URBAN EDGE ENVIRONMENTAL CONSULTING

NATURAL PROGRESSION

Land at Burleigh Lane, Crawley Down, West Sussex

Ground Level Tree Assessment & Bat Emergence Surveys

June 2025

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Ground Level Tree Assessment & Bat Emergence Surveys

Client:	Merrow Wood	
Report No.:	UE0604_BurleighLane_GLTA-Bats_1_250624	
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CIEEM REGISTERED PRACTICE 2025-2026

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Abbreviations

BCT	Bat Conservation Trust
CHS	Conservation of Habitats & Species Regulations 2017
EPS	European Protected Species
GLTA	Ground Level Tree Assessment
Habs.Dir.	Habitats Directive 92/43/EEC
MAGIC	Multi-Agency Geographic Information for the Countryside
NERC	Natural Environment and Rural Communities Act 2006
PEA	Preliminary Ecological Appraisal
PRF	Potential Roost Features
PSR	Protected Species Report
SAC	Special Area of Conservation
SSSI	Site of Special Scientific Interest
SxBRC	Sussex Biological Records Centre
WCA	Wildlife and Countryside Act 1981 (as amended)

0 Executive Summary

0.1 Introduction

0.1.1 Protected species surveys for roosting bats were undertaken for the site of a proposed residential development at Land at Burleigh Lane, Crawley Down, West Sussex. The study was undertaken to identify and evaluate the potential impacts of development on roosting bats and make recommendations accordingly.

0.2 Results

0.2.1 Trees T1, T4, T22, T23, T24, T69 and T72 were identified as providing PRF-M suitability for roosting bats and Trees T5, T14, T28, T40, G57, T64 and T74 were identified as providing PRF-I suitability.

0.2.2 One dusk emergence survey of buildings B5, B9 and B10 was carried out on 2 June 2025. No bats were recorded emerging or returning to roost. Activity at B10 was restricted to a single soprano pipistrelle heard by surveyors, with regular common pipistrelle commuting identified in proximity to B5 / B9.

0.3 Evaluation

0.3.1 Given the relatively low number of trees identified with PRF-M features that could be suitable for a higher conservation status roost and the domination of activity recorded during the bat activity surveys by common and widespread species, the survey area is provisionally assessed as of Local Importance for roosting bats within trees.

0.3.2 Felling or arboricultural works to trees which exhibited PRFs for bats could result in destruction of a bat roost or present a risk of killing, injury or disturbance if bats are present during the works, which would constitute an offence under the Wildlife and Countryside Act 1981 (as amended) and Conservation of Habitats and Species Regulations 2017 (as amended). However, the majority of these trees will be retained and protected, with only G57 due to be felled.

0.3.3 There is also potential for bats roosting within trees to be displaced by increased lighting during the construction and operational phase. Recommendations including a sensitive lighting scheme and habitat creation to avoid and mitigate predicted impacts are set out within the Preliminary Ecological Appraisal and Protected Species Report.

0.3.4 The survey results provide a good level of confidence that bats were absent from buildings B5, B9 and B10. The survey area is considered to be of Negligible Importance for bats roosting in buildings.

0.4 Recommendations

0.4.1 Recommendations are made below for avoidance and / or mitigation of impacts to roosting bats to prevent an offence under the relevant legislation from occurring, and to reduce the risk of development proposals resulting in significant effects on the population and distribution of species recorded during the surveys; these are summarised in Table 0.1. The recommendations should be read alongside those contained in the Preliminary Ecological Appraisal and Protected Species Report which continue to apply, including those for ecological enhancement.

Table 0.1: Summary of recommendations

#	Recommended mitigation, avoidance and enhancement measures
R1	Aerial inspections for roosting bats within trees T1, T4, T22, T23, T24, T69 and T72 if they are affected by the Proposed Development, undertaken between May and August. It is currently anticipated that only G57 will be lost to facilitate the Proposed Development.
R2	If works to fell or lop trees T5, T14, T28, T40, G57, T64 and T74 are required, they will be undertaken during March-April or September-October to avoid critical maternity and hibernation periods, and in accordance with a Non-Licenced Method Statement to reduce the risk of killing / injury to roosting bats. Any works to fell or lop any trees classified as PRF-I should be compensated for with bat boxes.

0.5 Conclusion

0.5.1 In the absence of mitigation, the Proposed Development will result in negative impacts to roosting bats in trees. However, mitigation measures are recommended to prevent an offence under the relevant legislation from occurring, and to avoid / reduce the risk of development proposals resulting in significant effects on the populations of bat species.

1 Introduction

1.1 Purpose of this Report

1.1.1 A Preliminary Ecological Appraisal (PEA) was carried out in March 2025 for the site of a proposed residential development at Land at Burleigh Lane, Crawley Down, West Sussex (Grid Reference: TQ 35046 37254). It was recommended that further surveys should be carried out for roosting bats in buildings and trees due to the presence of favourable habitats.

1.2 Objectives and Approach of the Study

1.2.1 The study was commissioned to fulfil the following objectives:

- To determine the presence or likely absence of roosting bats, and if present record their distribution within the survey area;
- To provide sufficient data to inform a European Protected Species Mitigation Licence applications for roosting bats, if required;
- To identify and evaluate the potential impacts of development on roosting bats; and
- To outline the measures required for avoiding and mitigating negative impacts to roosting bats and make recommendations for ecological enhancement.

1.2.2 To meet these objectives the survey approach involved field surveys using standard techniques to record the presence, distribution and relative abundance of roosting bats within the survey area, with reference to current industry guidelines.

1.3 Survey Area

1.3.1 The Application Site boundary is expected to be the same as the survey area boundary.

1.3.2 The survey area lies at the southern edge of the village of Crawley Down in the Mid Sussex District of West Sussex. The survey area comprises c.2.64ha of land, currently dominated by grasslands with scrub, woodland, hedgerows and derelict buildings.

1.3.3 The survey area is bounded to the north, east and west by mature hedgerow and residential properties, and to the south by mature hedgerow and agricultural land. The extent of the Application Site and survey area are outlined on Figure 1.1.

1.3.4 The wider landscape is characterised by a patchwork of arable land and pasture with a network of drainage ditches, scattered ponds, hedgerows with trees and woodland blocks. A total of 22 ponds are present within 500m of the survey area.

1.4 Proposed Construction Activities

1.4.1 Planning consent is being sought for a residential development with vehicular and pedestrian access; car parking; open space and landscaping. The proposed site layout is shown in Figure 1.2.

Burleigh Lane, Crawley Down, West Sussex

Survey area

Figure 1.1: Survey area

0 150 300 N

Metres

Scale (at A4): 1:5,000 **Created by:** EM

Date: Mar 2025 **Reviewed by:** NP

Drawing number:

UE0604ECO-BurleighLane_250312:SiteLocation

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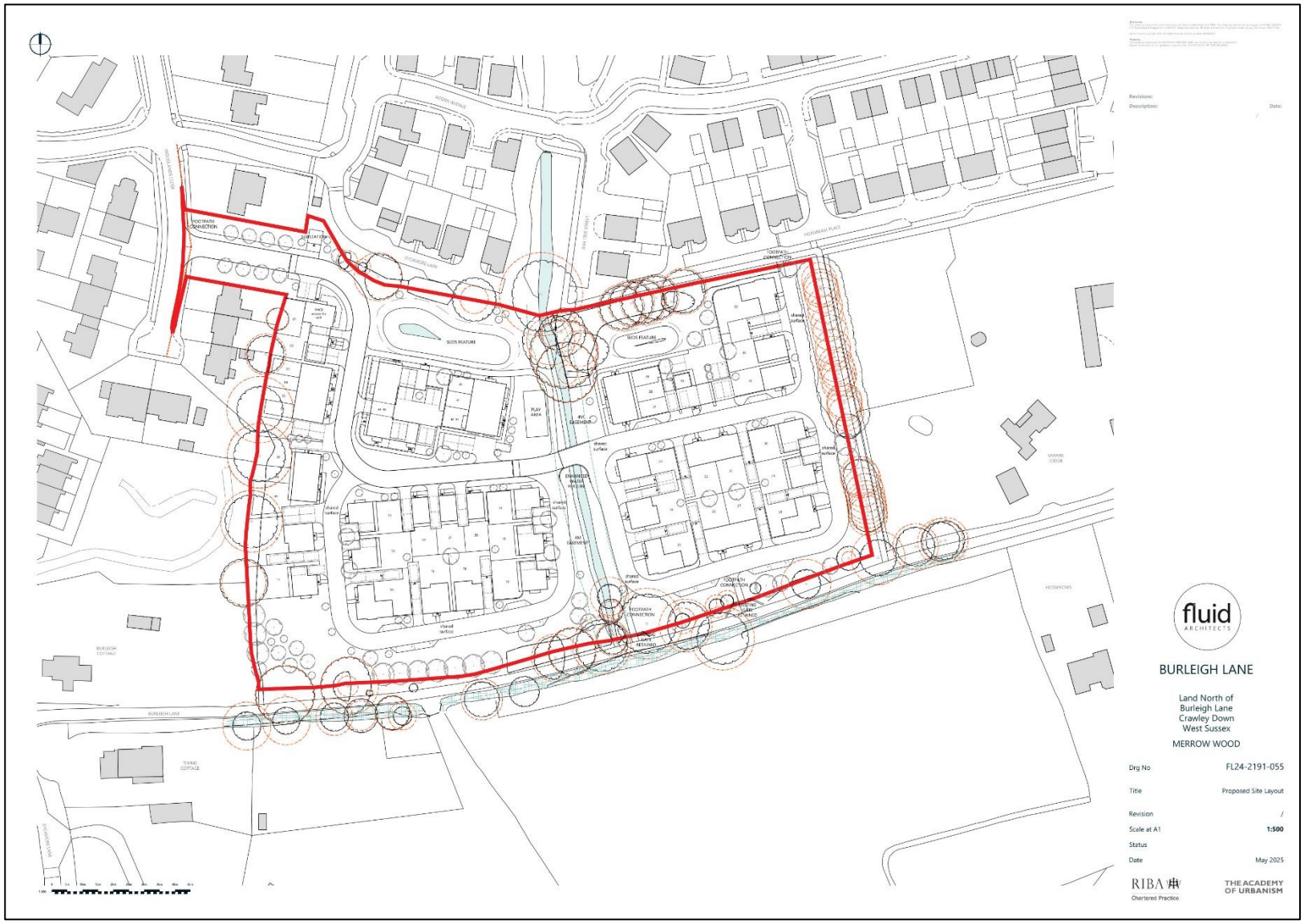


Figure 1.2: Proposed Site Layout

2 Survey Methodology

2.1 Desk Study

2.1.1 Sussex Biological Records Centre (SxBRC) was consulted for records of bat species within a 2km search radius. The desk-study data search was carried out in preparation for the PEA. Additionally, the Multi-Agency Geographic Information for the Countryside (MAGIC) website was consulted for granted European Protected Species (EPS) mitigation licenses for bats within a 2km radius, and for citations of Sites of Special Scientific Interest (SSSI) or Special Areas of Conservation (SAC) which are notified for important populations of bats within 10km of the survey area.

2.2 Ground level Tree Assessment

2.2.1 Trees lying within the survey area were subject to an external inspection for potential bat roost features (subject to safe access). The Ground-level Tree Assessment (GLTA) was based on latest Good Practice Guidelines from the Bat Conservation Trust (BCT; Collins, J. (ed.) 2023) and Natural England's standing advice for bats[1].

2.2.2 The initial inspection of trees was carried out during the PEA on 1 April 2025 by an experienced ecologist. Weather conditions were mild (c.13°C), with a light breeze (Beaufort Scale 2), 50% cloud cover and no precipitation. A subsequent more detailed inspection was carried out on 3 June 2025 by the same ecologist. Weather conditions were mild (c.17-18°C), with a gentle breeze (Beaufort Scale 3), 70% cloud cover and no precipitation.

2.2.3 The inspection from ground-level focused on potential access points and roosting opportunities, known Potential Roost Features (PRF), such as woodpecker and squirrel holes, cavities, cracks or splits in major limbs (e.g. hazard beams, rot holes, frost cracks, knot holes, occlusions, flush cuts, tear-outs, cankers or butt-rots), loose platey bark, aerial deadwood and dense ivy or epicormic growth. In the case of bats, typical indicators include droppings (which are characteristic and are often indicative of species), signs of fur oil staining, urine splashing, characteristic odours, and accumulations of discarded prey remains.

2.2.4 All features observable from ground level which were potentially suitable for bats were noted and the overall suitability of each tree for roosting bats was classified with reference to Table 2.1.

Table 2.1: Potential suitability of structures/trees for roosting bats (after Collins, 2023)

Suitability	Roosting habitats
None	No habitat features on site likely to be used by any roosting bats at any time of year (i.e. a complete absence of crevices / suitable shelter at all ground / underground levels).

[1] Available here: https://www.gov.uk/guidance/bats-surveys-and-mitigation-for-development-projects

Suitability	Roosting habitats
Negligible	No obvious habitat features on site likely to be used by roosting bats; however, a small element of uncertainty remains as bats can use small and apparently unsuitable features on occasion.
PRF-I	PRF is only suitable for individual bats or very small numbers of bats either due to size or lack of suitable surrounding habitats.
PRF-M	PRF is suitable for multiple bats and may therefore be used by a maternity colony.
Confirmed roost	Bats or unequivocal evidence of bats found, i.e. bat droppings. Suitability categories are irrespective of the presence of a roost. Accordingly, if a roost is confirmed then the categorisation still stands and 'confirmed roost' should be added.

2.2.5 The inspections were undertaken with the aid of the following equipment: telescopic ladders; CB-2 (1 million candlepower) searchlight to search dark areas for signs of bats; close-focusing binoculars to view areas inaccessible on foot; and digital camera with flash to record any evidence of bats or features suitable for use by bats.

Limitations

2.2.6 It is important to note that bat roosts are transitory in nature and the results of this assessment reflect the baseline conditions at the specific time of survey. The trees surveyed may not currently support a bat roost, but they may be used by roosting bats in the future as some have features that would indicate their potential for use as seasonal roosts.

2.2.7 Historical field evidence for roosting bats, such as droppings and feeding remains, generally deteriorates more quickly within trees due to greater exposure to the weather, only being found within the most sheltered features. A precautionary approach was applied during the interpretation of results in consideration of this factor and appropriate recommendations for further surveys were provided to ensure that any survey limitation has been minimised.

2.2.8 During the data upload process following the survey, information including photos of trees became corrupted and were lost. However, data relating to the location and suitability of trees was maintained to inform this assessment.

2.3 Presence / Absence Surveys

2.3.1 Where a structure is found to contain evidence of roosting bats, or judged to be potentially suitable as a roost, then further surveys are required prior to undertaking works in order to confirm whether bats are currently present or are likely to be absent. These surveys typically take the form of emergence surveys (carried out as the bats leave the roost at dusk) and can be carried out between May and September (May to August being the optimal period).

2.3.2 Current guidelines (Collins, J. (ed.), 2023) recommend the minimum levels of presence / absence survey effort for structures, based on their overall suitability for roosting bats; see Table 2.2. The PEA concluded that buildings B5, B9 and B10 were of low suitability for roosting bats and one presence / absence survey was undertaken using a six-person survey team. Appendix III presents a map of surveyor positions.

Table 2.2: Recommended minimum survey effort for presence / absence surveys

Low roost suitability	Moderate roost suitability	High roost suitability
One survey visit. One dusk emergence survey.	Two separate dusk emergence survey visits.	Three separate dusk emergence survey visits.

2.3.3 The emergence survey commenced at least 15 minutes before dusk and continued for 1 hour 30 minutes after sunset. The objective was to establish the presence or likely absence of bats within each feature, determine the assemblage and relative abundance of bat species using the features, and identify the type(s) of roost (e.g. day roost or maternity roost).

2.3.4 Detection equipment included Wildlife Acoustics Echo Meter Touch 2 Pro full spectrum bat detectors and each surveyor was paired with a Canon XA60 infrared camera, illuminated by infrared flood lighting. The approach to survey was hybrid i.e. surveys were undertaken by eye until light levels became untenable and then switched to live review of the camera footage using Lilliput 4K external camera monitors. Recordings of bat calls were analysed using Kaleidoscope Pro (v5.6.8) software.

2.3.5 The camera footage was reviewed manually, where necessary, by a suitably qualified ecologist, at a maximum of 2x speed, using BORIS (Behavioural Observation Research Interactive Software; v8.17.1) which allows the user to set the playback speed and does not skip frames. A screen shot from the camera at the darkest point of the survey is provided at Appendix IV to demonstrate the field of view and level of illumination.

2.3.6 Survey covariates were noted (minimum / maximum air temperatures, wind speed / direction, precipitation and cloud cover). Weather conditions were mild (c.14-12°C), with a light breeze (Beaufort Scale 2), 20-10% cloud cover and no precipitation.

Evaluation

2.3.7 The importance of bat roosts is classified as Site, Local, District, County or Regional with reference to Table 3.2 in the *Bat Mitigation Guidelines* (Reason, P.F. and Wray, S. (2023). However, these are relative terms which require an interpretation of the rarity of different species and regional variations therein. The terms are hence applicable within the survey area only and are intended to indicate which features of the survey area may be of importance to the conservation status of local bat populations. Evaluation of the potential impacts on bats was undertaken with reference to Reason, P.F. and Wray, S. (2023) and Natural England Standing Advice, with predicted impacts to each Important Ecological Feature noted as of Site, Local, District, County or Regional significance.

Limitations

2.3.8 The presence / absence surveys reported herein were carried out in June 2025. The surveys were hence undertaken in accordance with the BCT's recommended timings for presence / absence surveys (Collins, J. (ed.), 2023) and during the maternity period of May to August.

2.3.9 There were no difficulties in gaining access to the site to carry out the presence / absence survey. Weather conditions were within acceptable parameters and there were no equipment malfunctions or other limitations of relevance to the methods applied.

2.4 General Limitations

2.4.1 The details of this report are valid until the dates shown in Table 2.3. Beyond these periods, if works have not yet been undertaken, the development proposals change or red line boundary changes, it is recommended that a review of the ecological conditions is undertaken.

Table 2.3: Validity of assessment

Survey Type	Validity period (CIEEM, 2019)	Date of final survey	Expiry date
GLTA	12 months	03/06/2025	03/06/2026
Bat presence / absence	12 months	02/06/2025	02/06/2026

2.4.2 See Appendix VI for general Legal and Technical Limitations which apply to this document.

2.5 Personnel

2.5.1 The personnel deployed on the surveys are listed in Table 2.4.

Table 2.4: Survey personnel and qualifications

Feature / Task	Personnel
GLTA	Robin Searle, Becci Bond
Roosting bats	Nick Pincombe, Robin Searle, Poppy Lankstead, Elliot Martin, 2x uncrewed cameras
Personnel	**Qualifications**
Nick Pincombe BA (Hons) MSc CEnv MIEMA MCIEEM	Director with 20 years' experience leading survey and impact assessment teams for a wide range of ecology and environmental planning projects. Natural England Class Licences to survey for bats (WML-CL18) and great crested newt (WML-CL08).
Becci Bond FdSc BSc (Hons) MCIEEM	Principal Ecologist with fourteen years' professional consultancy experience. Licences to survey for bats (WML-CL17), great crested newt (WML-CL09) and hazel dormouse (WML-CL10a).
Robin Searle BSc (Hons) ACIEEM	Senior Ecologist with 11 years' experience in ecological consultancy. Licences to survey for great crested newt (WML-CL08) and hazel dormouse (WML-CL10a).
Poppy Lankstead MSci	Assistant Ecologist with two seasons' bat experience.
Elliot Martin BA (Hons) MSc	Assistant Ecologist, experienced in ecological surveying and fieldwork, and environmental management.

3 Results

3.1 Desk Study

3.1.1 SxBRC returned 95 records of at least five species of bat from within 2km of the survey area, as summarised in Table 3.1. Unspecified records of both *Myotis* species and *Plecotus* species were also included. These records included 33 roost sites, the closest to the survey area being located c.50m south-east in 1993 (unspecified type and species).

Table 3.1: Summary of bat records data within 2km of the site

Species	Protection
Noctule *Nyctalus noctula*	Habs.Dir.Ax.4, CHS Sch.2, WCA Sch.5 full, NERC s41
Brown long-eared *Plecotus auritus*	Habs.Dir.Ax.4, CHS Sch.2, WCA Sch.5 full, NERC s41
Soprano pipistrelle *Pipistrellus pygmaeus*	Habs.Dir.Ax.4, CHS Sch.2, WCA Sch.5 full, NERC s41
Common pipistrelle *Pipistrellus pipistrellus*	Habs.Dir.Ax.4, CHS Sch.2, WCA Sch.5 full
Serotine *Eptesicus serotinus*	Habs.Dir.Ax.4, CHS Sch.2, WCA Sch.5 full

Habs.Dir.Ax.2/4	Habitats Directive 92/43/EEC Annex 2 or 4
CHS Sch.2	Conservation of Habitats & Species Regulations 2017 Schedule 2 (EPS animals)
WCA Sch.5 full	Wildlife and Countryside Act (1981), Schedule 5 (fully protected)
NERC s41	Natural Environment and Rural Communities (Act 2006) Section 41

3.1.2 A search of the MAGIC database for granted EPS mitigation licenses for bats within a 2km radius found four licenced sites, summary details of which are listed in Table 3.2. There are 12 SSSI and one SAC within 10km of the survey area. Bat populations do not feature among the notified features of any of these sites.

Table 3.2: Summary of granted EPS mitigation licences within 2km of the site

Case ref.	Distance from site	Dates valid	Licenced actions
2017-31276-EPS-MIT	244m east	25/10/2017 -31/10/2027	Destruction of a breeding roost and resting place used by brown long-eared.
2014-3084-EPS-MIT	662m north-east	16/09/2014 -01/10/2016	Destruction of a resting place used by brown long-eared and common pipistrelle.
EPSM2012-4307	1km north-west	24/04/2012 -01/04/2014	Destruction of a breeding roost and resting place used by brown long-eared and common pipistrelle.
2014-965-EPS-MIT	1.9km north-east	20/03/2014 -30/09/2014	Destruction of a breeding roost and resting place used by barbastelle *Barbastella barbastellus* and common pipistrelle.

3.2 Ground Level Tree Assessment

3.2.1 The GLTA identified all trees that were potentially suitable for roosting bats within the survey area and classified them as Negligible, PRF-I or PRF-M.

3.2.2 In total, seven trees were classified as PRF-M, seven trees were classified as PRF-I. All other trees within the survey area was assessed as providing negligible suitability. A summary of the GLTA results is provided in Table 3.3 while the location of trees is shown within the tree survey plan at Appendix I.

Table 3.3: Summary of GLTA results

Tree #	Species	Tree height (m)	Diameter at breast height (mm)	PRFs	Suitability
T1	Pedunculate oak *Quercus robur*	17	790	Wound within canopy obscured by ivy	PRF-M
T4	Pedunculate oak	18	875	Split branches and dead limbs high in canopy with potential internal hollowing	PRF-M
T5	Pedunculate oak	18	900	Natural hole at 4m following wound	PRF-I
T14	Pedunculate oak	12	650	Damaged branches within the canopy at 5m, 6m and 8m	PRF-I
T22	Pedunculate oak	20	790	Ivy cover on trunk, with potential cavities in canopy	PRF-M
T23	Pedunculate oak	17	655	Ivy cover on trunk and large split at 7m	PRF-M
T24	Pedunculate oak	17	645	Ivy cover on trunk, with potential cavities in canopy	PRF-M
T28	Yew *Taxus baccata*	6	280	Ivy cover on trunk	PRF-I
T40	Hybrid black poplar *Populus x canadensis*	20	895	Ivy covered on trunk and broken branches within the canopy at 5m and 7m facing east	PRF-I
G57	Norway spruce *Picea abies*	20	560	Ivy cover on trunk	PRF-I
T64	Pedunculate oak	19	670	Ivy cover on trunk	PRF-I
T69	Pedunculate oak	16	715	Damaged branch within canopy	PRF-M
T72	Pedunculate oak	18	730	Ivy cover on trunk and broken branches within the canopy	PRF-M
T74	Hornbeam *Carpinus betulus*	7	350	Matted ivy on canopy branches, which fall within the survey area	PRF-I

3.3 Presence / Absence Survey

Survey 1: 2 June 2025 – Dusk (Sunset 21:07; survey start 20:52; survey end 22:37)

3.3.1 No bats were seen emerging from any of the buildings.

3.3.2 The surveyors positioned at B10 (S1 and S2) recorded only one bat during the survey. This comprised an unseen commuting soprano pipistrelle at 21:58.

3.3.3 The first bat recorded by the surveyors positioned at B5 and B9 was a commuting common pipistrelle at 20:52 (S4). Regular common pipistrelle activity was recorded by surveyors between 21:33 to 21:53. However, no patterns of activity were identified and few bats were seen. Common pipistrelle was by far the most abundantly recorded species, with only one faint pass by soprano pipistrelle at 21:52. No other species of bat was recorded.

4 Evaluation

4.1 Introduction

4.1.1 This section evaluates the survey area in terms of roosting bats present or potentially present within the survey area or its immediate vicinity, in the context of relevant legislation and planning policy. See Appendix V for a review of the legislation and planning context.

4.2 Designated sites

4.2.1 No designated sites notified for their bat populations will be affected by the proposals for the site.

4.3 Presence or Absence of Roosting Bats in Trees

4.3.1 Fourteen trees were identified as providing PRF-I to PRF-M Tree suitability for roosting bats.

4.3.2 Site evaluation

4.3.3 Given the relatively low number of trees identified with PRF-M features that could be suitable for a higher conservation status roost and the domination of activity recorded during the bat activity surveys by common and widespread species (UEEC, 2023), the survey area is provisionally assessed as of Local Importance for roosting bats within trees. This is a precautionary assessment due to the limited survey data for trees within the survey area.

Impact Assessment

4.3.4 Felling or arboricultural works to trees which exhibited PRFs for bats could result in destruction of a bat roost or present a risk of killing, injury or disturbance if bats are present during the works, which would constitute an offence under the WCA. However, the majority of these trees will be retained and protected, with only G57 due to be felled (see Appendix II).

4.3.5 There is also potential for bats roosting within trees to be displaced by increased lighting during the construction and operational phase. Recommendations including a sensitive lighting scheme and habitat creation to avoid and mitigate predicted impacts are set out within the Protected Species Report (PSR; UEEC, 2023).

4.4 Presence or Absence of Roosting Bats in Buildings

4.4.1 The survey results provide a good level of confidence that bats were absent from buildings B5, B9 and B10 during the 2025 season. Surveys were carried out at an appropriate time of year and weather conditions were within acceptable parameters.

Site evaluation

4.4.2 The results are therefore considered to provide an accurate account of the bat roost status of the buildings surveyed. The survey area is considered to be of Negligible Importance for bats roosting in buildings.

Impact Assessment

4.4.3 No bat roosts in were identified within any of the buildings within the survey area. Accordingly roosting bats in buildings are not considered to present a constraint the Proposed Development.

5 Recommendations and Conclusion

5.1 Introduction

5.1.1 Recommendations are made below for avoidance and mitigation of impacts to protected species, to prevent an offence under the relevant legislation from occurring, and to reduce the risk of development proposals resulting in significant effects on the population and distribution of species recorded during the surveys.

5.2 Avoidance and Mitigation Measures

5.2.1 The following species / groups (Table 5.1) require specific measures to be adhered to prior to and during construction to ensure that an offence under the relevant legislation is avoided.

Table 5.1: Recommended survey, mitigation and avoidance

#	Recommended mitigation, avoidance and enhancement measures
R1	Aerial inspections for roosting bats within trees T1, T4, T22, T23, T24, T69 and T72 if they are affected by the Proposed Development, undertaken between May and August. It is currently anticipated that only G57 will be lost to facilitate the Proposed Development.
R2	If works to fell or lop the low suitability trees at T5, T14, T28, T40, G57, T64 and T74 are required, they will be undertaken in accordance with a Non-Licenced Method Statement to reduce the risk of killing/injury to roosting bats. The Method Statement will specify reasonable avoidance measures including timing restrictions (works to be carried out during March-April or September-October to avoid critical maternity and hibernation periods), 'soft felling' techniques to enable bats to disperse, and will be carried out under the supervision of a suitably qualified ecologist. Additionally, appropriate compensation for the loss of trees assessed as having PRF-I suitability to support roosting bats will be provided to maintain the roost resource within the survey area.

Roosting bats

5.2.2 It is currently anticipated that only G57 will be lost to facilitate the Proposed Development, and therefore no further survey work is required. If at a later date the proposals change and the Proposed Development requires felling or arboricultural works to trees T1, T4, T5, T14, T22, T23, T24, T28, T40, G57, T64, T69, T72 or T74, these works could result in destruction of a bat roost or killing, injury or disturbance to roosting bats, and at this point more detailed inspection of these features would be required in line with current guidelines (Collins, J. (ed.), 2023) as follows:

- PRF-M trees: Three aerial inspections, with at least two in the period May to August.
- PRF-I trees: No further survey required but compensate for lost PRFs and fell under precautionary methods.

5.2.3 Aerial inspections aim to closely investigate potential bat roost features, using an endoscope to search for evidence of bats and investigate the depth, extent and quality of PRFs. Aerial inspections must be undertaken/supervised by surveyors licensed to use endoscopes, and are either completed by qualified tree climbers or from a cherry picker. In some cases, aerial inspection will show that a PRF does not extend into a cavity and therefore is not of roosting potential. In such cases the tree may be removed without further constraints. An initial aerial inspection can be undertaken at any time of year and in some cases can rule out the need for further survey. Where aerial access is not possible or features are too extensive to adequately inspect, aerial inspections should be substituted with emergence surveys.

5.3 Other Ecological Protection Measures

5.3.1 The protection measures recommended in sections 5.3 and 5.4 of the PEA (UEEC, 2025) and section 5.2 and 5.3 of the PSR (UEEC, 2023) continue to apply and should be carried out as part of the proposed scheme. In particular, R2 within the PSR which relates to external lighting.

5.4 Ecological Enhancement

5.4.1 The measures recommended in section 5.5 of the PEA (UEEC, 2025) and 5.4 of the PSR (UEEC, 2023) should be implemented to deliver ecological enhancements for a range of wildlife following construction.

5.5 Conclusions

5.5.1 In the absence of mitigation, the Proposed Development will result in negative impacts to roosting bats in trees. However, mitigation measures are recommended to prevent an offence under the relevant legislation from occurring, and to avoid / reduce the risk of development proposals resulting in significant effects on the populations of bat species.

References and Bibliography

British Standards Institution (BSI; 2013): *BS42020:2013 Biodiversity – Code of practice for planning and development*. BSI Standards Limited, London.

Chartered Institute of Ecology and Environmental Management (CIEEM, 2017): *Guidelines for Ecological Report Writing*. 2nd Edition, CIEEM, Winchester.

CIEEM (2018): *Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine version 1.3*. Chartered Institute of Ecology and Environmental Management, Winchester.

CIEEM (2019): *Advice Note on the Lifespan of Ecological Reports & Surveys*. Available online at: https://cieem.net/resource/advice-note-on-the-lifespan-of-ecological-reports-and-surveys/.

Collins, J. (ed.) (2023): *Bat Surveys for Professional Ecologists: Good Practice Guidelines (4th Edition)*, Bat Conservation Trust, London.

Hill, D., Fasham, M., Tucker, G., Shrewry, M. and Shaw, P(eds) (2005): *Handbook of Biodiversity Methods: Survey, Evaluation and Monitoring* (4th edition). Cambridge University Press, Cambridge.

Reason, P.F. and Wray, S. (2023). *UK Bat Mitigation Guidelines: a guide to impact assessment, mitigation and compensation for developments affecting bats*. CIEEM, Ampfield.

Urban Edge Environmental Consulting Ltd (UEEC; 2025): *Land at Burleigh Lane, Crawley Down, West Sussex: Preliminary Ecological Appraisal*.

Urban Edge Environmental Consulting Ltd (UEEC; 2023): *Land at Burleigh Lane, Crawley Down, West Sussex: Protected Species Report*.

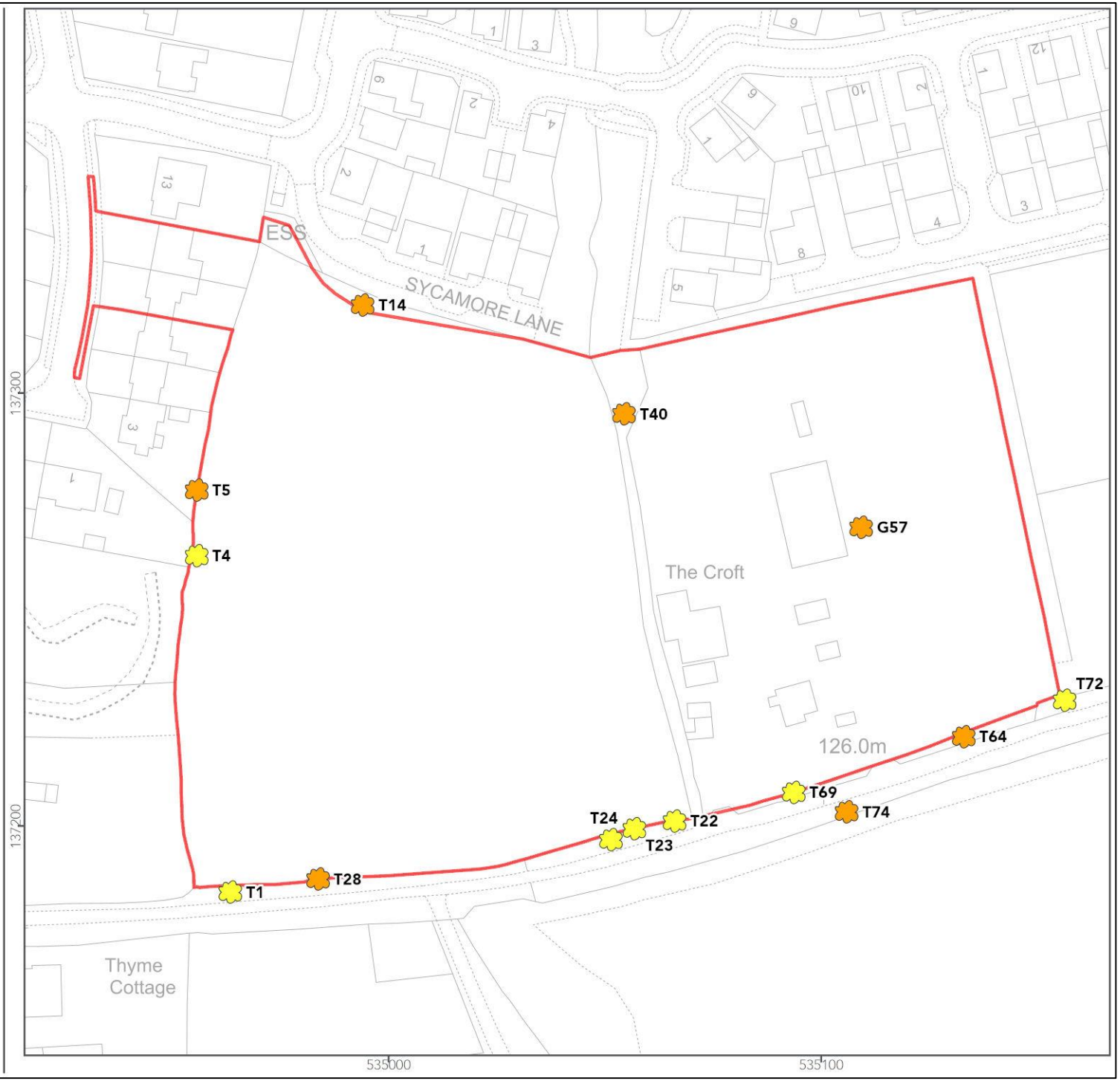
Appendix I: GLTA Plan

Burleigh Lane, Crawley Down, West Sussex

Survey area

PRF-I

PRF-M



0 30 60

Metres

N

Scale (at A4): 1:1,300 **Created by:** EM

Date: Jun 2025 **Reviewed by:** NP

Drawing number:

UE0604ECO-BurleighLane:HabitatsPostDev_250618

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Appendix II: Tree Protection Plan

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email: mail@acdenv.co.uk
www.acdenvironmental.co.uk

scheme: Land at Burleigh Lane, Crawley Down
client: Merrow Wood
drawing: Tree Protection Plan
date: 27/05/2025
scale: 1:250@A0
dwg no: PRI24810-03
drawn: WTW checked: HEP

Appendix III: Bat Presence/Absence Surveyor Positions

Burleigh Lane, Crawley Down, West Sussex

Survey area

Developed land, sealed surface;

Surveyor

0 30 60

Metres

N

Scale (at A4): 1:1,300 **Created by:** EM

Date: Jun 2025 **Reviewed by:** NP

Drawing number:

UE0604ECO-BurleighLane:PresenceAbsence_250618

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Appendix IV: Infrared Camera Field of View

View from Canon XA60 infrared camera on 2 June 2025, illuminated by infrared flood and spot lighting that replaced a surveyor at position S1.

View from Canon XA60 infrared camera on 2 June 2025, illuminated by infrared flood and spot lighting that replaced a surveyor at position S2.

View from Canon XA60 infrared camera on 2 June 2025, illuminated by infrared flood and spot lighting that replaced a surveyor at position S3.

View from Canon XA60 infrared camera on 2 June 2025, illuminated by infrared flood and spot lighting that replaced a surveyor at position S4.

View from Canon XA11 infrared camera on 2 June 2025, illuminated by infrared flood and spot lighting that replaced a surveyor at position S5.

View from Canon XA11 infrared camera on 2 June 2025, illuminated by infrared flood and spot lighting that replaced a surveyor at position S6.

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Appendix V: Legislation and Planning Context

Legislation

General

The main legislative instruments for ecological protection in England and Wales are: the Wildlife and Countryside Act 1981 (WCA; as amended); Countryside and Rights of Way Act 2000 (CRoW; as amended); Natural Environment and Rural Communities Act 2006 (NERC; as amended); the Conservation of Habitats and Species Regulations 2017 (the Habitats Regulations; as amended); and the Environment Act 2021.

WCA 1981 consolidated and amended pre-existing national wildlife legislation in order to implement the Bern Convention and the European Union Wild Birds Directive (Council Directive 2009/147/EC). It complements the Habitats Regulations, offering protection to a wider range of species than the latter. The Act also provided for the designation and protection of nationally important conservation sites of value for their floral, faunal or geological features, termed Sites of Special Scientific Interest (SSSI). Schedules of the act list protected species of flora and fauna, as well as invasive species, and detail the possible offences that apply to these species.

The CROW Act 2000 amended and strengthened existing wildlife legislation detailed in the WCA. It placed a duty on government departments & the National Assembly for Wales to have regard for biodiversity, provided increased powers for the protection and maintenance of SSSI, and created a right of access to parts of the countryside. The Act contained lists of habitats and species (Section 74) for which conservation measures should be promoted, in accordance with the recommendations of the Convention on Biological Diversity (Rio Earth Summit) 1992.

The NERC Act 2006 consolidated and replaced aspects of earlier legislation. Section 40 of the Act places a duty upon all local authorities and public bodies in England and Wales to have regard to the purpose of conserving biodiversity in exercising all of their functions, including by restoring or enhancing habitats and species populations. Sections 41 (England) and 42 (Wales) list habitats and species of principal importance to the conservation of biodiversity (otherwise known as priority habitats/species as listed in the now superseded UK Biodiversity Action Plan). These lists supersede Section 74 of the CRoW Act 2000. These species and habitats are a material consideration in the planning process.

The Habitats Regulations 2017 are the principal means by the European Union Habitats Directive (Council Directive 92/43/EEC) was transposed into English and Welsh law, and place a duty upon the relevant authority of government to identify sites which are of importance to the habitats and species listed in Annexes I and II of the Habitats Directive. Those sites which meet the criteria in Europe are designated as Sites of Community Importance by the European Commission, and subsequently identified as Special Areas of Conservation (SAC) by the European Union member states. Since the UK's departure from the European Union the European Commission no longer has a role in designating SACs in the UK. The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 establish a single stage designation process, where the appropriate authority is the decision maker. The selection and designation of SACs is based on the criteria set out in Annex III of the Habitats Directive insofar as it applies to the UK, and having regard to the advice of the appropriate nature conservation body.

The 2019 Amendment Regulations have created a new national site network on land and at sea, including both the inshore and offshore marine areas in the UK. The national site network includes existing SACs, existing Special

Protection Areas (SPA) originally designated as a result of Council Directive 2009/147/EC on the Conservation of Wild Birds, and any new SACs and SPAs designated under the 2019 Regulations. SACs and SPAs in the UK therefore no longer form part of the EU's Natura 2000 ecological network.

The Habitats Regulations also provide for the protection of individual species of fauna and flora of European conservation concern listed in Schedules 2 and 5 respectively (European Protected Species (EPS)). Schedule 2 includes species such as otter and GCN for which the UK population represents a significant proportion of the total European population. It is an offence to deliberately kill, injure, disturb or trade in these species. Schedule 5 plant species are protected from unlawful destruction, uprooting or trade under the regulations. Under the Habitats Regulations disturbance includes any activity which is likely to: impair the ability of a EPS to survive, breed, reproduce, or rear/nurture its young; impair the ability of a EPS to migrate or hibernate; or significantly affect the local distribution or abundance of the species.

The Environment Act 2021, among other things: established an Office for Environmental Protection; introduced a mandatory requirement for all new development requiring planning permission to achieve a net gain for biodiversity of at least 10% (although implementation of this is transitionary); amended the NERC Act duty to conserve biodiversity by explicitly adding a duty to enhance; and requires local authorities to produce local nature recovery strategies.

Bats (Chiroptera)

Bats and their roosts are fully protected by protected by the WCA and the Habitats Regulations, and seven species of bats are species of principal importance. The legislation makes it an offence, *inter alia*, to:

- Intentionally kill, injure or take a bat.
- Possess or control a live or dead bat, any part of a bat, or anything derived from a bat.
- Intentionally or recklessly damage, destroy or obstruct access to any structure or place that a bat uses for shelter or protection. This is taken to mean all bat roosts whether bats are present or not.
- Intentionally or recklessly disturb a bat while it is occupying a structure or place that it uses for shelter or protection.
- Make a false statement in order to obtain a licence for bat work.

Under the Habitats Regulations disturbance includes any activity which is likely to:

- Impair the ability of a bat to survive, breed, reproduce, or rear/nurture its young.
- Impair the ability of a bat to migrate or hibernate.
- Significantly affect the local distribution or abundance of the species.

Planning context

National Planning Policy Framework (Section 15: Conserving and enhancing the natural environment)

The National Planning Policy Framework (NPPF), published in December 2024, outlines the Government's commitment to the conservation of wildlife and natural features. It is concerned with:

- Protecting and enhancing valued landscapes, sites of biodiversity or geological conservation value and soils (in a manner commensurate with their statutory status or identified quality in the development plan);

- Recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland;
- Maintaining the character of the undeveloped coast, while improving public access to it where appropriate;
- Minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current & future pressures and incorporating features which support priority or threatened species such as swifts, bats and hedgehogs;
- Preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans; and
- Remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate.

The NPPF requires that local plans should "distinguish between the hierarchy of international, national and locally designated sites; allocate land with the least environmental or amenity value…; take a strategic approach to maintaining and enhancing networks of habitats and green infrastructure; and plan for the enhancement of natural capital at a catchment or landscape scape across local authority boundaries".

To protect and enhance biodiversity and geodiversity, the NPPF states that planning policies should:

- Identify, map and safeguard components of local wildlife-rich habitats and wider ecological networks, including the hierarchy of international, national and locally designated sites of importance for biodiversity, wildlife corridors and stepping stones that connect them; and areas identified by national and local partnerships for habitat management, enhancement, restoration or creation; and
- Promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity.

When determining planning applications, local planning authorities should aim to protect and enhance biodiversity by applying the following principles:

- if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;
- development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest;
- development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists; and

- development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to improve biodiversity in and around developments should be integrated as part of their design, especially where this can secure measurable net gains for biodiversity or enhance public access to nature where this is appropriate.

The following wildlife sites should be given the same protection as habitats sites:

- potential Special Protection Areas and possible Special Areas of Conservation;
- listed or proposed Ramsar sites; and
- sites identified, or required, as compensatory measures for adverse effects on habitats sites, potential Special Protection Areas, possible Special Areas of Conservation, and listed or proposed Ramsar sites.

The presumption in favour of sustainable development does not apply where the plan or project is likely to have a significant effect on a habitats site (either alone or in combination with other plans or projects) unless an appropriate assessment has concluded that the plan or project will not adversely affect the integrity of the habitats site. The policies within the NPPF (and additional guidance contained within Circular 06/2005) are a material planning consideration.

UK/Local Biodiversity Action Plan Designations and Birds of Conservation Concern and Red Data Book Listings

Note that BAP designations and status as RSPB Birds of Conservation Concern or Red Data Book species does not offer any further legal protection, but planning authorities are required to prevent these species from being adversely affected by development in accordance with National Planning Policy and the CROW and NERC Acts. The United Kingdom Biodiversity Action Plan (UKBAP), first published in 1994 and updated in 2007, was a government initiative designed to implement the requirements of the Convention of Biological Diversity to conserve and enhance species and habitats. The UKBAP contained a list of priority habitats and species of conservation concern in the UK, and outlined biodiversity initiatives designed to enhance their conservation status.

However, as a result of devolution, and new country-level and international drivers and requirements, much of the work previously carried out by the UK BAP is now focussed at a country-level rather than a UK-level, and the UK BAP was succeeded by the 'UK Post-2010 Biodiversity Framework' in July 2012. The UK lists of priority habitats and species nonetheless remain an important reference source and were used to draw up statutory lists of priority habitats and species in England, Northern Ireland, Scotland and Wales. The priority habitats and species correlate with those listed on Section 41 and 42 of the NERC Act.

The UKBAP required that conservation of biodiversity be addressed at a County level through the production of Local BAPs. These are targeted towards species of conservation concern characteristic of each area. In addition, a number of local authorities and large organisations have produced their own BAPs. Where they exist, Local BAP targets with regard to species and habitats are a material consideration in the planning process.

Local Planning Policy

The Mid Sussex District Plan 2014-2031 (Mid Sussex District Council, March 2018) contains the following policy relating to wildlife and biodiversity:

DP38 – Biodiversity

"Biodiversity will be protected and enhanced by ensuring development:

- *Contributes and takes opportunities to improve, enhance, manage and restore biodiversity and green infrastructure, so that there is a net gain in biodiversity, including through creating new designated sites and locally relevant habitats, and incorporating biodiversity features within developments; and*
- *Protects existing biodiversity, so that there is no net loss of biodiversity. Appropriate measures should be taken to avoid and reduce disturbance to sensitive habitats and species. Unavoidable damage to biodiversity must be offset through ecological enhancements and mitigation measures (or compensation measures in exceptional circumstances); and*
- *Minimises habitat and species fragmentation and maximises opportunities to enhance and restore ecological corridors to connect natural habitats and increase coherence and resilience; and*
- *Promotes the restoration, management and expansion of priority habitats in the District; and*
- *Avoids damage to, protects and enhances the special characteristics of internationally designated Special Protection Areas, Special Areas of Conservation; nationally designated Sites of Special Scientific Interest, Areas of Outstanding Natural Beauty; and locally designated Sites of Nature Conservation Importance, Local Nature Reserves and Ancient Woodland or to other areas identified as being of nature conservation or geological interest, including wildlife corridors, aged or veteran trees, Biodiversity Opportunity Areas, and Nature Improvement Areas"*

Appendix VI: Legal and Technical Limitations

- This report has been prepared by Urban Edge Environmental Consulting Ltd (UEEC Ltd) with all reasonable skill, care and diligence within the terms of the contract made with the Client to undertake this work, and taking into account the information made available by the Client. No other warranty, expressed or implied, is made as to the professional advice included in this report or any other services provided by us.
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- The advice provided in this report does not constitute legal advice. As such, the services of lawyers may also be considered to be warranted.
- Unless otherwise stated in this report, the assessments made assume that the sites and facilities that have been considered in this report will continue to be used for their current planned purpose without significant change.
- All work carried out in preparing this report has utilised and is based upon UEEC Ltd's current professional knowledge and understanding of current relevant UK standards and codes, technology and legislation. Changes in this legislation and guidance may occur at any time in the future and may cause any conclusions to become inappropriate or incorrect. UEEC Ltd does not accept responsibility for advising the Client or other interested parties of the facts or implications of any such changes;
- Where this report presents or relies upon the findings of ecological field surveys (including habitat, botanical or protected/notable species surveys), its conclusions should not be relied upon for longer than a maximum period of two years from the date of the original field surveys. Ecological change (e.g. colonisation of a site by a protected species) can occur rapidly and this limitation is not intended to imply that a likely absence of, for instance, a protected species will persist for any period of time;
- This report has been prepared using factual information contained in maps and documents prepared by others. No responsibility can be accepted by UEEC Ltd for the accuracy of such information;
- Every effort has been made to accurately represent the location of mapped features, however, the precise locations of features should not be relied upon;
- Populations of animals and plants are often transient in nature and a single survey visit can only provide a general indication of species present on site. Time of year when the survey was carried out, weather conditions and other variables will influence the results of an ecological survey (e.g. it is possible that some flowering plant species which flower at other times of the year were not observed). Every effort has been made to accurately note indicators of presence of protected, rare and notable species within and adjacent to the site but the possibility nonetheless exists for other species to be present which were not recorded or otherwise indicated by the survey;
- Any works undertaken as a consequence of the recommendations provided within this report should be subjected to the necessary health & safety checks and full risk assessments.

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