gaps could be created underneath the ridge tiles on the roof of the new building (See Figure 6). These access gaps can be created by mortaring on the ridge tiles with a small piece of batten inserted around the base of the tile that is subsequently withdrawn. The access gap should aim to be approximately 25mm in height and no less than 40mm wide. Alternatively, 2FE Schwegler Wall-Mounted bat shelters could be installed upon the external faces of the building close to the eaves, on the south or eastern face.



Figure 6. Enhancement opportunity for creating roosting opportunities for crevice roosting bats.

It is further recommended that native trees and shrubs are planted as part of the proposed landscaping, which will create greater habitat connectivity to the deciduous woodland and benefit a variety of birds and invertebrates. Only specimens sourced only from UK stock should be planted. The following species are recommended in this location: wild cherry *Prunus avium*, wayfaring tree *Viburnum lantana*, hawthorn *Crataegus monogyna*, elder *Sambucus nigra*, field maple *Acer campestre*, sea buckthorn *Hippophae rhamnoides*. Given the arrival of ash dieback, it is not recommended that any ash saplings are planted anywhere on the site.

If any bats or other protected species are found during the development, work should be stopped immediately, and an ecologist must be contacted for advice.

Should you need any further advice on the information provided above, please do not hesitate to contact The Ecology Co-op.



APPENDIX 1 – Wildlife Legislation and National Planning Policy

The following text is intended for general guidance only and does not constitute comprehensive professional legal advice. It provides a summary of the current legal protection afforded to bats.

All bat species in the UK are included in Schedule II of the Habitats Regulations 2017, which transpose Annex II of the Council Directive 92/43/EEC 1992 on the Conservation of Natural Habitats and of Wild Fauna and Flora (“The EC Habitats Directive”). As such all bat species in the UK are defined as ‘European Protected Species (EPS)’.

Four species of bat (Bechstein’s bat *Myotis bechsteinii*, Barbastelle bat *Barbastella barbastellus*, greater and lesser horseshoe bats, *Rhinolophus ferrumequinum* and *R. hipposideros*) are also listed on Annex IV of the EC Habitats Directive. This requires the designation of a series of sites which contain important populations of these species as Special Areas of Conservation (SACs).

All species of British bat are also fully protected under the Wildlife and Countryside Act (1981), as amended, through inclusion in Schedule V.

All species of bat are listed on Section 41 of the Natural Environment and Rural Communities (NERC) Act (2006). Section 41 of the NERC Act lists the habitats and species of principle importance. This places a statutory duty on all public bodies, including planning authorities, under Section 40, to take, or promote the taking by others, steps to further the conservation of habitats and species of principal importance for the conservation of biodiversity in England (commonly referred to as the ‘Biodiversity Duty’). This duty extends to all public bodies the biodiversity duty of Section 74 of the Countryside and Rights of Way (CROW) Act 2000, which placed a duty only on Government and Ministers.

Under the above legislation it is an offence to:

- kill, injure or take any individual bat of any species;
- possess any part of an individual bat, either alive or dead;
- intentionally or recklessly damage, destroy or obstruct access to any place or structure used by bats for shelter, rest, protection, or breeding;
- intentionally or recklessly disturb these species whilst using any place of shelter or protection;
- or
- deliberately disturb bats in such a way as to be likely to impair their ability to:
 - survive, to breed or reproduce, to rear or nurture their young; to hibernate or migrate; or to affect significantly the local distribution or abundance of the species to which they belong;
- keep (possess), transport, sell or exchange, or offer for sale or exchange, any live or dead bat, or any part of, or anything derived from a bat.

It is also an offence to set and use articles capable of catching, injuring, or killing bats (for example a trap or poison), or knowingly cause or permit such an action. There is also protection under Schedule 6 of The Wildlife and Countryside Act 1981 (as amended) relating specifically to trapping and direct pursuit of bats.

A European Protected Species Licence (EPSL) in relation to bats is required from Natural England for



any work that would result in an otherwise unlawful activity (e.g. damage to a bat roost). A license can only be issued to permit otherwise prohibited acts if Natural England are satisfied that all the following three tests are met:

- The proposal is for ‘preserving public health or public safety, or other imperative reasons of overriding public interest including those of a social or economic nature and beneficial consequences of primary importance for the environment’;
- There is no satisfactory alternative; and
- The action authorised by the license will not be detrimental to the maintenance of bat populations at a favourable conservation status in their natural range.

A bat roost is defined by the Bat Conservation Trust’s Bat Surveys—Good Practice Guidelines 3rd Edition as “the resting place of a bat”. In general, the word roost is interpreted as “any structure or place, which any wild bat uses for shelter or protection.”

Bats tend to re-use the same roosts; therefore, legal opinion is guided by recent case law precedents, that a roost is protected, whether or not the bats are present at the time. This includes summer roosts used for resting during the day and/or breeding; or winter roosts, used for hibernating.

Mid-Sussex District Council plan - High Weald Area of Outstanding Natural Beauty

Strategic Objectives: 3) To protect valued landscapes for their visual, historical and biodiversity qualities; and 11) To support and enhance the attractiveness of Mid Sussex as a visitor destination.

Evidence Base: The High Weald AONB Management Plan.

Development within the High Weald Area of Outstanding Natural Beauty (AONB), as shown on the Policies Maps, will only be permitted where it conserves or enhances natural beauty and has regard to the High Weald AONB Management Plan, in particular;

- the identified landscape features or components of natural beauty and to their setting;
- the traditional interaction of people with nature, and appropriate land management;
- character and local distinctiveness, settlement pattern, sense of place and setting of the AONB; and
- the conservation of wildlife and cultural heritage.

Small scale proposals which support the economy and social well-being of the AONB that are compatible with the conservation and enhancement of natural beauty will be supported.

Development on land that contributes to the setting of the AONB will only be permitted where it does not detract from the visual qualities and essential characteristics of the AONB, and in particular should not adversely affect the views into and out of the AONB by virtue of its location or design.



APPENDIX 2 – Reducing Impacts of Artificial Light

Bright external lighting can have a detrimental impact upon foraging and commuting bat flight paths, but more importantly can also cause bats to remain in their roosts for longer. Artificial lighting can also cause significant impacts on other nocturnal species, most notably moths and other nocturnal insects. It can also result in disruption of the circadian rhythms of birds, reducing their fitness. Guidelines issued by the Bat Conservation Trust⁶ should be considered while designing the lighting scheme. A simple process which should be followed where the impact on bats is being considered as part of a proposed lighting scheme. It contains techniques which can be used on all sites, whether a small domestic project or larger mixed-use, commercial or infrastructure development. This includes the following measures:

Avoid lighting on key habitats and features altogether

there is no legal duty requiring any place to be lit. British Standards and other policy documents allow for deviation from their own guidance where there are significant ecological/environmental reasons for doing so. It is acknowledged that in certain situations lighting is critical in maintaining safety, such as some industrial sites with 24-hour operation. However, in the public realm, while lighting can increase the perception of safety and security, measurable benefits can be subjective. Consequently, lighting design should be flexible and be able to fully consider the presence of protected species

Apply mitigation methods to reduce lighting to agreed limits in other sensitive locations – lighting design considerations

Where bat habitats and features are considered to be of lower importance or sensitivity to illumination, the need to provide lighting may outweigh the needs of bats. Consequently, a balance between a reduced lighting level appropriate to the ecological importance of each feature and species, and the lighting objectives for that area will need to be achieved. The following are techniques which have been successfully used on projects and are often used in combination for best results:

- Dark buffers, illuminance limits and zonation
- Sensitive site configuration, whereby the location, orientation and height of newly built structures and hard standing can have a considerable impact on light spill
- Consider the design of the light and fittings, whereby the spread of light is minimised ensuring that only the task area is lit. Flat cut-off lanterns or accessories should be used to shield or direct light to where it is required. Consider the height of lighting columns. It should be noted that a lower mounting height is not always better. A lower mounting height can create more light-spill or require more columns. Column height should be carefully considered to balance task and mitigation measures. Consider no lighting solutions where possible such as white lining, good signage, and LED cats eyes. For example, light only high-risk stretches of roads, such as crossings and junctions, allowing headlights to provide any necessary illumination at other times.
- Screening, whereby light spill can be successfully screened through soft landscaping and the installation of walls, fences and bunding
- Glazing treatments, whereby glazing should be restricted or redesigned wherever the ecologist and lighting professional determine there is a likely significant effect upon key bat habitat and features.
- Creation of alternative valuable bat habitat on site, whereby additional or alternative bat

⁶ Bat Conservation Trust and Institute for Lighting Professionals (2018) Guidance note 8. Bats and Artificial Lighting. <https://www.theilp.org.uk/documents/guidance-note-8-bats-and-artificial-lighting/>



flightpaths, commuting habitat or foraging habitat could result in appropriate compensation for any such habitat being lost to the development.

- Dimming and part-night lighting. Depending on the pattern of bat activity across the key features identified on site it may be appropriate for an element of on-site lighting to be controlled either diurnally, seasonally or according to human activity. A control management system can be used to dim (typically to 25% or less) or turn off groups of lights when not in use.

Demonstrate compliance with illuminance limits and buffers

- *Design and pre-planning phase*; It may be necessary to demonstrate that the proposed lighting will comply with any agreed light-limitation or screening measures set as a result of your ecologist's recommendations and evaluation. This is especially likely to be requested if planning permission is required.
- *Baseline and post-completion light monitoring surveys*; baseline, pre-development lighting surveys may be useful where existing on or off-site lighting is suspected to be acting on key habitats and features and so may prevent the agreed or modelled illuminance limits being achieved.
- *Post-construction/operational phase compliance-checking*; as a condition of planning, post-completion lighting surveys by a suitably qualified person should be undertaken and a report produced for the local planning authority to confirm compliance. Any form of non-compliance must be clearly reported, and remedial measures outlined. Ongoing monitoring may be necessary, especially for systems with automated lighting/dimming or physical screening solutions.

Further reading:

Buglife (2011) *A review of the impact of artificial light on invertebrates*.

Royal Commission on Environmental Pollution (2009) *Artificial light in the environment*. HMSO, London.
Available at: <https://www.gov.uk/government/publications/artificial-light-in-the-environment>

Rich, C., Longcore, T., Eds. (2005) *Ecological Consequences of Artificial Night Lighting*. Island Press.
ISBN 9781559631297.

CPRE (2014) *Shedding Light: A survey of local authority approaches to lighting in England*. Available at: <http://www.cpre.org.uk/resources/countryside/dark-skies/item/3608-shedding-light>

Planning Practice Guidance guidance (2014) When is light pollution relevant to planning? Available at: <https://www.gov.uk/guidance/light-pollution>

Institution of Lighting Professionals (2011) *Guidance Notes for the Reduction of Obtrusive Light* GN01:2011. Available at: <https://www.theilp.org.uk/resources/free-resources/>



DP16: High Weald Area of Outstanding Natural Beauty

Strategic Objectives: 3) To protect valued landscapes for their visual, historical and biodiversity qualities; and 11) To support and enhance the attractiveness of Mid Sussex as a visitor destination.

Evidence Base: The High Weald AONB Management Plan.

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- **character and local distinctiveness, settlement pattern, sense of place and setting of the AONB; and**
- **the conservation of wildlife and cultural heritage.**

Small scale proposals which support the economy and social well-being of the AONB that are compatible with the conservation and enhancement of natural beauty will be supported.

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