The Ecology Co-op
ENVIRONMENTAL CONSULTANTS
Unit 4, Langham Stables, Langham Lane, Lodsworth, Petworth, West Sussex, GU28 9BU.
Tel: 01798 861 800 - E-Mail: info@ecologyco-op.co.uk - Web: www.ecologyco-op.co.uk

Preliminary Ecological Appraisal

Site Name

Staalcot Fields, Pulborough

Client

Tony Castle

Issue Date

21st August 2025

Author

James Whitby

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The Ecology Co-operation Ltd
Registered Office: Unit 4, Langham Stables, Langham Lane, Lodsworth, West Sussex, GU28 9BU
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About the Author

This report has been prepared by James Whitby, a Consultant Ecologist at The Ecology Co-op, with 3 years' experience. He has a Level 1 Great Crested Newt and Level 1 Bat Survey Licence and is proficient in Biodiversity Net Gain and UKHab. As a Qualifying member of the Chartered Institute for Ecology and Environmental Management, he is bound by their code of professional conduct.

About the Reviewer

This report has been reviewed by Emma Baker, who is a Senior ecologist with eight years experience. She holds Level 1 great crested newt and hazel dormouse survey licenses. As a Full member of the Chartered Institute for Ecology and Environmental Management (CIEEM), she is bound by their code of professional conduct.

Report Summary

Purpose	The Ecology Co-op was commissioned by Mr Tony Castle to undertake a Preliminary Ecological Appraisal at Staalcot Fields further to a proposal to construct two mobile home plots on the site. The site was initially scheduled to have four plots with two of the four already constructed prior to planning permission. The new scheme has reduced the number of plots to two.
Context	The site is situated in a rural location roughly 3km away from the town of Pulborough. The site contains modified grassland parcels, with a track and two caravan plots and is bounded by tree lines. In the wider landscape, woodland, mixed arable farmland and grassland surrounds the site.
Key findings	The site contains some suitable habitat for protected species modified grassland that will be impacted by the proposed works. However, the impacts are contained to the modified grassland, while higher value habitats such as the semi-mature/mature tree line will be retained.
Recommendations	Due to the nature of the proposals and the low impacts of the works, impacts are only expected at a site level and therefore precautionary methods such as a two phase strim are considered an appropriate level of mitigation.
Are further surveys required?	No

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1 INTRODUCTION

1.1 Purpose of the Report

The Ecology Co-op has been commissioned to undertake a Preliminary Ecological Appraisal (PEA) of land at Staalcot Fields, Pulborough by the client Mr Tony Castle. This report presents the findings of a walkover survey undertaken by James Whitby, a Qualifying member of the Chartered Institute of Ecology and Environmental Management (CIEEM) and Natural England Level 1 Bat Survey Class Licence and Level 1 Great Crested Newt Survey Class License holder on 21st July 2025. It provides details on the potential for any protected/notable species and/or habitats to be present at the site and a simple assessment of the potential ecological constraints and opportunities in relation to the proposed development which involves the erection of two mobile home plots. Recommendations for further surveys that are likely to be required to inform a planning application and Ecological Impact Assessment (EcIA) of the proposal are provided where necessary, and possible measures to avoid, mitigate and/or compensate for significant adverse effects are summarised. The potential to incorporate ecological enhancement measures as part of the scheme is discussed, in addition to any requirement to achieve biodiversity net gain.

This PEA report is designed to inform the client and their team (as appropriate) about the initial findings of the site walkover and desk study research in relation to the site proposals, highlighting the key ecological constraints and opportunities, and any further survey requirements. It is not intended for submission in support of a planning application but can be used to inform a future Ecological Impact Assessment (EcIA).

1.2 Background

This site measures 0.4ha and is situated on 3km northwest of Pulborough, West Sussex. The site comprises modified grassland with tree lines and an existing barn.

The initial proposal for the site was to erect four caravan plots. The latest iteration has reduced the number of plots down to two and will occupy the eastern side of the site. The site historically was used as a horse field, but two of the four originally planned mobile homes have since been erected on the western side and the eastern side, leaving the centre of the site as grassland. In the wider landscape, woodland, mixed arable farmland and grassland surrounds the site. The full address of the site is Staalcot Fields, Stall House Lane, North Heath, West Sussex, Pulborough RH20 2HR and the central national grid reference is TQ 07166 21496. Figure 1 shows the boundary of the site.

The proposed development is for the installation of two mobile home pitches which will include permeable hardstanding ground and will involve the construction of a barn in the southeast of the site. This report will present retrospective look at the areas already developed, as well as the remaining areas.

The site has previously been subjected to a PEA by Arbtech[1], carried out in 2023.

[1] Arbtech (2023). Preliminary Ecological Appraisal and Preliminary Roost Assessment.

Figure 1. An aerial image showing the location of the site. The approximate site boundary is outlined in red . Image produced courtesy of Magic maps (http://www.magic.gov.uk/, contains public sector information licensed under the Open Government Licence v3.0).

Figure 2. Proposed site plan provided by the client (Mr Tony Castle), dated 15.07.2025, drawing number: 2507ST 002.

1.3 Policy and Legislation

Legal protection applying to relevant bird, mammal, herpetofauna, invertebrate species and flora, and current nature conservation planning policy is outlined in Appendix 1 of this report.

Where possible, this report provides guidance on how the proposal can be designed to meet the requirements of both local planning policy and the National Planning Policy Framework (NPPF). Details of the NPPF can be found in Appendix 1 and relevant local planning policy by Horsham District Council is provided in Appendix 2.

2 METHODOLOGY

The methodologies used for this survey are in accordance with the Guidelines for Preliminary Ecological Appraisal[2], but also consider the Guidelines for Ecological Report Writing, Second Edition[3].

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

2.1 Desk Study

A search of on-line mapping resources was undertaken to identify the location of any features of potential ecological interest including ponds within 500m (relevant to great crested newts *Triturus cristatus*), watercourses (relevant to riparian mammals and crayfish) and connectivity to woodland, scrub, and hedgerow networks (relevant to bats and dormice *Muscardinus avellanarius*) in the wider landscape around the site. The connectivity of the site to these features, buildings and other semi-natural habitats, such as grassland and heathland, are also relevant to great crested newts, reptiles and a wide variety of notable species of conservation concern.

The MAGIC website resource (www.magic.gov.uk) was used to identify the location of designated sites for nature conservation and European Protected Species (EPS) licences granted in relation to the survey site.

2.2 Field Survey

A site walkover survey was undertaken on 21st of July 2025, during which the habitats contained within the site were described and evaluated. Since this site is relatively small in scale and contains limited semi-natural habitat diversity, it was not considered necessary to undertake comprehensive UKHab mapping of the site. All habitat types contained within the site, together with the dominant botanical species and indicators of important habitat types, such as ancient woodland or unimproved grassland, have simply been listed and described where identified.

Habitats and features at the site were evaluated for their potential to support legally protected species and/or species of conservation interest. In addition, observations of any important plant communities, bird assemblages or other potentially valuable ecological features were recorded.

Details of the preliminary survey methods for each legally protected species are given below. Any site-specific limitations to the survey, e.g. access constraints or seasonal constraints, are set out in section 3.9.

2.3 Badgers

Badgers *Meles meles* exploit a range of habitats, including gardens, coniferous woodland, deciduous woodland, mixed woodland and arable land. They live in an underground system of tunnels and nesting chambers, known as a sett, with territories ranging from 30ha to 150ha or more.

Habitats within the site and surrounding area were broadly assessed for their potential to support badgers. Any signs of badger activity, for example setts, footprints, latrines, well-worn paths and foraging marks, were recorded. Further surveys were recommended as appropriate.

2.4 Bats

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

Trees, buildings and other structures were broadly assessed for their potential to support roosting bats and further

surveys are recommended as appropriate.

The habitats surrounding the site and wider landscape were broadly assessed for their potential to support foraging and commuting bats. Further surveys are recommended as appropriate.

2.5 Breeding Birds

Birds can use a wide range of natural and artificial habitats when breeding, including trees, hedgerows, fields, houses and garden sheds. The habitats contained within the site and adjacent areas were broadly assessed for their potential to support important bird species/assemblages, and breeding birds. Any birds identified during the site visit were recorded. Special attention was paid to notable species such as red-listed Birds of Conservation Concern[4] and those species afforded special protection on Schedule 1 of the Wildlife and Countryside Act (1981). Further surveys have been recommended as appropriate.

2.6 Dormice

Dormice are found in deciduous woodland and hedgerows, feeding on flowers, pollen, fruits, insects and nuts, favouring hazel *Corylus avellana* and honeysuckle *Lonicera periclymenum* for food and as bedding. The site was broadly assessed for its potential to support dormice. This included use of on-line mapping resources to assess the surrounding area for connectivity to large blocks of woodland, scrub and extensive hedgerow networks.

Further surveys are recommended as appropriate in accordance with best practice guidance[5].

2.7 Great Crested Newt

Great crested newts breed in ponds during the spring and spend the rest of the year feeding on invertebrates primarily in semi-natural habitats including woodland, hedgerows, marshes and tussocky grassland. A desk study was undertaken to identify ponds and wet ditches within 500m of the site that might support breeding great crested newts. Where access permission was granted, or ponds could be viewed from public roads or footpaths, the ponds were assessed for their potential to support great crested newts using the Habitat Suitability Index (HSI) (Oldham et al 2000)[6]. The value of the site for terrestrially foraging great crested newts and any features that might be used by hibernating newts has also been assessed.

Further surveys are recommended as appropriate, in accordance with best practice guidance (English Nature 2001)[7].

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[4] Stanbury, A., Eaton, M., Aebischer, N., Balmer, N., Douse, A., Lindley, P., McCulloch, N., Noble, D., and Win I. (2021). Birds of Conservation Concern 5: the status of bird populations: the fifth Birds of Conservation Concern in the United Kingdom, Channel Islands and Isle of Man. British Birds 114, pp 723-747.
[5] Bright, P., Morris, P. and Mitchell-Jones, T. (2006). *The dormouse conservation handbook 2nd Ed.* English Nature, Peterborough.
[6] Oldham, R.S., Keeble, J., Swan, M.J.S. and Jeffcote, M. (2000). Evaluating the suitability of habitat for the great crested newt (*Triturus cristatus*). *Herpetological Journal* 10, 143-155.
[7] English Nature (2001). *Great Crested Newt Mitigation Guidelines*. English Nature, Peterborough.

2.8 Reptiles

The common lizard *Zootoca vivipara*, slow-worm *Anguis fragilis,* grass snake *Natrix helvetica* and adder *Vipera berus* are widespread species that can be found in any of these habitats, whereas smooth snake *Coronella austriaca* and sand lizard *Lacerta agilis* have much more restricted and isolated populations on lowland heathland and sand dunes.

Habitats on the site were broadly assessed for their potential to support reptiles. Particular attention was paid to those features that provide suitable basking areas (e.g. south-facing slopes), hibernation sites (e.g. banks, walls, piles of rotting vegetation) and opportunities for foraging (rough grassland and scrub). Further surveys are recommended have been completed as appropriate.

Any existing refugia were searched for presence of reptiles and any observations of reptiles recorded.

2.9 Other Notable Species

The site's habitats were broadly assessed for their potential to support species of principal importance for nature conservation (Section 41 NERC Act 2006) and other notable species. This includes mammals such as harvest mouse *Micromys minutus*, hedgehog *Erinaceus europaeus*, brown hare *Lepus europaeus*, and many bird species. The site was broadly assessed for its potential to support important invertebrate assemblages with particular attention paid to features such as standing deadwood, wet flushes, bare earth banks and botanically rich areas.

3 BASELINE CONDITIONS

3.1 Designated Sites and Granted EPS Licences

There is one statutory designated site within 2km of the site. The South Downs National Park is 1.7km to the north-west.

There are three habitats of importance for nature conservation in proximity to the site including replanted ancient woodland, deciduous woodland, and good quality semi-improved areas of grassland.

There are no granted EPS licences for mitigation projects within 1km of the site boundary.

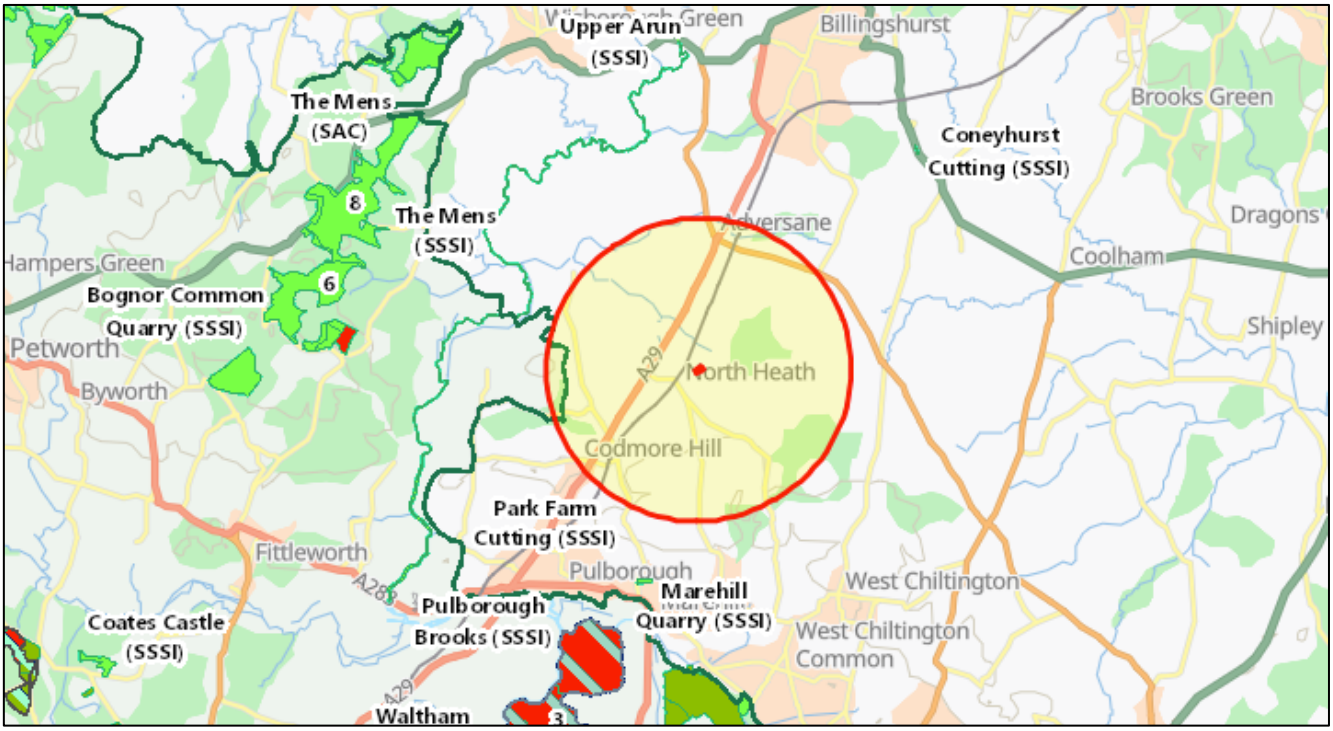

Figure 1. Designated sites within a radius of 2km of the application site. The national Parks boundary is represented by a green line. Image produced courtesy of Magic maps (http://www.magic.gov.uk/, contains public sector information licensed under the Open Government Licence v3.0).

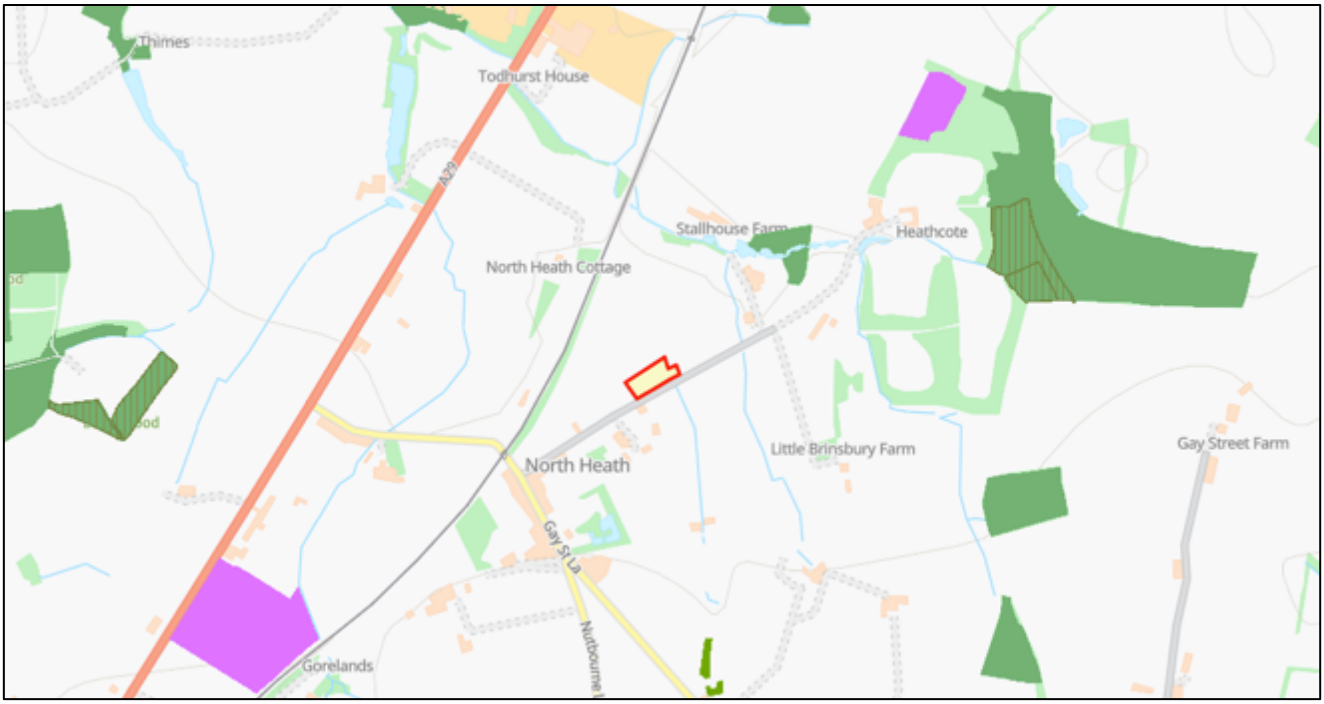

Figure 4. Habitats of importance for nature conservation, including ancient replanted woodland (red hatching), priority habitat deciduous woodland (dark green parcels), and good quality semi-improved grassland (pink parcels). The site boundary is highlighted in red. Image produced courtesy of Magic maps (http://www.magic.gov.uk/, contains public sector information licensed under the Open Government Licence v3.0).

3.2 Habitats

At the time of the site walkover, the access track and two of the mobile home plots had already been installed.

Note that references of 'to the south' refers to habitats south of the track and 'to the north' refers to habitats north of the track.

The southern boundary is bordered by a tree line consisting of English oak *Qurcus robur,* hawthorn *Cretageus monogyna*, field maple *Acer campestre,* willow *Salix* sp., and hazel *Corylus avellana.* The western tree line consists of hawthorn, English oak and blackthorn *Prunus spinosa.*

There is a strip of grassland between the track and the southern tree line consisting of species indicative of recent disturbance and sub-optimal condition, such as bristly oxtongue *Helminthotheca echoides,* greater plantain *Plantago major,* curled dock *Rumex crispus,* white clover *Trifolium repens,* prostrate knotweed *Polygonum aviculare* and common nettle *Urtica dioica.* Grasses in this area included cock's-foot *Dactylis glomerata,* smooth meadow grass *Poa pretensis* and false oat-grass *Aranathreum elaitus.* Other species in this area included fleabane *Pulcaria dysenterica,* soft rush *Juncus effusus* and a small area of greater willowherb *Epilobium hirsutum*. These plants are indicators of damp conditions, however, at the time of the survey conditions were incredibly dry and the dominant plants were bristly oxtongue and curled dock. The sward height was roughly 50-70cm tall, however the structure was relatively poor with lots of bare ground between established plants.

The area between the two established caravans also consisted of grassland, but the sward was much shorter, and the percentage of bare ground was much higher. Species included common sowthistle *Sonchus oleraceus,* bird's-foot trefoil *Lotus corniculatus*, ribwort plantain *Plantago lanceolata,* marsh cudweed *Gnaphalium uliginosum*, yarrow *Achillea millefolium,* bulbous buttercup *Ranunculus bulbosus*, scarlett pimpernel *Lysimachia* arvensis and false oat-grass as well as smooth meadow grass and perennial rye *Lolium perenne*. The structure of the sward in this parcel was notably worse than the southern strip of grassland, with a lower sward height and a higher proportion of bare ground.

In addition to the boundaries and grassland parcels, there were also areas of planted ornamental shrubs and areas of hardstanding associated with the existing caravans as well as an old barn in the south-west corner of the site.

Photograph 1. Photo illustrates the site as a whole; including the grassland parcels to the south and north of the track, as well as the western caravan and the barn (left) to be demolished.

Photograph 2a and 2b. Left illustrates the eastern caravan plot, right illustrates the structure and composition of the southern section of grassland.

Photograph 3a and 3b. Both photos illustrate the area of grassland to be impacted by the additional two caravan plots, note that the photo on the right illustrates the amount of bare ground and low sward within the parcel.

Photograph 4a and 4b. Photo illustrates the pile of refugia on the western side of the barn, as well as the new gaps in the metal/onduline roof. Note the metal ridge along the apex is not suitable for roosting bats.

3.3 Badgers

No signs of any badger activity were seen during the survey assessment, though there are habitats of value for this species within the site and surrounding landscape. It is likely that if any setts were situated within 30m of the site boundary, then evidence of badger activity would have been observed.

3.4 Bats

There is a single barn to be impacted by the works, with an additional replacement barn to be constructed to the west. The barn appears to be in worse condition than when the initial walkover was conducted in 2023[1]. However, the timber cladding is still mostly in good repair, offering no roosting opportunities for bats. The roof is clad in a. mixture of onduline and corrugated metal. The onduline cladded roof has deteriorated since the previous survey and now presents gaps that would be big enough for bats to use. However, due to the materials and the roof being single skin, this is extremely unlikely to provide roosting opportunities for bats. There area with the best gaps would be the ridge. However, the ridge is cladded in a metal sheet and will not provide the correct thermal properties to create suitable bat roosting opportunities. While no internal access was granted at the time of survey, it was noted in Arbtech's initial walkover that there was no internal void space. As the roof has deteriorated further, it is likely that the interior of the barn is now exposed to the elements, rendering it more unsuitable. As such, the building is rated as having a 'negligible' bat roosting potential.

The tree lines contained on the boundaries likely form commuting and foraging resources for bats. In the wider context of the site there are many high value habitats such as woodland, mixed farmland and the river Arun. The linear features are also well connected to other foraging resources in the landscape.

3.5 Breeding Birds

All of the semi-mature and occasional large mature trees on the boundary have the potential to support a variety of common nesting birds.

3.6 Dormice

Due to the tree lines which contain hazel on the southern boundary, it is possible that dormice could use the boundary habitats in low numbers. The southern and the western tree lines do provide good habitat connectivity to other parcels of woodland within the area.

3.7 Great Crested Newts and other Amphibians

A single pond was identified within 250m of the application site; located to the west within a different property boundary and a further six ponds within 500m of the site (Figure 5).

The initial walkover conducted by Arbtech in 2023 noted the grassland sward was short and was likely unsuitable terrestrial habitat for great crested newts.

While there are no major barriers to dispersal between the pond and the site, and the linear feature to the south

could provide a commuting route for great crested newts, the habitats contained within the site are largely unsuitable for great crested newts. The highest value area of the site located within the redline boundary would be the southern boundary and the immediate strip of vegetation that proceeds it. There is an area of refugia/sheets of corrugated metal on the western side of the barn. This also provides good habitat for amphibians as it is within the long grassland sward south of the track. This refugia was checked at the time of survey and no amphibians were seen.

The grassland strip to the south of the site also provides some good cover for newts and other amphibians. The grassland patch in the centre of the site, north of the established track and the area proposed for the remaining two caravans provides sub-optimal habitat as the structure is poor and there is a short sward and a large proportion of bare ground.

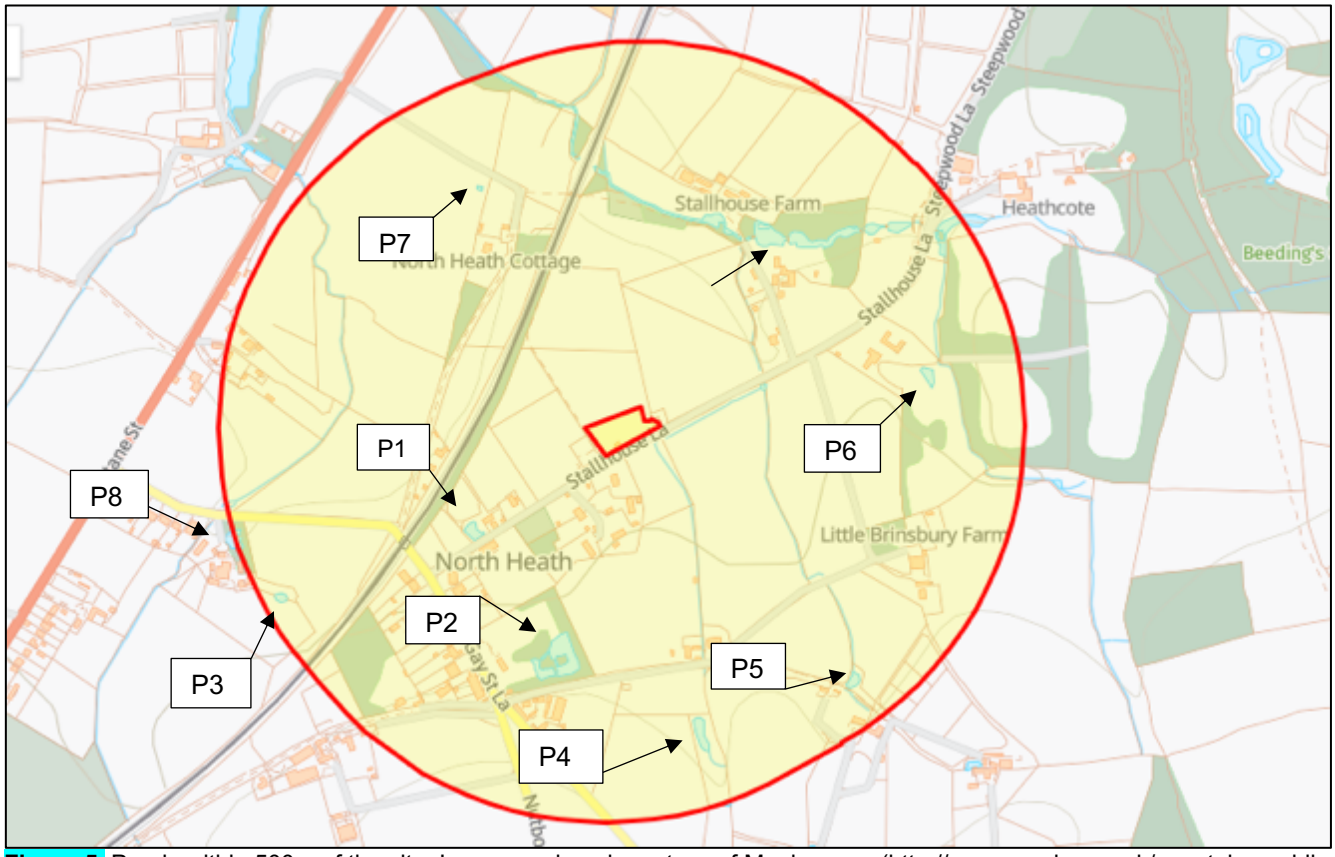

Figure 5. Ponds within 500m of the site. Image produced courtesy of Magic maps (http://www.magic.gov.uk/, contains public sector information licensed under the Open Government Licence v3.0)

3.8 Reptiles

The grassland habitat present within the proposed development site is potentially suitable for common reptile species, particularly common lizard and slow worm, owing to the presence of grassland habitats and boundary habitats.

On the western side of the existing barn there was a pile of corrugated metal. This was checked during the walkover. No reptiles or amphibians were under any of the refugia, but it remains suitable habitat for sheltering herptiles.

3.9 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. For this reason, habitats are assessed for their potential to support some species, even where no direct evidence (such as droppings) has been found.

4 IMPACT APPRAISAL

4.1 Designated Sites

The site is outside the zone of influence of all designated sites and, based on this and the small scale of the development, there are no identified mechanisms of impact on designated sites as a result of the proposed development.

4.2 Habitats

The habitats contained within the site to be impacted by the proposed works are common and widespread with species present indicative of sub-optimal condition. The highest value habitats would be the treelines located on the west and southern boundary which have good species composition and mature trees. These are not planned to be impacted by the works and are therefore not a design constraint.

4.3 Badgers

No signs of badger activity were identified during the assessment, and no badger setts are situated on or near to the proposed construction zone. No further surveys or mitigation for badgers is advised, however, if any signs of digging by large animals is identified on or near to the site in the future, prior to development or the submission of a planning application, further surveys would likely be required.

4.4 Bats

As the barn is rated as negligible, no further bat surveys are necessary.

As the site may be used by foraging and commuting bats, it is important that the potential for disturbance from artificial lights is considered. The proposed development is likely to require an 'ecologically sensitive lighting scheme' in accordance with guidance produced by the Bat Conservation Trust (summarised in Appendix 3).

4.5 Breeding and Wintering Birds

No suitable nesting bird habitat is due to be impacted by the proposed works, and therefore nesting birds are not a design constraint, and no mitigation is considered necessary.

4.6 Dormice

The proposed development is highly unlikely to impact dormice given the suitable habitat on site will not be impacted by the proposed works, and as such no further surveys are recommended.

As dormice are nocturnal, it is important that the potential for disturbance from artificial lights is considered, as for bats (see Appendix 3).

4.7 Great Crested Newts

There is one waterbody within 250m of the proposed development. While there is some terrestrial habitat on the site that is suitable for great crested newts, this is mostly contained to the southern boundary and the immediate strip of vegetation that proceeds it. The grassland strip to the south of the site does provides some cover for newts and other amphibians.

The patch of grassland in the middle of the site provides much lower quality habitat, and it is extremely unlikely that great crested newts would be found in this area. There is also a high proportion of higher-quality grassland adjacent to the northern boundary.

Based on the latest proposals, only the area of grassland to the north will be impacted by the proposed works. In this instance, a precautionary approach to the works is considered an appropriate mitigation effort when considering the proposed impacts. Areas of suitable habitat should be cut in two phases using a petrol strimmer. The initial phase should take the vegetation down to a height of roughly 30cm, at which point a suitably qualified ecologist can perform a hand search. After completing a hand search, the final cut can be done which takes the vegetation down to a height of roughly 5cm. Considering the amount of bare ground within each parcel, this will then render areas unsuitable for amphibians. It is important that the two phase strim is directional. In the unlikely event any newts are present within either sward, it is important that the two phase strim aims to encourage them into suitable habitat and not leave them stranded in unsuitable habitat where they could be susceptible to predation or to the elements. Thus, the section of grassland should aim to start at the south and work north, moving any potential individuals toward the higher quality grassland outside the development's boundary (Figure 6). This area of grassland will also form the project's enhancement area for mandatory net gain.

In addition to this, if the remaining grassland to south is left long, it will have an overall positive effect on the site's suitability for amphibians in comparison to the site prior to any caravans being installed.

Figure 6. Red outline illustrates the areas to be impacted, and the blue arrows indicate the direction that the two phase strim should follow.

4.8 Reptiles

As with great crested newts, the grassland to south is suitable habitat for common reptiles such as grass snake and slow worm. The grassland parcel in the north of the site is less suitable, as with amphibians, and is unlikely to support any reptiles based on its current condition. However, given the presence of reptiles cannot be ruled out with certainty, the section of grassland to the north should be subject to the precautionary methods outlined in section 4.7.

5 OPPORTUNITIES FOR ENHANCEMENT

The development should aim to retain as much of the grassland strip to the south as possible as this is the most suitable habitat, except the treelines for any protected species. The latest red line boundary now excludes a large part of the western side of the site. If this area of grassland was managed like a meadow going forward, this could turn into higher quality grassland provide a good foraging and commuting resource for a plethora of species. Standard meadow management would involve a late summer/autumn cut and a spring cut, ensuring all cuttings are gathered. Cuttings could then be piled in a corner of the site to create good hibernating and breeding habitat for reptiles. While plants in the southern sward are mostly undesirable, species such as spear thistle and bristly ox tongue still provide good resources for pollinators and provide refuge for other species. However, over time with good management, other plants should begin to colonise if these species are controlled though good management.

There are proposed enhancements for the land north of the application site to secure mandatory net gain. The project could look to further enhance this area by also adopting a meadow management style for the whole area

which would supress the grasses and potentially allow additional forbs to colonise the area. In addition, the project could look to enhance this area for newts and reptiles by constructing a pond and adding in a hibernaculum.

6 CONCLUSIONS

The project is due to impact habitats that are common and widespread and are highly unlikely to contain protected species in anything other than low populations.
Due to the scale of the works proposed and the habitats to be impacted, precautionary methods are recommended for reptiles and amphibians. That include a two-phase strim and hand search under supervision from an Ecological Clerk of Works (ECoW).

It is important that no habitat clearance or other site preparation work should be undertaken until planning permission has been granted and all relevant protections for habitats of importance and protected species have been detailed and implemented. Please be advised that any work to remove or modify habitats outside of typical management may undermine a future planning application.

Should you need any further advice on the information provided above, please do not hesitate to contact The Ecology Co-op, info@ecologyco-op.co.uk, www.ecologyco-op.co.uk, Office: 01798 861800.

APPENDIX 1 – Wildlife Legislation and National Planning Policy

Introduction

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 wildlife in general and certain species. It includes current national planning policy relevant to nature conservation.

The 'Birds Directive', 'Habitats Directive' and 'Natura 2000 Sites'

The Council Directive 79/409/EEC on the Conservation of Wild Birds ("the Birds Directive") sets a framework for the protection of wild birds. Under the Directive, several provisions are made including the designation and protection of 'Special Protection Areas' (SPAs) – areas which support important bird populations, and the legal protection of rare or vulnerable species.

The Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora (the "Habitats Directive") directs member states of the EU to take measures to maintain the favourable conservation status of important habitats and species. This requires the designation of a series of sites which contain important populations of species listed on Annex II of the Directive (for example Bechstein's bat *Myotis bechsteinii*, Barbastelle bat *Barbastella barbastellus* and white-clawed crayfish *Austropotamobius pallipes*. Together with 'Special Areas of Conservation' (SACs), SPAs form a network across Europe of protected areas known as the 'Natura 2000 sites'.

Annex IV lists species in need of more strict protection, these are known as "European Protected Species (EPS)". All bat species, common dormice *Muscardinus avellana*, otter *Lutra lutra* and great crested newts *Triturus cristatus* are examples of EPS that are regularly encountered during development projects.

The 'Habitats Regulations'

The Conservation of Habitats and Species Regulations 2017, as amended (the "Habitats Regulations") is the principle means of transposing the Habitats Directive and the Birds Directive, and updates the Conservation (Natural Habitats, &c.) Regulations 1994 ("the 1994 regulations") in England and Wales.

'Natura 2000' sites, now known as National Site Network sites under the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019, receive the highest level of protection under the Regulations which requires that any activity within the zone of influence of these sites would be subject to a Habitats Regulations Assessment (HRA) by the competent authority (e.g. planning authority), leading to an Appropriate Assessment (AA) in cases where 'likely significant effects' to the conservation objectives are identified.

For European Protected Species, Regulation 41 makes it a criminal offence to:

- deliberately capture, injure or kill any such animal;
- deliberately disturb wild animals of such species;
- deliberately take or destroy their eggs (where relevant);
- damage or destroy a *breeding or resting place* of such an animal;
- possess, control, sell or exchange any live or dead animal or plant, of such species;
- deliberately pick, collect, cut, uproot or destroy a wild plant of such species.

The Habitats Directive and Habitats Regulations provide for the derogation from these prohibitions for specific

reasons provided certain conditions are met. An EPS licensing regime allows operations that would otherwise be unlawful acts to be carried out lawfully. Natural England is the licensing Authority and, in order to grant a license, ensures that three statutory conditions (sometimes referred to as the 'three derogation tests') are met:

- a licence can be granted for the purposes of "preserving public health or safety or for other imperative reasons of overriding public interest including those of a social or economic nature and beneficial consequences of primary importance for the environment" (Regulation 53 (2) (e);
- a licence can be granted if "there are no satisfactory alternatives" to the proposed action;
- a licence shall not be granted unless 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.

Wildlife and Countryside Act (1981) as amended.

This remains one of the most important pieces of wildlife legislation in the UK. There are various schedules to the Act protecting birds (Schedule 1), other animals including insects (Schedule 5), plants (Schedule 8), and control of invasive non-native species (Schedule 9).

Under the Wildlife and Countryside Act (WCA) 1981, all wild birds (with the exception of those listed on Schedule 2), their eggs and nests are protected by law and it is an offence to:

- take, damage or destroy the nest of any wild bird while it is in use or being built
- take or destroy the egg of any wild bird
- disturb any bird listed on Schedule 1, while it is nest building, or at a nest with eggs or young, or disturb the dependant young of any such bird.

Schedule 5 lists all non-avian animals receiving protection to a varied degree. At its strongest, the Act makes it an offence to intentionally kill, injure or take any wild animal listed on Schedule 5, and prohibits interference with places used for shelter or protection, or intentionally disturb animals while occupying such places. Examples of species with *full protection* include all EPS, common reptile species, water vole *Arvicola amphibius*, white-clawed crayfish *Austropotamobius pallipes* and Roman snail *Helix pomatia*. Other species are protected from sale, barter or exchange only, such as white letter hairstreak *Satyrium w-album*.

The Act makes it an offence to intentionally pick, uproot or destroy any plant or seed, and sell or possess any plant listed on Schedule 8. It is also an offence to intentionally uproot any wild plant not listed on Schedule 8 unless authorised [by the land owner]. Species on Schedules 5 and 8 are reviewed every 5 years when species can be added or removed.

Measures for the prevention of spreading non-native species which may be detrimental to native wildlife is included in the Act, which prohibits the release of animals or planting of plants into the wild of species listed on Schedule 9 (for example, Japanese knotweed *Fallopia japonica*, Himalayan balsam *Impatiens glandifera*, New Zealand Pygmyweed *Crassula helmsii*).

The Wildlife and Countryside Act 1981 (as amended) also prohibits certain inhumane methods of traps and devices for the capture or killing of wild animals and certain additional methods such as fixed trap, poisoning with gas or smoke, or spot-lighting with vehicles for killing species listed on Schedule 6 of the Act (this includes all bat species, badger, otter, polecat, dormice, hedgehog and red squirrel).

Natural Environment and Rural Communities (NERC) Act (2006)

The NERC Act (2006) created the statutory nature conservation body Natural England, and 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. Section 41 of the NERC Act lists the habitats and species of principle importance. This includes a wide range of species from mosses, vascular plants, invertebrates through to mammals and birds. It originates from the priority species listed under the UK Biodiversity Action Plan (UK BAP) with some omissions and additions.

Environment Act (2021)

The Environment Act sets a target of halting the decline in species through the inclusion of a legally binding 2030 species abundance target. Aiming to restore natural habitats and enhance biodiversity, the Act requires new developments to improve or create habitats for nature (through mechanisms such as mandatory Biodiversity Net Gain), and tackle deforestation. Going forwards, UK businesses will need to look closely at their supply chains as amongst other measures they will be prohibited from using commodities associated with wide-scale deforestation. Woodland protection measures are also strengthened through the Act.

The Act enables the reform of the Habitats Regulations and further improves protection for nature through the establishment of Local Nature Recovery Strategies that support national Nature Recovery Networks. In addition, the Act provides for the production of Protected Site Strategies and Species Conservation Strategies, aimed at supporting the design and delivery of strategic approaches to deliver better outcomes for nature.

Protection of Badgers Act (1992)

The badger *Meles meles* is afforded specific legal protection in Britain under the Protection of Badgers Act (1992), and Schedule 6 of the Wildlife and Countryside Act 1981 (as amended) (see above).

Under this legislation, it is a criminal offence to:

- intentionally kill, injure, take, possess, or cruelly ill-treat, a badger, or to attempt to do so;
- interfere with a sett, by damaging or destroying it;
- to obstruct access to, or any entrance of, a badger sett; or
- to disturb a badger when it is occupying a sett.

A licence may be obtained from Natural England to permit certain prohibited actions for a number of defined reasons including interference of a sett for the purpose of development, provided that a certain number of conditions are met. Note that licenses are not normally granted for works affecting badgers between the end of November and the start of July.

National Planning Policy Framework

The National Planning Policy Framework (NPPF 2024)[8] sets out the Government's view on how planners should balance nature conservation with development and helps ensure that Government meets its biodiversity commitments with regard to the operation of the planning system.

Paragraph 192, states that council plans should "*promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue*

[8] HM Government (2024). National Planning Policy Framework. Department for Communities and Local Government. Available online at: https://assets.publishing.service.gov.uk/media/675abd214cbda57cacd3476e/NPPF-December-2024.pdf.

opportunities for securing measurable net gains for biodiversity."

The Office of the Deputy Prime Minister (ODPM) Circular 06/2005, 2005)[9]. In accordance with the NPPF, it is important that developments should contribute to and enhance the natural and local environment by:

- minimising impacts on existing biodiversity and habitats;
- providing net gains in biodiversity and habitats, wherever possible;
- establishing coherent ecological networks that are more resilient to current and future pressures.

UK Post-2010 Biodiversity Framework

The UK Biodiversity Action Plan (UK BAP), first published in 1994, was the UK's response to the commitments of the Rio Convention on Biological Diversity (1992) until 2010, when the UK BAP was replaced by the UK Post-2010 Biodiversity Framework. This framework covers the period 2011 to 2020 and forms the UK government's response to the new strategic plan of the United Nations Convention on Biodiversity (CBD) published in 2010. This promotes a focus on individual countries delivering target for protection for biodiversity through their own strategies.

The most recent biodiversity strategy for England, 'Biodiversity 2020: A strategy for England's wildlife and ecosystem services' was published by Defra (2011), and a progress update was provided in July 2013 (Defra 2013).

'Biodiversity 2020' builds on the Natural Environment White Paper for England – 'The Natural Choice', published on 7 June 2011, and sets out the strategic direction for biodiversity policy for the next decade.

Biodiversity 2020 deliberately avoids setting specific targets and actions for local areas and species because the Government believes that local people and organisations are best placed to decide how to implement the strategy in the most appropriate way for their local area or situation.

Birds of Conservation Concern (BoCC)

In 1996, the UK's leading non-governmental bird conservation organisations listed the conservation status of all bird species in the UK against a series of criteria relating to their population size, trends and relative importance to global conservation. The lists, known as the 'Red', 'Amber' and 'Green' lists (in order of decreasing concern) are used to inform key conservation policy and decisions. The lists are reviewed every five years and are a useful reference for determining the current importance of a particular site for birds. The most recent review was undertaken in 2021 (Stanbury et al, 2021), which provides an up to date assessment of the conservation status of birds in the UK.

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Circular 06/2005 (2005). Government Circular: Biodiversity and geological conservation – statutory obligations and their impact within the planning system. Office of the Deputy Prime Minister, London. Available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/7692/147570.pdf

[9] HM Government (2005) ODPM Circular 06/05 Government Circular: *Biodiversity and Geological Conservation – Statutory Obligations and their Impact within the Planning System*. Available online at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/7692/147570.pdf.

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APPENDIX 2 – Local Planning Policy

Horsham District Council - Horsham District Planning Framework (excluding South Downs National Park) (November 2015)

Policy Number/Title	Policy Summary
Policy 24 - Strategic Policy: Environmental Protection	The high quality of the district's environment will be protected through the planning process.
Policy 25 - Strategic Policy: The Natural Environment and Landscape Character	The council will support development that: • Maintains and enhances the Green Infrastructure Network and addresses any identified deficiencies in the District. • Maintains and enhances the existing network of geological sites and biodiversity, including safeguarding existing designated sites and species, and ensures no net loss of wider biodiversity and provides net gains in biodiversity where possible. • Conserves and where possible enhances the setting of the South Downs National Park.
Policy 26 - Strategic Policy: Countryside Protection	The rural character and underdeveloped nature of the countryside will be protected against inappropriate development. It may be considered if it protects or enhances the character area in which it is located, such as: the ecological qualities of the area, the pattern of woodlands, fields, hedgerows, trees, waterbodies and other features.
Policy 31- Green Infrastructure and Biodiversity	Development proposals will be required to contribute to the enhancement of existing biodiversity and should create and manage new habitats where necessary. It should ensure the ecosystem services of that area are maintained. The council will favour development that retains and enhances significant features of nature conservation on development sites, as well as development which makes a positive contribution to biodiversity through the creation of green spaces, and linkages between habitats to create local and regional ecological networks. Where protected trees must be felled, replacement planting with a suitable species will be required. SPAs, SACs and SSSIs as well as Local Nature Reserves (LNR) and National Nature Reserves (NNR) will be given particular consideration. If the development is thought to have an indirect/direct adverse effect on biodiversity, development will be refused unless the reason for development outweighs the need to protect the site, or mitigation will be provided. Any development with the potential to impact Arun Valley SPA or the Mens SAC will be subject to a HRA to determine the need for an Appropriate Assessment. In addition, development will be required to be in accordance with the necessary mitigation measures for development set out in the HRA of this plan.

APPENDIX 3 – 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 to 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 Trust[10] should be referred to when designing the lighting scheme. Note that lighting designs in very sensitive areas should be created with consultation from an ecologist and using up-to-date bat activity data where possible. The guidance contains techniques that 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 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;
- consideration of 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. Consideration should be given to 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

[10] Bat Conservation Trust and Institute for Lighting Professionals (2023) Guidance note 08/23. Bats and Artificial Lighting in the UK. https://www.theilp.org.uk/documents/guidance-note-8-bats-and-artificial-lighting/

features;

- creation of alternative valuable bat habitat on site, whereby additional or alternative bat 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.

Lighting Fixture Specifications

The Bat Conservation Trust recommends the following specifications for lighting on developments to prevent disturbance:

- lighting spectra: peak wavelength >550nm
- colour temperature: <2700k (warm)
- reduction in light intensity
- minimal UV emitted
- upward light ratio of 0% and good optical control.

Further reading:

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End.