Eastern Green Link 4:

Scottish Onshore Scheme

Volume 4: Appendices

Appendix 7.2: Bats

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Prepared for:

SP Energy Networks
320 St Vincent St
Glasgow, G2 5AD

Prepared by:

AECOM Limited
1 Tanfield
Edinburgh EH3 5DA
United Kingdom

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Appendix 7.2 – Bats

1. Introduction

1.1 Background

This appendix accompanies **Chapter 7: Ecology and Nature Conservation** (**Volume 2 Main Report**) of the Environmental Impact Assessment Report (EIAR). It describes in detail the desk study and field survey carried out to establish the baseline conditions within the zone of influence (ZoI) of the Scottish Onshore Scheme with respect of bats.

Throughout this appendix, species are given their common and scientific names when first referred to and their common names only thereafter. All distances are cited as the shorted distance 'as the crow flies', unless otherwise specified. The area encompassed by the red line boundary shown on the accompanying figures is referred to throughout as the 'Site'.

This appendix is supported by **Figure 7.6 Ground Level Tree Assessment (GLTA) Results (Chapter 7 Ecology and Nature Conservation, Volume 2 Main Report)**.

1.2 Quality Assurance

This appendix, and the desk study and field survey described within it, has been completed in accordance with the AECOM Integrated Management System (IMS). AECOM's IMS places emphasis on professionalism, technical excellence, quality, as well as covering health, safety, environment and sustainability management. All AECOM staff members are committed to maintaining this accreditation to those parts of BS EN ISO 9001:2015 and 14001:2015, as well as BS OHSAS 18001:2007 that are relevant to a consultancy service.

The field survey for bats was carried out by experienced AECOM ecologists. All are members of the Chartered Institute of Ecology and Environmental Management (CIEEM) at the appropriate grade and adhered to their strict Code of Professional Conduct.

1.3 Legislation and Policy

Relevant Legislation

All species of bats found in Scotland are protected under the Conservation (Natural Habitats, &c.) Regulations 1994 (as amended) (more commonly known as the 'Habitats Regulations'). Under the Habitats Regulations it is an offence to intentionally or recklessly:

- capture, injure or kill a bat;
- harass a bat or group of bats;
- disturb a bat in a roost;
- disturb a bat while it is rearing or otherwise caring for its young;
- obstruct access to a bat roost or otherwise deny a bat use of a roost;

- disturb a bat in a manner or in circumstances likely to significantly affect the local distribution or abundance of the species;
- disturb a bat in a manner or in circumstances likely to impair its ability to survive, breed or reproduce, or rear or otherwise care for its young; and/or
- disturb a bat while it is migrating or hibernating.

It is also an offence to damage or destroy a breeding site or resting place (i.e., a roost) of a bat, whether or not this was done deliberately or recklessly.

A licence must be obtained from NatureScot for any action that could otherwise constitute an offence under the Habitats Regulations. A licence can only be issued for development activities subject to three strict qualifiers being met:

a. the development must be required for preserving public health or public safety or for some other imperative reasons of overriding public interest, including those of a social or economic nature, and beneficial consequences of primary importance to the environment;

b. there must be no satisfactory alternative; and

c. the proposed action must not be detrimental to the maintenance of the species at favourable conservation status.

Satisfactory survey information and a Species Protection Plan (SPP) incorporating proportionate mitigation and/or compensation are also required to support a licence application.

Under the Nature Conservation (Scotland) Act 2004, public bodies in Scotland have a duty to further the conservation of biodiversity. The Scottish Biodiversity List (SBL) is a list of habitats, plants and animals that Scottish Ministers consider to be of principal importance for biodiversity conservation in Scotland. The purpose of the SBL is to identify habitats and species that are of highest priority for biodiversity conservation, thereby helping public bodies to carry out their biodiversity duty.

The following bat species are identified through their listing on the SBL as being of principal importance for biodiversity conservation in Scotland:

- Brandt's bat *Myotis brandtii*;
- brown long-eared bat *Plecotus auritus*.
- common pipistrelle *Pipistrellus pipistrellus*;
- Daubenton's bat *Myotis daubentonii*;
- Nathusius' pipistrelle *Pipistrellus nathusii*;
- Natterer's bat *Myotis nattereri*;
- noctule bat *Nyctalus noctula*;
- soprano pipistrelle *Pipistrellus pygmaeus*; and,
- whiskered bat *Myotis mystacinus*.

Relevant Planning Policy

National Planning Policy

National Planning Framework 4 (NPF4) was formally adopted by Scottish Ministers on 13 February 2023. NPF4 includes the following statements of policy intent: "*To protect, restore and enhance natural assets making best use of nature-based solutions*" and "*To protect biodiversity, reverse biodiversity loss, deliver positive effects from development and strengthen nature networks*". Wherever possible and proportionate to the scale and nature of the project, the Scottish Onshore Scheme should therefore seek to deliver benefits for biodiversity, in addition to protecting existing biodiversity. NPF4 also states that major development will only be supported where nature networks "*are in a demonstrably better state than without intervention*" using best practice and including future monitoring and management where appropriate.

Local Planning Policy

Relevant local planning policies are stated in the Fife Local Development Plan (LDP), Adopted in September 2017.

Guidance

The Fife Local Biodiversity Action Plan (LBAP) (2013-2018) includes several priority habitats and a list of priority species for local conservation. Those include bats, listed as priority lowland and farmland species; specifically brown long-eared, common pipistrelle, Daubenton's, Nathusius' pipistrelle, Natterer's, and soprano pipistrelle. Though not legislative, Fife LBAP sets out Fife Councils' strategy for improving biodiversity within the local authority area, which contributes to the overall Scottish Biodiversity Strategy. The proposed Natural Environment Bill may in future introduce statutory nature recovery targets, to which LBAPs could contribute.

2. Methods

2.1 Desk Study

A desk study was carried out to identify nature conservation designations for which bats are qualifying or notified species, and to search for existing records of bats in proximity to the Scottish Onshore Scheme. The desk study sought to identify:

- Statutory designated sites for nature conservation for which bats are qualifying / notified features, including Special Areas of Conservation (SACs) within 10 km and Sites of Special Scientific Interest (SSSIs) within 2 km of the Scottish Onshore Scheme;
- Local non-statutory nature conservation sites within 1 km of the Scottish Onshore Scheme for which bats are an identified reason for designation or, where no designation information is available, for which bats are likely to be part of the reason for site selection; and

- records of bats within 1 km of the of the Scoping Boundary[1], made in the last 20 years.

The NatureScot SiteLink website (NatureScot, 2025) was used to identify nature conservation designations. Commercially available records of bats were obtained from the NBN Atlas Scotland (NBN, 2025) and from Fife Nature Records Centre. The Joint Nature Conservation Committee (JNCC) UK conservation assessments of bat species were reviewed for information about species ranges in Scotland (JNCC, 2019).

2.2 Field Survey

Field survey was conducted to assess the suitability of habitats within the Site for roosting, commuting, and foraging bats and to search for specific bat roosting locations within the Site (as it was understood at the time of survey). A description of the field survey methods employed is provided below.

Bat Habitat Suitability Assessment

In accordance with industry-standard guidelines published by the Bat Conservation Trust (BCT) (Collins, 2023), a Daytime Bat Walkover (DBW) was carried out between 16 September and 23 October 2024 to assess the suitability of habitats for roosting, commuting and foraging bats. Suitability was categorised according to the descriptions given in Table 1 below.

Table 1: Bat habitat suitability categories (from Collins (2023))

Suitability	Description of roosting habitats (in structures)	Description of commuting and foraging habitat
None	No habitats 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).	No habitat features on Site likely to be used by any commuting or foraging bats at any time of year (i.e., no habitats that provide continuous lines of shade/protection for flight lines or generate/shelter insect populations available to foraging bats).
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.	No obvious habitat features on Site likely to be used for commuting or by foraging bats. However, a small element of uncertainty remains in or der to account for non-standard bat behaviour.
Low	A structure with one or more potential roost sites that could be used by individual bats opportunistically at any time of year. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats (i.e., unlikely to be suitable for maternity and not a classic cool/stable hibernation site but	Habitat that could be used by small number of bats for commuting such as a gappy hedgerow or unvegetated stream, but isolated (i.e., not very well connected to the surrounding landscape by other habitat). Suitable but isolated habitat that could be used by small numbers of foraging bats such as a lone tree (not in a parkland situation) or a patch of scrub.

[1] A record search was carried out to inform the scoping report (AECOM, 2024) before the Site boundary was defined.

Suitability	Description of roosting habitats (in structures)	Description of commuting and foraging habitat
	could be used by individual hibernating bats).	
Moderate	A structure with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions, and surrounding habitat but unlikely to support a roost of high conservation status (with respect to roost type only, such as maternity and hibernation – the categorisation described in this table is made irrespective of species conservation status, which is established after presence is confirmed).	Continuous habitat connected to the wider landscape that could be used by bats for commuting, such as lines of trees and scrub or linked back gardens. Habitat that is connected to the wider landscape that could be used by bats for foraging such as trees, scrub, grassland or water.
High	A structure with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions, and surrounding habitat. These structures have the potential to support high conservation status roosts (e.g., maternity or classic cool/stable hibernation site).	Continuous, high-quality habitat that is well connected to the wider landscape that is likely to be used regularly by bats for commuting such as river valleys, streams, hedgerows, lines of trees and woodland edge. High quality habitat that is well connected to the wider landscape that is likely to be used regularly by foraging bats such as broadleaved woodland, tree-lined watercourses and grazed grassland. Site is close to and connected to known roosts.

Ground Level Tree Assessment Survey

Further to the DBW, a Ground Level Tree Assessment (GLTA) was also carried between 16 September and 23 October 2024, concurrently with the DBW, within the Site (as it was understood at the time of survey) where access was possible and safe. Trees were categorised as NONE (no PRF), PRF (contain potential roost feature) and FAR (further assessment required). PRFs searched for included suitable holes, cracks or splits in trees. Where such features existed, searches were made as far as possible for evidence of bat use such as droppings, staining, foraging remains, auditory evidence and the presence of live or dead bats.

All identified PRFs were then further categorised based on ground-level assessment only, without the use of specialist equipment such as mirrors, torches, or endoscopes. Consequently, the suitability classification assigned at this stage are considered indicative rather than definitive, as internal inspection was not carried out. As a result, some PRFs may have been assigned a higher or lower suitability category than would be determined through a more detailed inspection.

Trees were categorised according to the descriptions provided in Table 2 below.

Table 2: Categories of potential suitability of PRFs in trees (Collins, 2023)[4]

Suitability	Description of roosting habitats
PRF-I	Tree has a PRF which is only suitable for individual or very small numbers of bats; either due to their size or lack of suitable surrounding habitat.
PRF-M	Tree has a PRF which is suitable for multiple bats and may be used by a maternity colony.

Emergence Surveys

Dusk emergence surveys were required only for PRF-M trees that are at risk of being felled during construction of the Scottish Onshore Scheme. There are two trees that could be impacted, only one of which has been categorised as a PRF-M. This tree is a mature oak with two potential roost features facing east and west (see Section 3.2: Field Survey). The remaining tree that will be impacted was categorised as PRF-I.

Dusk emergence surveys were carried out on 09 and 30 July 2025 and by two suitably qualified AECOM ecologists on the single tree categorised as PRF-M (T27). This tree was incidentally recorded during NVC survey on 19 May 2025. Industry-standard recommendations, as described by the BCT (Collins, 2023), are to complete three emergence surveys; however, owing to time constraints relating to late recording and submission deadlines, only two surveys were carried out (see Section 2.3: Limitations).

Dusk emergence surveys started 15 minutes before sunset and ended 1.5 hours after sunset. Surveys were undertaken in suitable weather conditions, i.e., no rain or strong wind and with temperatures above 10°C at sunset. Metadata for the surveys is provided in Table 3 below.

Table 3: Emergence Surveys Metadata for T27

Survey Date	Sunset Time	Survey Start Time	Survey End Time	Weather Conditions
09 July 2025	21:59	21:41	23:30	Calm with no precipitation and no cloud cover. A light breeze present, following a hot and dry day. Temperatures around 17°C throughout the survey.
31 July 2025	21:29	21:14	22:59	Calm with no precipitation but with partial cloud cover. A light breeze present, following a hot and dry day. Temperatures around 17°C throughout the survey

During the emergence surveys, the potential roost features were watched carefully by the surveyors and, if bats emerged / re-entered the feature(s), the surveyors noted the location, species (using bat detection equipment, see below) and the number of bats. General bat activity was also noted during the surveys to provide context about the use of the Site by bats.

The surveyors used Elekon Batlogger M2 ('Batlogger') detectors to detect, identify and record bat calls. The detectors were set to record continuously throughout the survey, in real-time (recording calls and gaps, allowing 'rhythms' to be recognised) and in full spectrum (all frequencies), which allows the most comprehensive and detailed analysis (see below).

Following BCT guidance (Collins, 2023), the bat detector surveys were supplemented by the use of two Canon infra-red (IR) cameras which were paired with each surveyor. The IR cameras recorded continuously throughout the survey, supported by use of an infra-red torch and / or floodlights. This allowed enhanced infra-red visibility which would allow any bats exiting or returning to PRF, even in complete darkness, to be viewed in the footage recorded. Cameras were focussed on individual PRF or more widely across the feature being surveyed, as appropriate. After surveys were completed, the infra-red footage was reviewed in full by an experienced ecologist to look for footage of bats emerging PRF. An indicative camera setup is presented in Plate 1 and a snapshot of the darkest point of each survey taken is provided in Table 4.

Plate 1. Indicative IR camera setups (not from within the Site).

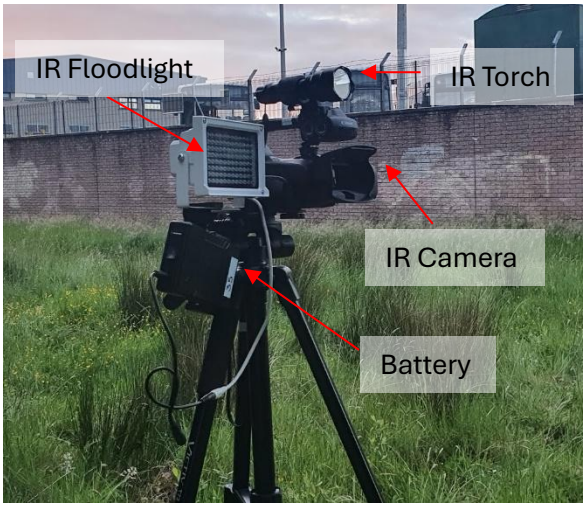
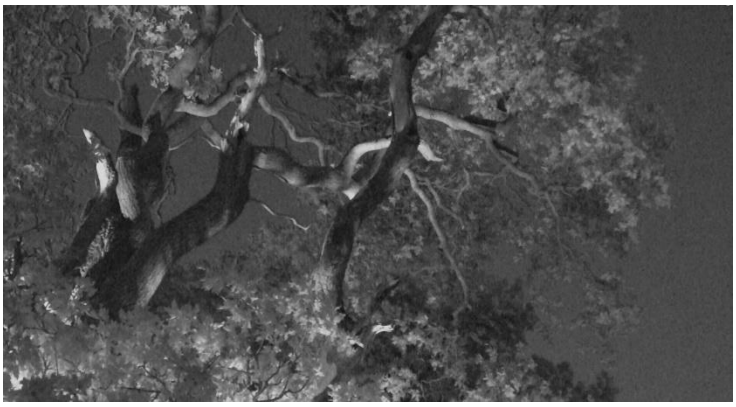
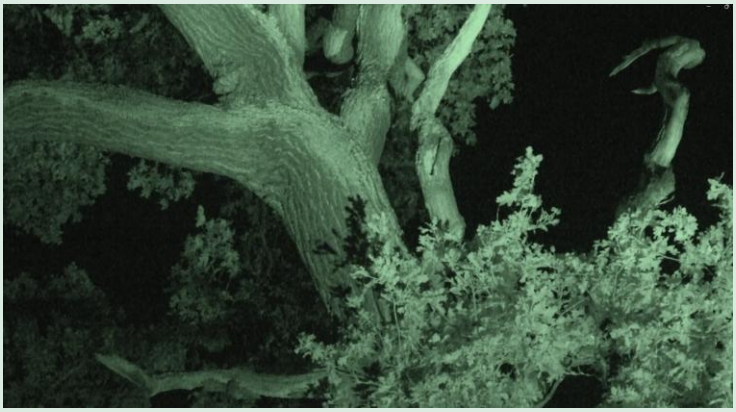
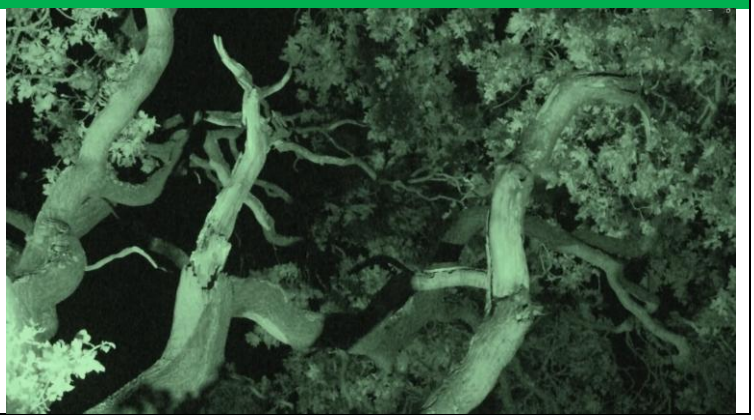


Table 4. Photograph of darkest point captured on the IR camera during each emergence bat survey

Tree reference	Survey date	Photograph of the darkest point
T27 east	09 July 2025	
T27 west	09 July 2025	
T27 east	30 July 2025	
T27 west	30 July 2025	

Tree reference	Survey date	Photograph of the darkest point
		

Sonogram Analysis

Analysis of all recordings made during the emergence survey was carried out using Kaleidoscope Pro software (Version 5.6.8) by a suitably experienced ecologist, with reference to guidance materials. This analysis was then audited by an expert bat ecologist to verify identifications.

Analysis of bat call recordings provides information on the species present at each location, as well as the numbers and timing of bat passes. A bat pass is defined as a single automated detector file made up of bat pulses of a single species; this can be one bat in a file or many bats in a file. The number of passes recorded on automated detectors gives an indication of the level of bat activity at a given location and can be reliably correlated to bat abundance when considered alongside surveyor observation.

2.3 Limitations

The aim of the desk study was to help characterise the baseline context of the Scottish Onshore Scheme and provide valuable background information that may not be captured by field survey alone. Information obtained during a desk study is dependent upon people and organisations having made and submitted records for the area of interest. As such, a lack of records for particular species does not necessarily mean that they do not occur in the study area. Likewise, the presence of records for particular species does not automatically mean that these still occur within the area of interest or are relevant to the Scottish Onshore Scheme.

Knockbathy Wood, located approximately at OSGR NT 22251 92151, was not surveyed completely, due to very steep slopes that do not allow safe access to carry out GLTA. However, this area will be subject to Trenchless Horizontal Directional Drilling (HDD), which is not considered impactful for bats.

Survey areas were based on the boundary of the Scottish Onshore Scheme as it stood at the time of survey. Owing to design changes and lack of land access, some sections of the Site and surrounding habitats have not been surveyed. Areas not accessed and discrepancies between the survey area and the Site are shown in the figures supporting this Technical Appendix. Habitats not surveyed for mammals appear from aerial imagery to largely comprise

agricultural fields with occasional field drains of limited value to protected/important mammals, except where the Site crosses a block of woodland of greater ecological value towards the southern end. This limitation is considered when carrying out the ecological impact assessment.

All identified PRFs were categorised based on ground-level assessment only, without the use of specialist equipment such as mirrors, torches, or endoscopes. Consequently, the suitability classification assigned at this stage is considered indicative rather than definitive, as internal inspection was not carried out (See Section 3.2: Ground Level Tree Assessment Survey). As a result, some PRFs may have been assigned a higher or lower suitability category than would be determined through a more detailed inspection. This is not considered a significant limitation at this stage, as trees with potential to be affected were subject to a more detailed inspection (see Section 2.2: Emergence surveys).

Additionally, as per BCT (2023) guidelines, undertaking three surveys are recommended for trees classified as having PRF-M; however, only two surveys were carried out due to the tree being recorded incidentally at a later stage in the process, coupled with time constraints associated with the late identification and submission deadlines. However, this does not pose a significant constraint as even with three surveys, it can be difficult to have full confidence in a negative result indicating that bats do not use the tree as a roost, as many tree-roosting bat species are known to exhibit roost-switching behaviour—roosting in one tree on one night and in another the next.

During the second dusk emergence survey, there was a delay in the commencement of video recording due to limited battery availability on both cameras. As a result, the IR camera to the east began recording at 21:40 and the IR camera to the west at 21:50, corresponding to 26 and 36 minutes after the start of the survey, respectively. It is noted, however, that no bat activity was observed until 22:04. Throughout the entire observation period, conditions were favourable, with sufficient natural light, and surveyors maintained a focused visual assessment of all potential roost features. As no bats were recorded on the bat loggers prior to the cameras being activated and given the surveyors' continuous and unobstructed observation of the features, it is considered that no bat activity was missed; therefore, this is not regarded as a limitation to the survey results.

3. Results

3.1 Desk Study

Statutory Designated Sites

There are no SACs within 10 km of the Scottish Onshore Scheme (or further afield which are obviously connected to the Site), or SSSIs within 2 km, for which bats are qualifying or notified species.

Non-statutory Designated Sites

There are four non-statutory, locally designated local wildlife sites within 1 km of the Scottish Onshore Scheme. Although all may support bats, none are specifically designated for such species.

Species Records

The NBN Atlas Scotland data search did not return any records of bats within the distances/period specified above. However, Fife Nature Records Centre provided eight recent records of bats; one of noctule bat, five of soprano pipistrelle, and an additional two records of pipistrelle bats (of undetermined species). Location information of these records is available to 1 km^2 resolution so their relationship to the Site is unclear. The largest count of 196 soprano pipistrelles was recorded in the general vicinity of Lochore.

Although no records were identified during the desk study, the Site is also within the distribution range of the following bat species (JNCC, 2019):

- brown long-eared bat;
- common pipistrelle;
- Daubenton's bat;
- Nathusius' pipistrelle; and
- Natterer's bat.

3.2 Field Survey

Bat Habitat Suitability Assessment

Overall, habitats across the Site are of moderate suitability for foraging and roosting bats. The agricultural fields which dominate the landscape are of poor quality for foraging bats; however, better quality habitats including woodlands, scrub, and wetlands are scattered across the Site with some level of connectivity via linear features such as watercourses and hedgerows. Habitats are notably poorer south of the B9157 where there are large expanses of arable fields and few connecting linear features.

Ground Level Tree Assessment Survey

Within the Survey Area, GLTA identified 34 trees, of which 17 are classified as being 'PRF-M', 15 as 'PRF-I', and two as 'FAR' due to limited visibility by canopy and terrain restrictions. Details on the trees, their location and a photograph are provided in Table 5 below, in Annex A and are

also illustrated on **Figure 7.6 Ground Level Tree Assessment (GLTA) Results (Chapter 7 Ecology and Nature Conservation, Volume 2 Main Report)**.

As mentioned in Section 2.2, only two PRF trees (T27 and T28) are at risk of being felled during construction of the Scottish Onshore Scheme. Although the GLTA survey was only carried out from the ground without additional aids (see Section 2.3: Limitations), it is highly likely that only T27 is a PRF-M tree, whereas the remaining tree T28 is PRF-I due to its' features providing minimal protection, being cluttered or exposed to precipitation.

Additionally, there are two areas outside of the Site that were incidentally recorded to have mature trees that likely have PRF and will require comprehensive GLTA if any of the trees within those areas will be felled. Those are located at OS Grid Reference (OSGR) NT 2312 790883 and NT 2484 089820.

Table 5. Trees with the potential to support roosting bats identified during field surveys

Ref	Tree Description	PRF description	Suitability	Photo	Approximate distance from the Site, indicative cable route[2], and indicative infrastructure layout[3] and OSGR
T01	Mature beech *Fagus sylvatica*	Exposed heartwood at 3 m from the ground, facing north-east. Cavity could extend further inwards but limited visibility from ground level.	PRF-M		Immediately adjacent to Site. 25 m west of cable route. OSGR NT 2083 593737.
T02	Mature beech	Single crack in trunk at around 2 m from the ground, facing north-east. No clear cavity extension. Possibility for further features depending on tree health, but none observed from ground level.	PRF-I		Immediately adjacent to Site. 130 m west of cable route. 30 m south of haul road. OSGR NT 2074 093686.

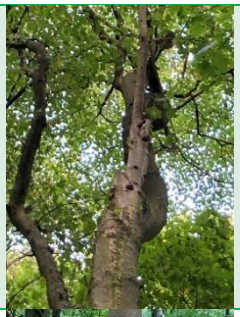
[2] The distance from the closest edge of the construction corridor associated with the indicative cable route.
[3] If the indicative cable route construction corridor is not closest.

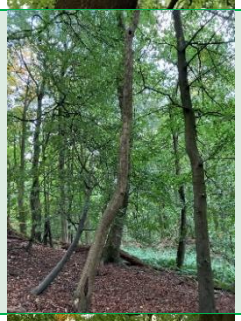
Ref	Tree Description	PRF description	Suitability	Photo	Approximate distance from the Site, indicative cable route[2], and indicative infrastructure layout[3] and OSGR
T03	Mature beech	Single crack in trunk at around 4 m from the ground with exposed heartwood, facing north-east. Cavity could extend inwards but limited visibility from ground level.	PRF-I		Immediately adjacent to Site. 145 m west of cable route. 30 m south of haul route. OSGR NT 2073 093682.
T04	Mature beech	Extensive limb damage at around 3.5 m from the ground with exposed heartwood, facing north-east. Cavity likely extends but limited visibility from ground level. Possibility for additional features depending on tree health but unclear from ground level.	PRF-M		Immediately adjacent to Site. 190 m west of cable route. 30 m south of haul route. OSGR NT 2069 293660.
T05	Semi-mature sycamore *Acer pseudoplatanus*	Single rot hole at around 4 m from the ground, facing north. Hole extends upwards but narrows considerably, making it unlikely to accommodate multiple bats.	PRF-I		Within Site. Within cable route (HDD[4]). OSGR NT 2232 992239.

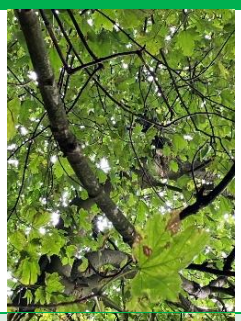
[4] Trenchless Horizontal Directional Drilling (HDD) will be used to install the cable in the nearest section to this feature.

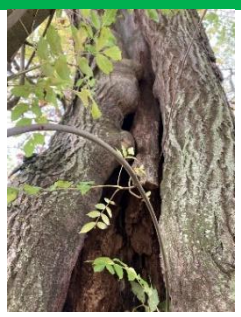
Ref	Tree Description	PRF description	Suitability	Photo	Approximate distance from the Site, indicative cable route[2], and indicative infrastructure layout[3] and OSGR
T06	Mature ash *Fraxinus excelsior*	Single rot hole on lower branch at around 5 m from the ground, facing north. Hole extends laterally with partially covered entrance.	PRF-I		Within Site. Within cable route (HDD). OSGR NT 2232 992220.
T07	Mature beech	Downward facing split in lower branch at around 4 m from the ground, facing north-west. No clear extension.	PRF-I		Within Site. Within cable route (HDD). OSGR NT 2235 692210.
T08	Mature ash	Single broken limb at around 8 m from the ground with heartwood exposed, facing south. Possible extension into remaining branch but limited visibility from the ground.	PRF-M		Within Site. Within cable route (HDD). OSGR NT 2232 892209.
T09	Mature beech	Butt rot at tree base at around 1.5 m from the ground, extending into hollow trunk at around 2.5 m, facing north.	PRF-M		Within Site. 10 m east of cable route (HDD). OSGR NT 2237 992206.

Ref	Tree Description	PRF description	Suitability	Photo	Approximate distance from the Site, indicative cable route[2], and indicative infrastructure layout[3] and OSGR
T10	Mature ash	Butt rot at tree base at around 0.5 m from the ground extending into hollow trunk, facing south.	PRF-M		Within Site. Within cable route (HDD). OSGR NT 2233 592205.
T11	Mature beech	Butt rot at tree base with sheltered section at around 1.5 m from the ground, facing north-east. Cavity extends upwards and narrows.	PRF-M		Within Site. Immediately adjacent to cable route (HDD). OSGR NT 2236 792204.
T12	Mature sycamore	Single rot hole in trunk at around 3 m from the ground, facing south. Cavity extends up towards trunk before narrowing.	PRF-I		Within Site. 10 m east of cable route (HDD). OSGR NT 2237 692202.
T13	Semi-mature sycamore	Butt rot at tree base at around 1.25 m from the ground with extension into trunk, facing west.	PRF-M		Within Site. Immediately adjacent to cable route (HDD). OSGR NT 2232 292196.

Ref	Tree Description	PRF description	Suitability	Photo	Approximate distance from the Site, indicative cable route[2], and indicative infrastructure layout[3] and OSGR
T14	Mature beech	Split of trunk from around 1.25 m from the ground to 7.5 m with exposed heartwood, facing east. The cavity at the top of split extends into trunk. Additional smaller split facing west.	PRF-M		Within Site. 25 m west of cable route (HDD). OSGR NT 2229 992194.
T15	Semi-mature sycamore	Single hole at around 10 m, facing north-east. The feature extends partially upwards but unlikely to accommodate multiple bats.	PRF-I		Within Site. 15 m east of cable route (HDD). OSGR NT 2239 392178.
T16	Semi-mature sycamore	Single hole at around 1 m from the ground, facing south-east. Elongated hole entrance with partial inward extension.	PRF-M		Within Site. 10 m east of cable route (HDD). OSGR NT 2239 392157.
T17	Semi-mature oak *Quercus robur*	Single rot hole at around 8 m from the ground, facing north-west and extending upwards.	PRF-M		Within Site. 15 m west of cable route (HDD). OSGR NT 2232 492152.

Ref	Tree Description	PRF description	Suitability	Photo	Approximate distance from the Site, indicative cable route[2], and indicative infrastructure layout[3] and OSGR
T18	Mature beech	Single hole on trunk at around 12 m from the ground. Hole has clear drop zone and precipitation cover.	PRF-M		Within Site. Within cable route (HDD). OSGR NT 2236 092149.
T19	Dead tree	Standing deadwood with pruning cut at around 4.5 m from the ground, facing east. Cavity extends into trunk.	PRF-I		Within Site. 25 m west of cable route (HDD). OSGR NT 2231 992143.
T20	Mature beech	Single hole on lower rotten branch at around 4 m from the ground, facing south-east. Feature is partially exposed to precipitation.	PRF-I		Within Site. Within cable route (HDD). OSGR NT 2236 692142.
T21	Mature oak	Possible feature within split branch but visibility limited by canopy and terrain restrictions.	FAR		Within Site. 15 m east of cable route (HDD). OSGR NT 2240 792138.

Ref	Tree Description	PRF description	Suitability	Photo	Approximate distance from the Site, indicative cable route[2], and indicative infrastructure layout[3] and OSGR
T22	Mature sycamore	Single hole in limb at around 9 m from the ground, facing west.	PRF-M		Within Site. 15 m east of cable route (HDD). OSGR NT 2241 692133.
T23	Semi-mature sycamore	Possible feature at around 8 m from the ground, facing south. Visibility limited by canopy and terrain restrictions.	FAR		Within Site. Within cable route (HDD). OSGR NT 2238 392119.
T24	Mature sycamore	Butt rot at tree base at around 1.25 m from the ground, extending into hollow trunk at around 2 m, facing south.	PRF-M		Within Site. Within cable route (HDD). OSGR NT 2236 892110.
T25	Mature ash	Single knot hole at around 6 m from the ground, facing east that extends upwards.	PRF-M		10 m north of Site. 125 m north of cable route. 20 m north of gravity pipe. OSGR NT 2388 290384.

Ref	Tree Description	PRF description	Suitability	Photo	Approximate distance from the Site, indicative cable route[2], and indicative infrastructure layout[3] and OSGR
T26	Mature ash	Large split in trunk at around 2 m from the ground. Additional two pruning cuts on upper branches at around 5.5 m and 6 m from the ground.	PRF-M		Immediately adjacent to Site. 115 m north of cable route. 10 m north of gravity pipe. OSGR NT 2388 490374.
T27	Mature oak	Single hole on west-facing dead branch stump at around 8 m from the ground. Additional possible hole on northern branch stump but facing upwards.	PRF-M		Within Site. Within cable route. OSGR NT 2414 090165.
T28	Mature oak	Single tear-out at on trunk at around 5 m from the ground facing north-east. lifted bark with possible narrow cavities beneath but likely quite exposed and with a cluttered entrance.			Within Site. Within cable route. OSGR NT 24142 90139
T29	Mature ash	Multiple dead wood cavities caused by branch breaks along the trunk. Features narrow and do not appear to extend into larger cavity.	PRF-I		Within Site. 5 m south of the cable route. OSGR NT 2414 590130.

Ref	Tree Description	PRF description	Suitability	Photo	Approximate distance from the Site, indicative cable route[2], and indicative infrastructure layout[3] and OSGR
T30	Mature horse chestnut *Aesculus hippocastanum*	Peeling bark at around 1 m and 2.5 m from the ground, facing south-east. Unlikely to accommodate multiple bats but could provide temporary roost.	PRF-I		195 m east of Site. 270 m south of cable route. 225 m east of haul road. OSGR NT 2445 089663.
T31	Mature horse chestnut	Multiple areas of peeling bark, on branches and trunk.	PRF-I		200 m east of Site. 280 m south of cable route. 230 m east of haul road. OSGR NT 2445 289655.
T32	Mature horse chestnut	Multiple areas of peeling bark at around 1 m and 2.5 m from the ground, facing south-east.	PRF-I		425 m southeast of Site. 470 m south of cable route. 450 m southeast of haul road. OSGR NT 2458 489436.
T33	Mature beech	Single pruning cut with upward extending hole at around 1.8 m from the ground, facing east. Feature is possibly exposed to precipitation.	PRF-M		440 m southeast of Site. 475 m south of cable route. 470 m southeast of haul road.

Ref	Tree Description	PRF description	Suitability	Photo	Approximate distance from the Site, indicative cable route[2], and indicative infrastructure layout[3] and OSGR
					OSGR NT 2459 989426.
T34	Dead elder *Sambucus nigra*	Single limb with three holes at around 2 m, facing south-east that extend upwards. All three holes are with diameter around 2 cm.	PRF-I		155 m northeast of Site. 265 m northeast of cable route. 180 m north of attenuation basin. OSGR NT 2681 988965.

Bat emergence surveys

Tree T27 that is at risk of being felled received two bat emergence surveys to check for roosting bats. During the surveys and upon reviewing the infra-red camera footage, there were **no** bats recorded emerging from the features.

A total of two bat species were confirmed to be present around T27 during the emergence surveys following analysis of the collected data: common pipistrelle and soprano pipistrelle. The total number of bat passes (note bat pass does not indicate number of bats) for each survey was as follows:

- 09 July 2025 emergence survey: A total of 84 bat passes were recorded, of which 83 were categorised to be soprano pipistrelle and one to be common pipistrelle. There were four recordings with both echolocation calls and social calls (likely type D). The first bat recorded was a soprano pipistrelle, commuting at 22:30, which is 31 minutes after sunset (21:59) and the last bat recorded was also a soprano pipistrelle at 23:35. The maximum number of bats observed flying together was two.
- 31 July 2025 emergence survey: A total of 18 soprano pipistrelle passes were recorded, of which 17 were of echolocation call and one had a social call only (likely type D). The first bat recorded was recorded at 22:04, which is 35 minutes after sunset (21:29), whereas the last bat pass was at 22:47. Only a single bat was observed during the survey. General flight pattern was along the tree line between the fields and towards the woodland to the north.

4. Summary

The habitats across the Site were determined to be of moderate suitability for foraging and roosting bats, consisting of agricultural fields, woodlands, scrub, and wetlands. A total of 34 trees with potential roosting features (PRFs) were identified. Of these, one PRF-M tree was selected for two dusk emergence surveys. The surveys concluded that no roosting bats were observed in that specific tree at the time of the assessments.

During the surveys, moderate levels of activity from soprano pipistrelle bats were recorded in the first survey, while the second survey showed lower levels. The first bats were observed 31 and 35 minutes after sunset. It was noted that bats briefly foraged and commuted in the vicinity of the surveyed tree before flying towards a wooded area to the north, suggesting the roosting site may be located elsewhere.

5. References

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