FENWICK SOLAR FARM

Fenwick Solar Farm
EN010152

Environmental Statement

Volume III Appendix 8-3: Bat Report

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00	October 2024	DCO application
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Fenwick Solar Project Limited

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Executive Summary

ES1 Between March and April 2023, AECOM (on behalf of Fenwick Solar Project Limited) undertook a Preliminary Ecological Appraisal (PEA) for the proposed Fenwick Solar Farm (hereafter referred to as the 'Scheme'). The PEA identified features such as trees, woodlands and buildings within the Scheme, and surveys were therefore undertaken to determine the suitability of these features as potential bat roosts and to establish the activity of bats using the habitat within the Order limits.

ES2 All bat species and their roosts are legally protected in the UK under the Conservation of Habitats and Species Regulations 2017 (as amended) (Ref. 8), which implements the EC Directive 92/43/EEC (the Habitats Directive) (Ref. 7). In addition, Barbastelle (*Barbastella barbastellus*), Lesser and Greater Horseshoe bats (*Rhinolophus hipposideros*) and (*Rhinolophus ferrumequinum*) and Bechstein's bat (*Myotis bechsteinii*) are listed in Annex II of the Habitats Directive (Ref. 7), which requires sites to be designated in member states for their protection. Bats and their roosts are also protected under the Wildlife and Countryside Act 1981 (as amended) (Ref. 4).

ES3 The Order limits were assessed to determine the potential suitability of features for roosting bats (a Daytime Bat Walkover (DBW)) and surveys for bat activity, comprising bat activity transect and static detector surveys in accordance with good practice guidelines at the time of survey (Ref. 1, Ref. 2). Field surveys were supported by a desk study of existing bat records within 2 km of the Order limits.

ES4 There were 12 desk study records of bats within 2 km of the Order limits, comprising the following species: Brown Long-eared bat (*Plecotus auritus*), Common Pipistrelle (*Pipistrellus pipistrellus*), Noctule (*Nyctalus noctula*) and Soprano Pipistrelle (*Pipistrellus pygmaeus*). Bat activity surveys undertaken recorded at least eight species; Common Pipistrelle, Soprano Pipistrelle, Nathusius' Pipistrelle, Pipistrelle species, Noctule bat, *Nyctalus* species, Leisler's bat, Myotis species, Daubenton's bat, Barbastelle bat and Brown Long-eared bat. No roosts were recorded within the Order limits.

ES5 The DBW of 253 trees found that, seven were recorded as having no features suitable for roosting bats (NONE), 154 were classified as further assessment required (FAR), and 92 trees had potential roost features that could be suitable for roosting bats (PRF). All trees within the Order limits were surveyed, but not all 'NONE' trees were recorded on mapping.

ES6 Based on the field data collected from the DBW and bat activity surveys, there are likely to be roosts within or close to the Order limits of common and Soprano Pipistrelle, Noctule, and Daubenton's bat and potentially other myotis species. This is based on habitat features such as suitable trees for roosting bats and the timing of observations (from static and transect data) in relation to expected bat emergence times indicating roosts nearby. As a precautionary approach, based on the data collected, potential breeding/non-breeding bat roosts of Common Pipistrelle, Soprano Pipistrelle, Brown Long-eared bat and Nathusius' Pipistrelle (*Pipistrellus nathusii*) have been assigned of up to District Importance and roosts of Daubenton's bat (and potentially other Myotis species) and Noctule up to County Importance.

ES7 There is foraging and commuting activity by bats with high reliance on habitats by Common Pipistrelle as demonstrated by regular use by larger[1] numbers of bats; moderate reliance on habitats by Soprano Pipistrelle and Noctule bats as showed by regular use by smaller[2] numbers of bats; and low reliance on habitats by Brown Long-eared bats, Myotis sp. and Nathusius' Pipistrelle as demonstrated by limited evidence or irregular use and generally by small numbers of bats.

ES8 Small pockets of woodland across and around the Order limits form a relatively rare resource for foraging bats. Hedges and wider field margins provide habitat connectivity to habitats within and outside of the Order limits. Woodlands and other habitats of value are connected via hedges, but relatively few regularly used commuting routes are apparent.

ES9 Based on the reliance of the habitats, habitat features and potential roosts within the Order limits, habitat features are considered to be of District Importance to commuting and foraging bats.

[1] As defined in the evaluation method in Section 3.3.
[2] As defined in the evaluation method in Section 3.3.

1. Introduction

1.1 Background

1.1.1 This report forms a technical appendix to the **ES Volume I Chapter 8: Ecology [EN010152/APP/6.1]**. This report provides information on the presence and distribution of bats relevant to the Fenwick Solar Farm Project (hereafter referred to as the 'Scheme').

1.2 The Scheme

1.2.1 The proposed Scheme includes three locations (collectively referred to as the 'Order limits'):

a. The land located east of Fenwick and immediately south of the River Went (hereafter referred to as the 'Solar PV Site');

b. The land between the Solar PV Site and the existing compound for Thorpe Marsh Substation (hereafter referred to as the 'Grid Connection Corridor'); and

c. The land located within the existing compound for Thorpe Marsh Substation (hereafter referred to as the 'Existing National Grid Thorpe Marsh Substation').

1.2.2 The Scheme comprises the installation of Solar PV Panels, On-Site Cables, associated Battery Energy Storage System (BESS) Containers, an On-site Substation, a cable or line drop connecting the On-Site Substation to the Existing National Grid Thorpe Marsh Substation and other supporting infrastructure including fencing, access tracks, drainage, and biodiversity and landscaping enhancements.

1.3 The Order limits

1.3.1 The Solar PV Site is located near the village of Fenwick, approximately 12 kilometres (km) north of Doncaster, at Ordnance Survey national grid reference SE 60658 16767. It is approximately 407 hectares (ha) in size.

1.3.2 The Grid Connection Corridor is approximately 95 ha in size and 6.3 km in length, stretching from NGR SE 60264 14924 to the Existing National Grid Thorpe Marsh Substation at NGR SE 60605 10009.

1.3.3 The Existing National Grid Thorpe Marsh Substation is approximately 6 ha in size and centred on the approximate NGR SE 60537 09736.

1.3.4 The Solar PV Site comprises arable (c. 70%) and pasture fields (c. 25%), and small patches of broadleaved woodlands, with the River Went delineating the northern Order limits, and two large drains running through the eastern part of the Solar PV Site (Fenwick Common Drain and Fleet Drain).

1.3.5 The Solar PV Site is bounded by further arable and pasture fields to the east, west and south, and the wider area consists of a landscape that is much the same in terms of land use. The small town of Askern is located approximately 3 km to the southwest of the Solar PV Site and nearby rural

villages Moss and Skyhouse are present within a few kilometres to the south and east, respectively.

1.3.6 The Order limits also includes a section of highway at the junction of the A19 and Station Road in the town of Askern to allow for abnormal indivisible load (AIL) vehicle access and escort. As the works would be limited to temporary traffic signal and banksman control for the period of AIL delivery, no impacts on bats are anticipated, and therefore this area is not assessed further.

1.4 Scope of this Report

1.4.1 The objective of the bat surveys reported in this document is to determine the presence and assemblages of roosting, foraging and commuting bat species within the Order limits. Note that for roosting bats only an initial Daytime Bat Walkover (DBW) Survey and desk study were undertaken to inform the Scheme design and that the Scheme will avoid roosts/potential roosts.

1.4.2 This report includes the following information:

a. Relevant legislation and policy;

b. Methods for desk and field-based assessments undertaken in 2023 and 2024;

c. Limitations to the surveys undertaken and any assumptions made as a result of incomplete data;

d. Survey results; and

e. Conclusions and recommendations.

2. Relevant Legislation and Biodiversity Action Plan

2.1 Relevant legislation

2.1.1 The following wildlife legislation is relevant to bats in relation to the Scheme:

a. Conservation of Habitats and Species Regulations 2017 (as amended) (Habitats and Species Regulations) (Ref. 3);

b. Wildlife and Countryside Act 1981 (as amended) (WCA) (Ref. 4);

c. Natural Environment and Rural Communities (NERC) Act 2006 (Ref. 5); and

d. Countryside and Rights of Way (CRoW) Act 2000 (Ref. 6).

2.1.2 The above legislation has been considered when planning and undertaking the commissioned survey work detailed in this report. Compliance with legislation may require the attainment of relevant protected species licences prior to the implementation of the Scheme.

2.2 European Legislation and Wildlife and Countryside Act

2.2.1 All bat species and their roosts are legally protected in the United Kingdom (UK) under European legislation through the Habitats and Species Regulations (Ref. 3), which implements the EC Directive 92/43/EEC (the Habitats Directive) (Ref. 7) through the provisions of the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 (Ref. 8). Four bat species are further listed under Annex II of the Habitats Directive which implies that sites must be designated for their protection. These bat species are Barbastelle , Lesser Horseshoe , Greater Horseshoe and Bechstein's. Under the WCA (Ref. 4), bats and roosts are also protected through the designation of protected areas including Sites of Special Scientific Interest (SSSIs) and by promoting protections for such designated areas.

2.2.2 Taken together, the Habitats and Species Regulations (Ref. 3) and the WCA (Ref. 4) make it illegal to:

a. Deliberately capture or intentionally take a bat;

b. Deliberately or intentionally kill or injure a bat;

c. Be in possession or control of any live or dead bat or any part of, or anything derived from a bat;

d. Damage or destroy a breeding site or resting place of a bat;

e. Intentionally or recklessly obstruct access to any place that a bat uses for shelter or protection;

f. Intentionally or recklessly disturb a bat while it is occupying a structure or place that it uses for shelter or protection; and

g. Deliberately disturb bats, in particular any disturbance which is likely to (i) impair their ability to survive, breed, reproduce or to rear or nurture their young; or in the case of hibernating or migratory species, to

hibernate or migrate; or (ii) affect significantly the local distribution or abundance of the species to which they belong.

2.2.3 A bat roost is defined as any structure a bat uses for breeding, resting, shelter or protection. It is important to note that since bats tend to reuse the same roost sites, current legal opinion is that a bat roost is protected regardless of whether or not the bats are present at a specific point in time.

2.3 The Countryside and Rights of Way Act

2.3.1 The CRoW Act 2000 (Ref. 6) introduced the offence of 'reckless' disturbance of threatened species protected under the WCA. It added extended powers relating to the protection and management of SSSIs as well, including powers for entering management agreements, placing a duty on public bodies to further the conservation and enhancement of SSSIs, increasing penalties for conviction, and appeal processes for the notification, management and protection of SSSIs.

2.4 Natural Environment and Rural Communities Act

2.4.1 In addition to the above legislation, seven bat species are listed as being Species of Principal Importance for conservation in England under section 41 of the NERC Act 2006 (Ref. 5). These include Barbastelle, Bechstein's, Noctule, Soprano Pipistrelle, Brown Long-eared, Lesser Horseshoe and Greater Horseshoe. Section 41 of the NERC Act 2006 requires the Secretary of State to publish a list of habitats and species which are of Principal Importance for the conservation of biodiversity in England. The list is used to guide decision-makers such as public bodies, including local and regional authorities, in implementing their duty under Section 40 of the NERC Act, to have regard to the conservation of biodiversity in England when carrying out their normal functions.

2.5 Local Biodiversity Action Plan

2.5.1 The Scheme is located within the county of South Yorkshire. Formerly, the Doncaster Biodiversity Action Plan (BAP) (Ref. 9) provided context to inform identification of threatened or uncommon species of local relevance, alongside priorities for conservation and enhancement targeted at a local level in South Yorkshire. However, under the Environment Act 2021 (Ref. 10), these are being replaced by Local Nature Recovery Strategies (LNRSs), which are a system of spatial strategies for nature which will support delivery of biodiversity net gain (BNG) and provide more focussed action for nature recovery. Whilst this is still being developed for South Yorkshire and with no specific habitat or species plans currently in place, this report references the Doncaster BAP, for which Brandt's (*Myotis brandtii*), Daubenton's, Whiskered (*Myotis mystacinus*), Natterer's (*Myotis nattereri*), Noctule, Common and Soprano Pipistrelle and Brown Long-eared are all listed, but with no specific action plans in place (Ref. 9).

3. Methods

3.1 Desk Study

3.1.1 Records of bat species within a 2 km radius of the Order limits were obtained through Doncaster Local Records Centre (DLRC) in February 2023 as part of the Preliminary Ecological Appraisal (PEA) (Ref. 20).

3.1.2 Only records up to ten years old were considered within the assessment, as any records older than ten years are unlikely to be still representative of bat species in the local area.

3.1.3 A freely available online resource 'Multi-Agency Geographic Information for the Countryside' (MAGIC) (Ref. 11) was used to search for Special Areas of Conservation (SACs) within 30 km of the Order limits where bats are cited as one of the qualifying features. Granted licences (European Protected Species Mitigation Licences (EPSMLs)) in relation to bats within 2 km of the Order limits were also searched for.

3.2 Field Survey

3.2.1 All field surveys were led by competent ecologists (as defined by the Chartered Institute of Ecology and Environmental Management (CIEEM) Technical Guidance (Ref. 12)) familiar with bat ecology and surveying.

Survey Area

3.2.2 The survey area included all habitat within the Order limits which comprises of mostly low value suitability habitats for foraging and commuting bats and is dominated by open intensively managed arable fields. Hedgerows, woodland blocks, numerous mature trees and woodland are also present. In accordance with the bat survey guidelines (Ref. 1), habitats assessed as being of low value for foraging and commuting bats require three activity transects surveys within one season capturing spring, summer and autumn.

Daytime Bat Walkover Survey

3.2.3 A small number of trees were initially subject to a ground level tree assessment (GLTA) in early 2023, but this data was superseded by the follow on DBW surveys.

3.2.4 A DBW survey was carried out on accessible features identified within the Order limits. Where access was permitted, this assessment of relevant woodland blocks and trees was undertaken externally at ground level for their suitability for roosting bats in June to August 2024.

3.2.5 The aim of the survey was to undertake a rapid assessment to identify where further survey effort may be required where impacts are likely, to determine roost presence/likely absence.

3.2.6 The DBW was undertaken in accordance with recently updated guidance in the Bat Surveys: Good Practice Guidelines for Professional Ecologists 4th Edition (Ref. 1). A global positioning system (GPS) was used to accurately record the location of individual trees, treelines, woodlands along with photographs and notes on each feature.

3.2.7 Based on the overall suitability for use as a bat roost, in accordance with good practice guidelines (Ref. 1) each woodland/tree was classified as:

a. NONE - no features;

b. FAR - further assessment required; or

c. PRF - potential roost feature.

3.2.8 These assessments were carried out to identify if any trees to be potentially impacted by the Scheme had potential suitability for roosting bats.

3.2.9 No buildings within the Order limits are expected to be impacted by the Scheme, and have not been included in this assessment.

Bat Activity Survey

Bat activity surveys were undertaken in 2023 and 2024 using six transect routes covering representative habitats across the Scheme. Each transect route (see

3.2.10 ~~Figure 8-3-3~~Figure 8-3-3: Bat Activity Overview, Annex A) was surveyed in spring, summer and autumn. The transect routes were chosen based on potential flight paths or foraging areas within the Order limits and between such areas and potential roost sites.

3.2.11 Prior to the start of the nighttime surveys in each new location, a daytime site visit was undertaken for each location by the lead surveyor in order to plan the works, assess any health and safety issues, and record the context of the survey locations.

In 2023, three surveys (transects 1, 2, and 3) were completed in line with the survey guidelines available at the time (Ref. 2). Each activity survey involved two surveyors walking a transect route which included a series of counts at pre-determined points along the transect (presented as 'stopping points' (see

3.2.12 ~~Figure 8-3-3, Annex A).~~, Annex A) was surveyed in spring, summer and autumn. The transect routes were chosen based on potential flight paths or foraging areas within the Order limits and between such areas and potential roost sites.

3.2.13 Prior to the start of the nighttime surveys in each new location, a daytime site visit was undertaken for each location by the lead surveyor in order to plan the works, assess any health and safety issues, and record the context of the survey locations.

~~3.2.12~~3.2.14 In 2023, three surveys (transects 1, 2, and 3) were completed in line with the survey guidelines available at the time (Ref. 2). Each activity survey involved two surveyors walking a transect route which included a series of counts at pre-determined points along the transect (presented as 'stopping points' (see ~~Figure 8-3-3: Bat Activity Overview~~, Annex A). These points were located at potentially higher value features with regards to foraging and or commuting bats such as woodland edges and hedgerows. At each point, surveyors stopped and recorded bat activity for one minute using bat echolocation detectors. All bat activity encountered whilst walking between points was also noted. The direction of the transects was varied during each survey visit to ensure different areas of the transect were walked at different times.

~~3.2.13~~3.2.15 In 2024, three night-time bat walkover (NBW) surveys (transects 4, 5 and 6) were completed in line with the survey guidelines available at the time (Ref. 1). Each activity survey involved two surveyors starting at a pre-determined location, which was selected along a potential flight line. Surveyors waited at the pre-determined location from sunset until 30 to 60 minutes post-sunset, depending on detected activity levels. On transect 4 and 5, surveyors walked a pre-determined route around the Order limits and, on transect 6, surveyors drove between three and five miles per hours along the route. All bat activity encountered whilst walking or driving was noted. The direction of the transects was varied during each survey visit to ensure different areas of the transect were covered at different times.

~~3.2.14~~3.2.16 Surveyors carried full spectrum bat echolocation detectors (Batlogger M) to determine which species were present. In accordance with survey guidelines current at the time of the surveys (Ref. 1, Ref. 2), dusk surveys were carried out from sunset to at least two hours after sunset. The time, location, numbers, species (where practicable) and direction of flight were recorded for each bat pass (a discrete burst of echolocation heard, or bat activity observed) during the survey. Echolocation calls detected were analysed with specialist software (BatExplorer) to verify bat calls. Survey visits were conducted in this way where weather conditions allowed, with surveys scheduled to avoid nights with cold (<7 °C), wet or windy conditions.

~~3.2.15~~3.2.17 In addition to the transect surveys, eleven automated static bat detectors (SM4BAT-Full Spectrum) were placed across the Order limits in representative habitats to record bat activity over a longer period of time (i.e. a minimum of five nights per season). The locations of the static detectors are presented on ~~Figure 8-3-2~~, Annex A.

~~3.2.16~~3.2.18 All microphones were located at least one metre above the ground on trees, so they were clear of vegetation between the adjacent habitats and the microphone. All detectors were set on default settings to record in zero-

crossing format. The static detectors were set up to record bat calls from sunset to sunrise for the recommended minimum of five consecutive nights per season in spring, summer and autumn (see deployment dates and weather conditions in Annex D). All calls detected were analysed with specialist software (KaleidoscopePro) to identify bat calls.

~~3.2.17~~3.2.19 Weather conditions were recorded using the temperate log files on each static detector and rain/wind conditions were recorded at the nearest weather station using online resources (Ref. 13). Weather data were taken into consideration in the analysis. Where any prolonged period of strong wind >25 mph or rain was experienced, the static detectors were left for longer within the Order limits to obtain sufficient data during optimum weather conditions for bat activity.

3.3 Bat Data Analysis

Activity Surveys

3.3.1 The transect/NBW data were described in relation to species, number of passes (and where practicable number of bats), observed behaviour, temporal and spatial trends. The static bat detector data collected were analysed to determine the total number of bat passes for each species or species group (depending on the level of identification possible from the recordings made) and then used to derive a metric (the Bat Activity Index (BAI)) for the bat activity at each survey location.

3.3.2 These analyses provide an indication of:

a. Seasonal variation in species activity and composition at each survey location;

b. Relative levels of bat activity across the Order limits; and

c. Potential roosting sites, important foraging areas and commuting routes.

Bat Activity Index (BAI)

3.3.3 BAI values were calculated by averaging the total number of bat passes per hour for each static bat detector unit at each location per survey period. The term ‘pass’ is defined as a single file made up of bat pulses of a single species i.e. this may be one bat in a recorded sound file or many bats in a single file.

3.3.4 Limited guidance is available on what constitutes low to high bat activity on a site based on number of passes. As such, a relative scale is used by AECOM that follows the protocol used by Ecobat (Ref. 14) in this report where:

a. Low activity: 0-20th percentiles;

b. Low to moderate activity: 21st-40th percentiles;

c. Moderate activity: 41st-60th percentiles;

d. Moderate to high activity: 61st-80th percentiles; and

e. High activity: 81st-100th percentiles.

3.3.5 For transect data, relative bat activity levels were described to aid the discussion. No guidance is available on what constitutes low, moderate or

high bat activity based on number of passes during a transect (based on a transect survey time of one and a half to three hours). As such a relative scale is used by AECOM in this report where:

a. Very low activity is up to 5 passes per survey;

b. Low activity is 6 to 25 passes per survey;

c. Moderate activity is 26 to 99 passes per survey; and

d. High activity is 100 passes per survey.

3.3.6 Reference to surveyor observations, including numbers of individual bats seen, flight routes and behaviour and detectability of individual species are also made to inform the overall evaluation.

Biodiversity Importance

3.3.7 An essential prerequisite step to allow ecological impact assessment of the Scheme was an evaluation of the relative biodiversity importance of the Order limits for bats. This is necessary to set the terms of reference for the subsequent ecological impact assessment.

3.3.8 The method of evaluation that was utilised to assign biodiversity importance (i.e. sensitivity) of any bat roosts, foraging and commuting habitat has been developed with reference to the CIEEM Guidelines (Ref. 19). This gives guidance on scoping and carrying out environmental assessments and places appraisal in the context of relevant policies and at a geographical scale at which feature matters (i.e. international, national, regional, county, district, local or site). Data received through desk study and field-based surveys were used to identify the importance of the species addressed in this report. Professional judgement was also applied, where necessary. Relevant published national and local guidance and criteria can be used, where available, to inform the assessment of biodiversity importance and to assist consistency in evaluation.

3.3.9 For further details on the method used to determine biodiversity importance, please refer to Annex E.

3.3.10 Reference has also been made, where required, to:

a. CIEEM Bat Mitigation Guidelines (Ref. 15);

b. Natural England Joint Publication JP025: A Review of the Population and Conservation Status of British Mammals (Ref. 16);

c. NERC Act section 41 list of species of principal importance (Ref. 5);

d. Bat Roosts in Trees: A Guide to Identification and Assessment for Tree-Care and Ecology Professionals (Ref. 17); and

e. The State of the UK's Bats 2017: National Bat Monitoring Programme Populations Trends (Ref. 18).

3.4 Assumptions and Limitations

Desk Study

3.4.1 The aim of the desk study was to help characterise the baseline context of the Order limits and provide valuable background information that would not

be captured by site surveys alone. Information obtained during the desk study was dependent upon people and organisations having made and submitted records for the area of interest. As such, a lack of records for a particular species does not necessarily mean that the species does not occur in the Study Area. Likewise, the presence of records of species does not automatically mean that these still occur within the area of interest or are relevant in the context of the Scheme.

Daytime Bat Walkover

3.4.2 Due to access limitations, it was not possible to survey the area at the south of the Grid Connection Corridor, around Thorpe Marsh Power Station. The only trees with the potential to be impacted in this area run adjacent to the road. The trees were assessed from the road as having no suitability to support roosting bats due to their age, size and health. As a result of the above, not fully accessing this area is not deemed to impact the assessment made in this report.

Bat Activity Field Survey

3.4.3 Transect 1 is situated near the River Went, there were several survey constraints around the bat activity transects due to flooding in the upper half of the transect during the second visit. The designated listening points were not accessible, and the route was diverted. This is not a significant limitation as there are not expected to be impacts to the River Went as it is retained and buffered from the Scheme, and a survey of representative habitats throughout the Order limits was undertaken.

~~3.4.4~~ Livestock were present in all fields for Transect 3 during the first and second bat activity transect visit. This resulted in the extension of Transect 3 route to divert around these fields and the route followed is reflected in

~~3.4.5 Figure 8-3-6,~~

~~3.4.6 Figure 8-3-12 and~~

~~3.4.7~~3.4.4 ~~Figure 8-3-18 (Annex A).~~Figure 8-3-6 ~~Figure 8-3-12~~ and ~~Figure 8-3-18~~ (Annex A).

~~3.4.8~~3.4.5 In Spring 2024, static detectors 24A, 24B and CR2 failed to record data. The detectors were deployed late in the season due to weather constraints so there was no opportunity for these to be re-deployed in Spring. This is not a significant limitation as there are not expected to be any direct impacts or vegetation removal in these areas, the NBW in these areas were completed for Spring and survey of representative habitats throughout the Order limits was undertaken.

~~3.4.9~~3.4.6 In Spring and Autumn 2024, static detector CR4 could not be deployed for health and safety purposes due to the presence of livestock in the field. This is not a significant limitation as there are not expected to be any direct impacts or vegetation removal in these areas, and the NBW in these areas were completed for Spring and Autumn.

~~3.4.10~~3.4.7 NBW 6 was completed as a driving survey due to the length of the route, whilst the majority of the road route aligns with the Order limits, there are some areas where the NBW route is outside of the Order limits. Where access allowed, static detectors have been used in areas where the cable route will cross linear features that may be utilised by foraging/commuting bats that were not covered by the NBW route.

Data Interpretation Limitations

~~3.4.11~~3.4.8 It is accepted that Myotis bat species are difficult to identify with any degree of certainty from echolocation alone. These species are often aggregated as ‘Myotis species’. Noctule and Leisler’s, and Common Pipistrelle and Soprano Pipistrelle can be difficult to separate. Therefore, *Nyctalus* species and *Pipistrellus* species are used respectively unless identification is certain. These aggregations, where undertaken, are widely accepted and does not affect the evaluation of the results of activity surveys. Where further details are required, roost inspections or bat trapping surveys may be undertaken to identify these species with certainty.

~~3.4.12~~3.4.9 The DBW surveys undertaken were aimed at determining the presence or likely absence of potential roosting features (PRFs), therefore there would be a need for further surveys on PRFs if they are likely to be impacted by the Scheme. At the time of writing this report it is understood that no trees with PRFs present are to be impacted.

~~3.4.13~~3.4.10 Bats are highly mobile and may roost in different locations each year where suitable roost features are present. Where required, a precautionary approach for mitigation would be proposed for trees or structures assessed with roost suitability but where roosts were not found.

~~3.4.14~~3.4.11 None of these limitations affect the conclusions of this report.

~~3.4.15~~3.4.12 Ecological data in relation to these species are valid for 18 months from the date of survey based on good practice guidance (Ref. 2). After this time, update surveys are likely to be required.

4. Results

4.1 Desk Study

4.1.1 There are no sites statutorily designated for international value for bats within 30 km of the Order limits. There are no national statutory sites designated for bats within 10 km of the Order limits or relevant non-statutory sites within 2 km of the Order limits.

4.1.2 DLRC holds 16 records of bats within the Study Area in the last ten years, including two roosts. All records are in the same location 1.7 km northwest of the Order limits and are from 2014. The closest of the two bat roosts is located 1.2 km east of the Order limits in 2015.

4.1.3 A further search of the MAGIC data showed that three Natural England bat mitigation licences were issued for the destruction of a Brown Long-eared and Common Pipistrelle non-breeding roost (2015-15069-EPS-MIT, 2020-49789-EPS-MIT and 2020-49789-EPS-MIT-1) between 2015 and 2020. The closest of these records is located 1.6 km north of the Order limits and was granted in 2015.

4.2 Field Survey

Daytime Bat Walkover Survey

4.2.1 In summary, an assessment of 253 trees found that:

a. Seven were recorded as having no features suitable for roosting bats (NONE);

b. 154 were classified as further assessment required (FAR); and

c. 92 trees that had features that were potentially suitable for roosting bats (PRF).

4.2.2 Detailed results of the DBW survey are presented in Annex B. The locations of all features surveyed are presented in ~~Figure 8-3-1~~ (Annex A).

4.2.3 In 2024, no ‘NONE’ trees were mapped. The ‘NONE’ trees have been carried over from 2023.

Bat Activity Survey

The results of these surveys and the BAI (as per the method in Section 3.3) are summarised below, with full results presented in Annex C Bat Activity Survey ResultsAnnex C Bat Activity Survey ResultsAnnex C Bat Activity Survey ~~Results~~ and Annex D Static Survey Results. Transect mapping is presented in

~~Figure 8-3-4~~Figure 8-3-4 to

4.2.4 ~~Figure 8-3-21~~Figure 8-3-15 (Annex A Figures~~Annex A Figures~~~~Annex A Figures~~).

Transect Surveys

Transect surveys were carried out in 2023 and 2024 to provide a representative coverage of the habitats within the Order limits. This comprised six transects; Transect 1, Transect 2, Transect 3 (split into parts 3a and 3b), Transect 4, Transect 5 and Transect 6 as presented in

~~Figure 8-3-4~~Figure 8-3-4 to

4.2.5 ~~Figure 8-3-21~~Figure 8-3-21 (Annex A). Transects 1, 2 and 3 were surveyed in the spring, summer and autumn of 2023, apart from Transect 3a that was re-routed in the spring and summer surveys due to livestock in the fields. Transects 4, 5 and 6 were surveyed in the spring, summer and autumn of 2024. The transects sampled representative habitats within the Order limits, comprising hedges/tree lines, woodland edge, roadside verges, and arable field margins.

4.2.6 At least seven species were recorded during the bat transect surveys Common Pipistrelle, Soprano Pipistrelle, Pipistrelle species, Brown Long-eared bat, Noctule, Daubenton's bat, Leisler's bat and Myotis species (Daubenton's and/or other unknown Myotis species).

Spring Surveys

Three transects were surveyed between 10 May 2023 and 11 May 2023 and three transects were surveyed on 30 May 2024. Bat activity is shown on

~~Figure 8-3-4~~Figure 8-3-4 to

4.2.7 ~~Figure 8-3-9~~Figure 8-3-9 (Annex A).

4.2.8 Transect 2 had very low activity levels with six passes by Common Pipistrelle.

4.2.9 Transect 1 and 3b had low activity levels, with 13 and 11 passes respectively. Common Pipistrelle activity was dominate with occasional Myotis species passes.

4.2.10 Transect 4 had high activity, with 225 passes, dominated by Common Pipistrelle with occasional Soprano Pipistrelle, Myotis and Brown Long-Eared passes.

4.2.11 Transect 5 had high activity, with 205 passes, dominated by Common Pipistrelle with occasional Soprano Pipistrelle, Myotis and Brown Long-Eared passes.

4.2.12 Transect 6 had moderate activity, with 70 passes, dominated by Common Pipistrelle passes with occasional Soprano Pipistrelle and Myotis passes.

Summer Surveys

Three transects were surveyed between 25 July 2023 and 27 July 2023 and three transects were surveyed on 29 July 2024. Bat activity is shown on

~~Figure 8-3-10~~Figure 8-3-10 to

4.2.13 ~~Figure 8-3-15~~Figure 8-3-15 (Annex A).

4.2.14 Transect 1, 2 and 3b had 18 passes, 17 passes and 24 passes, respectively, which is low activity. Dominated by Common Pipistrelle. Other species recorded were Soprano Pipistrelle, Myotis species, Daubenton's bat, BrownLong-Eared bat and Noctule.

4.2.15 Transect 4, 5 and 6 had a total of 56, 34 and 29 passes respectively, which is moderate activity. Dominated by Common Pipistrelle. Other species recorded were Soprano Pipistrelle, Noctule, Myotis species, Brown Long-Eared bat and Leisler's bat.

Autumn Surveys

Three transects were surveyed between 19 September 2023 and 21 September 2023, and three transects were surveyed between 9 September 2024 and 12 September 2024. Bat activity is shown on

~~Figure 8-3-16~~Figure 8-3-16 to

4.2.16 ~~Figure 8-3-21~~Figure 8-3-21 (Annex A).

4.2.17 Transect 1 had moderate activity level with 29 passes of Soprano Pipistrelle, Pipistrelle species, Myotis species and Noctule.

4.2.18 Activity levels for Transect 2, 3a and 3b were low with 16 passes, 17 passes and six passes, respectively, dominated by Common Pipistrelle. Other species recorded were Soprano Pipistrelle, Myotis species and Noctule.

4.2.19 Transect 4 and 5 had high activity level with a total of 136 and 205 passes, respectively, comprising Common Pipistrelle, Soprano Pipistrelle, Myotis species and Noctule.

4.2.20 Transect 6 had moderate activity level with a total of 59 passes. Common Pipistrelle were dominant with occasional passes from Soprano Pipistrelle, Noctule, and Myotis species.

Static Bat Detector Survey

4.2.21 Full results of the static bat detector surveys are provided in Annex D with static detector locations presented on ~~Figure 8-3-2~~ in Annex A. A total of 154 nights of data were analysed from eleven statics located across the Scheme, resulting in 102,169 records of bats. Species recorded comprised of the following species: Common Pipistrelle, Soprano Pipistrelle, Nathusius' Pipistrelle , Pipistrelle species, Noctule bat, *Nyctalus* species, Leisler's bat, Myotis species, Daubenton's bat, Barbastelle bat and Brown Long-eared bat. Common Pipistrelle was the most frequently recorded species by far with 87, 292 passes (see Plate 1). The highest overall activity was at T1 and CR1 in spring, and T1, T3 and CR1 in (see Table 1 and Plate 1).

Table 1: Summary of Bat Activity Index (BAI) from Static Bat Detector Surveys

Location	BAI* per hr	Activity Level	BAI* per hr	Activity Level	BAI* per hr	Activity Level
	Spring		**Summer**		**Autumn**	
T1	103.27	Moderate-high	106.45	High Activity	37.24	Moderate Activity
T2	85.99	Moderate-high	53.35	Moderate Activity	38.95	Moderate Activity
T3	32.47	Low	115.83	High Activity	21.32	Low Activity
24A	-	-	62.00	Moderate-high Activity	5.90	Low Activity
24B	-	-	21.25	Low Activity	39.47	Moderate Activity
24C	43.98	Moderate Activity	21.98	Low-moderate Activity	27.48	Low-moderate Activity

Location	BAI* per hr	Activity Level	BAI* per hr	Activity Level	BAI* per hr	Activity Level
	Spring		Summer		Autumn	
CR1	135.38	High Activity	134.16	High Activity	40.18	Moderate Activity
CR2	-	-	95.95	Moderate-high Activity	32.04	Low-moderate Activity
CR3	21.80	Low Activity	33.27	Low-moderate Activity	30.17	Low-moderate Activity
CR4	-	-	64.12	Moderate-high Activity		
CR5	92.04	Moderate-high Activity	89.15	Moderate-high Activity	17.14	Low Activity

*BAI = Bat Activity Index (overall number of bat passes per hour)

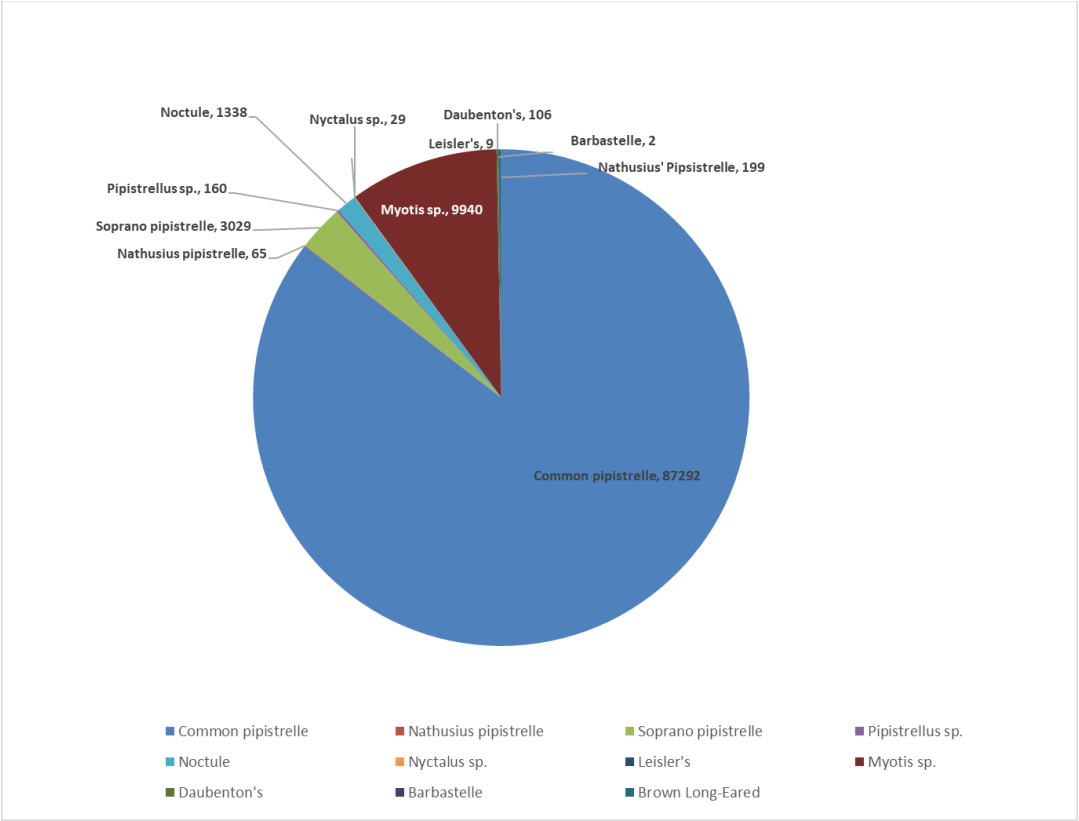

Plate 1: Total Number of Passes per Species

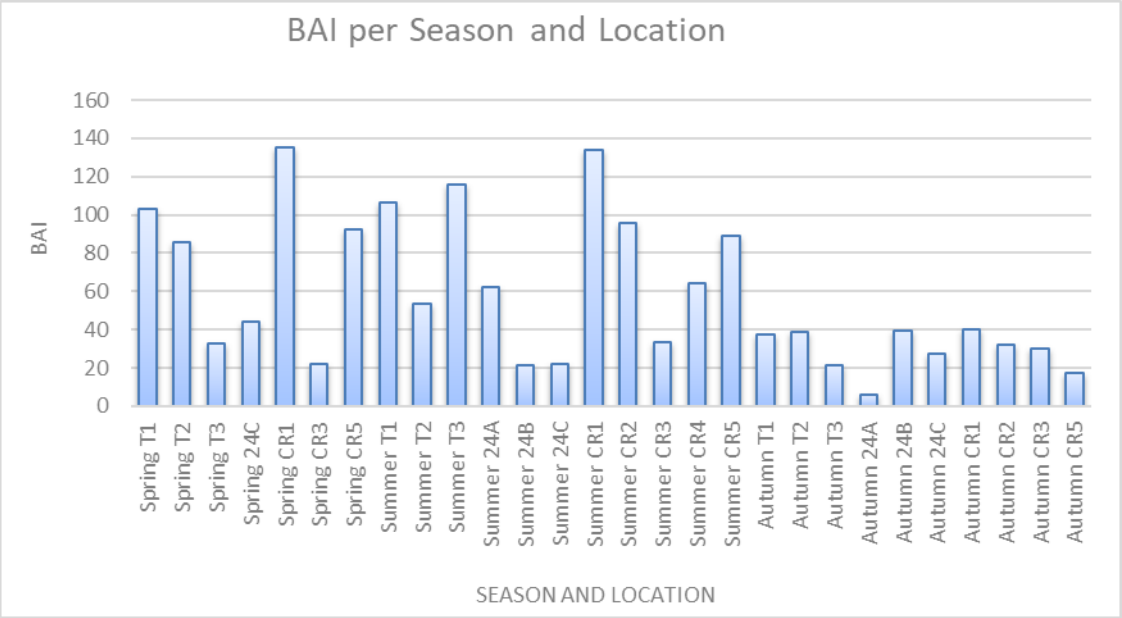

Plate 2: BAI per Season and Location

5. Evaluation

5.1 Sites Designated for their Biodiversity Value including for Bats

5.1.1 No designated sites of relevance to bats were identified within the Study Area and therefore are not considered further.

5.2 Roosts

5.2.1 The data search returned records of at least four bat species (Noctule, Common Pipistrelle, Soprano Pipistrelle, Brown Long-eared bat and unknown Pipistrelle species), all of which were from the same location, 1.7 km north west of the Order limits.

5.2.2 Two roosts were identified in the desk study within the Study Area.

5.2.3 Based on the field data collected from the DBW and bat activity surveys, there are likely to be roosts within or close to the Order limits of Common and Soprano Pipistrelle, Noctule, Daubenton's bat and potentially other Myotis species. This is based on suitable habitat features such as suitable trees for roosting bats and the timing of observations (from static and transect data) in relation to expected bat emergence times indicating roosts nearby.

5.2.4 All potential roosts currently identified are within retained features (due to avoidance of potential roosting features). As such, no detailed roost presence/absence or characterisation has been undertaken to determine roost importance and, therefore, an estimated biodiversity importance to individual species has been assigned based on desk study data and activity surveys.

5.2.5 As a precautionary approach, based on the data collected, potential breeding and non-breeding bat roosts of Common Pipistrelle, Soprano Pipistrelle, Brown Long-eared bat and Nathusius' Pipistrelle have been assigned of up to District Importance and roosts of Daubenton's bat (and potentially other Myotis species) and Noctule up to County Importance (see Table 2~~Table 2~~Table 2).

5.3 Commuting and Foraging Habitats

5.3.1 Biodiversity importance of commuting and foraging bats is based on species rarity, activity, presence of nearby roosts and habitat type/complexity of community/foraging features (see Annex E). This also considers the lower detectability on bat detectors of species such as Brown Long-eared bat and Myotis species compared to species such as Common and Soprano Pipistrelle and Noctule (Ref. 1). It is not possible to adopt the same matrix-based approach for valuing commuting routes and foraging areas. It is inherently more difficult to assess them and requires a higher degree of professional judgement. For example, some routes may be used only at certain times of year, and hence show low numbers of bat passes, but they may be critical routes to hibernation sites. As such, the importance of commuting and foraging areas are not interpreted in isolation and are judged

on the overall knowledge of bat activity in the area using the desk study and survey data collected.

5.3.2 Species recorded on the activity surveys (combined activity transects and static bat detectors) comprised of at least eight species; Common Pipistrelle, Soprano Pipistrelle, Nathusius' Pipistrelle, Pipistrelle species, Noctule bat, *Nyctalus* species, Leisler's bat, Myotis species, Daubenton's bat, Barbastelle bat and Brown Long-eared bat. The surveys identified a range of activity (including foraging, commuting and social calling) with multiple bats often recorded.

Most of the areas with highest activity were located along linear features such as hedgerows/tree lines and woodland edges, with very limited foraging and commuting observed over open fields or crops (see

~~Figure 8-3-4~~Figure 8-3-4 to

5.3.3 ~~Figure 8-3-21~~Figure 8-3-21, (Annex A).

5.3.4 As presented in Table 2~~Table 2~~Table 2**,** there is high reliance on habitats mentioned in Paragraph 0~~00~~1.1.1 by Common Pipistrelle as demonstrated by regular use by larger numbers of bats; moderate reliance on habitats by Soprano Pipistrelle and Noctule bats as shown by regular use by smaller numbers of bats; and low reliance on habitats by Brown Long-eared bats, Myotis species and Nathusius' Pipistrelle as demonstrated by limited evidence or irregular use and generally by small numbers of bats.

5.3.5 Small pockets of woodland across and around the Order limits form a relatively limited resource for foraging bats. Hedges and wider field margins provide habitat connectivity to habitats within and outside of the Order limits.

5.3.6 Woodlands and other habitats of value are connected via hedges, but relatively few regularly used commuting routes are apparent.

5.3.7 Taking the above into account, the habitats within the Order limits are of District Importance to commuting and foraging bats.

Table 2: Summary of Conservation Importance of Bats

Species	Importance of Roosts	Importance of Commuting and Foraging Habitat (summary of justification)	Importance of Assemblage
Widespread: Common Pipistrelle Soprano Pipistrelle Brown Long-eared bat	Evidence of roosts for all these species including breeding roosts and other non-breeding roosts within the Order limits. Does not exceed **District importance** for each species.	There is foraging and commuting activity by diverse assemblage of bats with high reliance on habitats by Common Pipistrelle as demonstrated by regular use by larger numbers of bats; moderate reliance on habitats by Soprano Pipistrelle and Noctule bats as showed by regular use by smaller numbers of bats; and low reliance on habitats by Brown Long-eared bats, Myotis species, Barbastelle and Nathusius' Pipistrelle as demonstrated by limited evidence or irregular use and generally by small numbers of bats. Small pockets of woodland across and around the Order limits form a relatively rare resource for foraging bats. Hedges and wider field margins provide habitat connectivity to habitats within and outside of the Order limits. Breeding roosts are likely to be present (e.g. Common and Soprano Pipistrelle and Noctule) in woodland and trees within Study Area. Woodlands and other habitats of value are connected via hedges, but relatively few	(1 point per species) Score 3 for this part of the assemblage (of a maximum of 3)
Widespread in many geographies but not as abundant in all: Daubenton's bat and potentially other Myotis species Noctule	Possible breeding and non-breeding roosts of Daubenton's bat within the Order limits. Does not exceed **County importance**. Evidence of likely breeding and non-breeding roost/s of Noctule. Does not exceed **County importance.**		(2 points per species) Score 4 for this part of the assemblage (of a maximum of 10)
Rarer or restricted distribution: Nathusius' Pipistrelle Leisler's	No evidence of roosts of these species, an unlikely with the Order limits, though possible within wider Study Area.		(3 points per species) Score 6 for this part of the assemblage (of a maximum of 9)

Species	Importance of Roosts	Importance of Commuting and Foraging Habitat (summary of justification)	Importance of Assemblage
	For this species if present, unlikely to exceed **District importance.**	regularly used commuting routes are apparent. Taking the above into account, the habitats within the Order limits are considered to be of **District Importance**.	
Rarest Annex II species and very rare: Barbastelle	No evidence of roosts of these species, unlikely with the Order limits due to lack of suitable roosting habitat, though possible within the wider Study Area. For this species if present, unlikely to exceed **County importance.**		(4 points per species) Score 4 for this part of the assemblage (of a maximum of 4)

Overall score: Assemblage score 17/26 = 65 %; meets the threshold for **Regional Importance**

6. Conclusions and Recommendations

6.1.1 The Order limits has been determined to provide a foraging/commuting resource for Common Pipistrelle, Soprano Pipistrelle, Myotis species, Daubenton's bat, Noctule, Brown Long-eared bats, Nyctalus species and Leisler's bats. Two single passes of Barbastelle were detected on one detector in Autumn 2024. Barbastelle were not recorded within the Order limits in 2023.

6.1.2 The Order limits is considered to be of District Value for foraging/commuting bats, but does have an assemblage of bat species considered to be of Regional importance. This has increased from District value due to the two barbastelle passes detected in 2024. Given that there were only two passes of Barbastelle on one occasion, this change is not deemed to cause any change to the assessment made in this report, as impacts to bats are minimal.

6.1.3 All species recorded were mostly recorded commuting along the hedgerows present within the Order limits.

6.1.4 The Scheme design retains and avoids the majority of habitats of value to bats, including hedgerows, as well as woodland, watercourses/ditches, and all trees suitable for use by bats.

6.1.5 No buildings or structures are to be affected by the Order limits.

6.1.6 Trees classified as 'FAR' or 'PRF' have and will continue to be avoided through design.

6.1.7 Should additional features be identified for removal/reduction which are suitable for roosting bats, then further surveys will be completed as necessary, which may identify the requirement for additional mitigation and/or a Natural England mitigation licence, where impacts to roosting bats cannot be avoided.

6.1.8 As detailed in Section 8.10 of **ES Volume I Chapter 8: Ecology [EN010152/APP/6.1]**, works will be restricted to daylight hours wherever practicable to remove the need for artificial lighting, with focussed task specific lighting provided where this is not possible. For example, Horizontal Directional Drilling (HDD) operations, unless directed by authorities or areas requiring road closures.

6.1.9 Within construction compounds and at welfare areas, Passive Infra-Red (PIR) controlled lights (motion sensors) will be used outside of core working hours. Task specific and general lighting may be required in winter periods due to reduced daylight hours (early mornings and up to 19:00 for general workforce) to meet safety requirements. Additionally, lighting would be used by the security teams during their regular checks and emergency visits if an alert is triggered. Outside of core working hours PIR controlled lights (motion sensors) will be used at construction compounds and at welfare areas. The CCTV will also use Infrared (IR) lighting to provide night vision functionality meaning that no visible lighting will be needed for the security system. Further details on lighting design are found in **ES Volume I Chapter 2: The Scheme [EN010152/APP/6.1].**

6.1.10 Where lighting is required, it will conform to good practice guidelines with respect to minimising light spill into adjacent habitats and preventing disturbance to bats and other nocturnal species, including Institute of Lighting Professional Guidance Notes (in particular GN08/23 Bats and Artificial Lighting at Night (Ref. 21)). With reference to **ES Volume I Chapter 2: The Scheme [EN010152/APP/6.1]**, the following such measures will be taken:

a. Lights installed will be of the minimum brightness and/or power rating capable of performing the desired function;

b. Light fittings will be used that reduce the amount of light emitted above the horizontal (reduce upward lighting);

c. Light fittings will be positioned correctly, inward facing and directed downwards;

d. Direction of lights will seek to avoid spillage onto neighbouring properties, habitats, highway, or waterway; and

e. PIR controlled lights (motion sensors) will be used except where temporary focussed task specific lighting is required.

6.1.11 During operation and maintenance, the Solar PV Site will not require artificial lighting other than during temporary periods of maintenance/repair. All routine maintenance activities, except panel cleaning, will be scheduled for daylight hours as far as is practicable, and therefore it is anticipated that focussed task specific lighting should only be required in the event of emergency works/equipment failure requiring night-time working or panel cleaning operations. The current preferred solution for cleaning operations, which is assumed to take place once every two years, would be lit by tractor mounted lighting which is akin to that used during night-time arable harvesting operations which are currently undertaken within the Order limits.

6.1.12 Outside of core working hours, PIR controlled lights (motion sensors) will be used. Any compounds for the On-Site Substation will have inward facing PIR controlled security lighting installed at each corner of the compound. Field Station Units and the control buildings for the On-Site Substation will likely require some internal lighting (to be manually activated when needed), but light spillage would be minimal (through doorways when open). Further details on lighting design are found in **ES Volume I Chapter 2: The Scheme [EN010152/APP/6.1]**.

7. References

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Ref. 21 Bat Conservation Trust and Institution of Lighting Professionals (2023) Guidance Note GN08/23 Bats and Artificial Lighting At Night

Annex A Figures

Revision: 0 Drawn: LP Checked: JW Approved: EW Date: 2024-10-16

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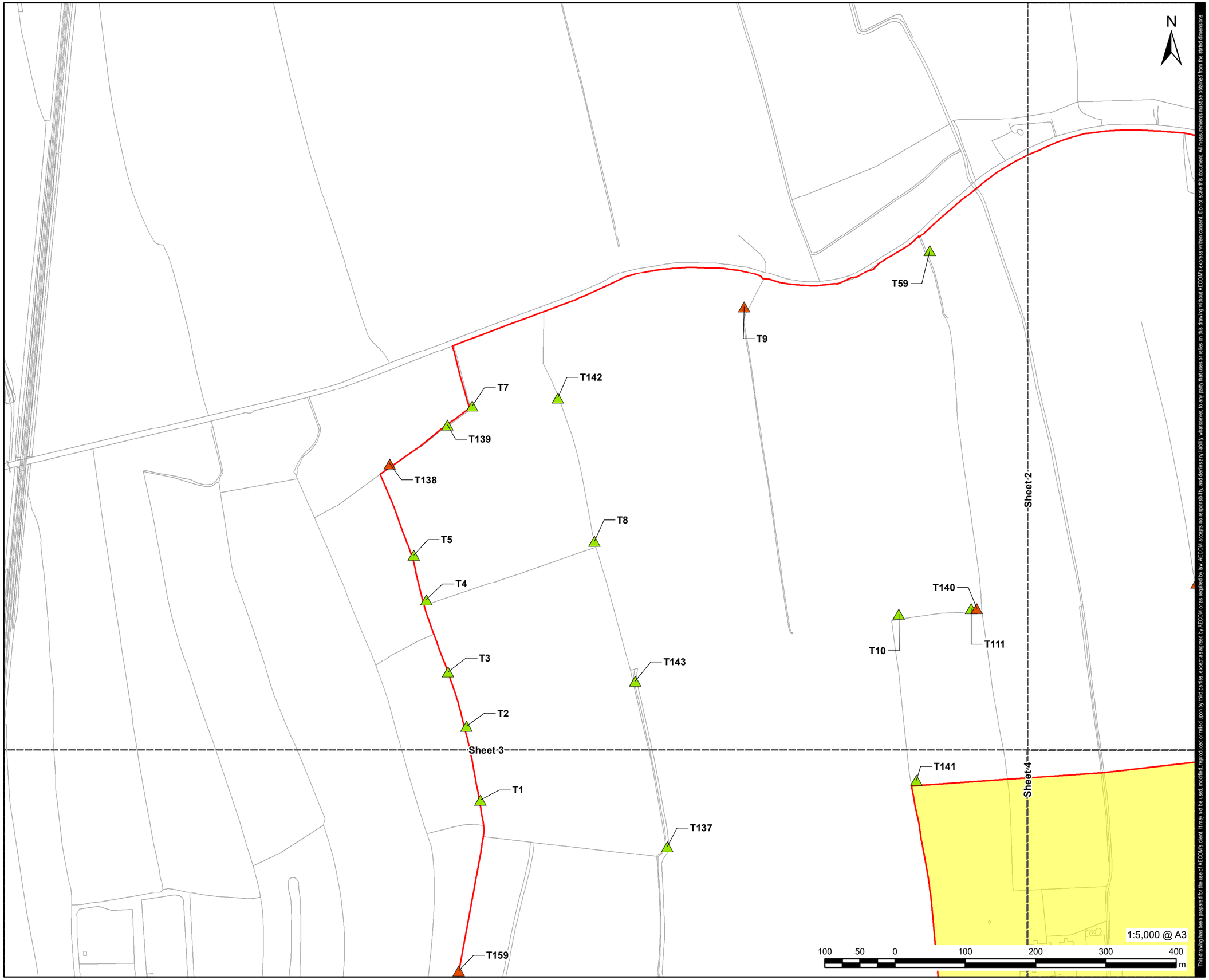

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PROJECT

Fenwick Solar Farm

CLIENT

Fenwick Solar Project Limited

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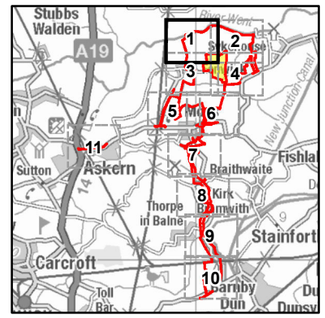
Basingstoke, RG21 7PP
www.aecom.com

LEGEND

- Order limits
- Land not included in the Order limits

Daytime Bat Walkover Potential Suitability

- PRF
- FAR



NOTES

ISSUE PURPOSE

Environmental Statement

PROJECT NUMBER

60698207

FIGURE TITLE

Daytime Bat Walkover Results
Sheet 1 of 11

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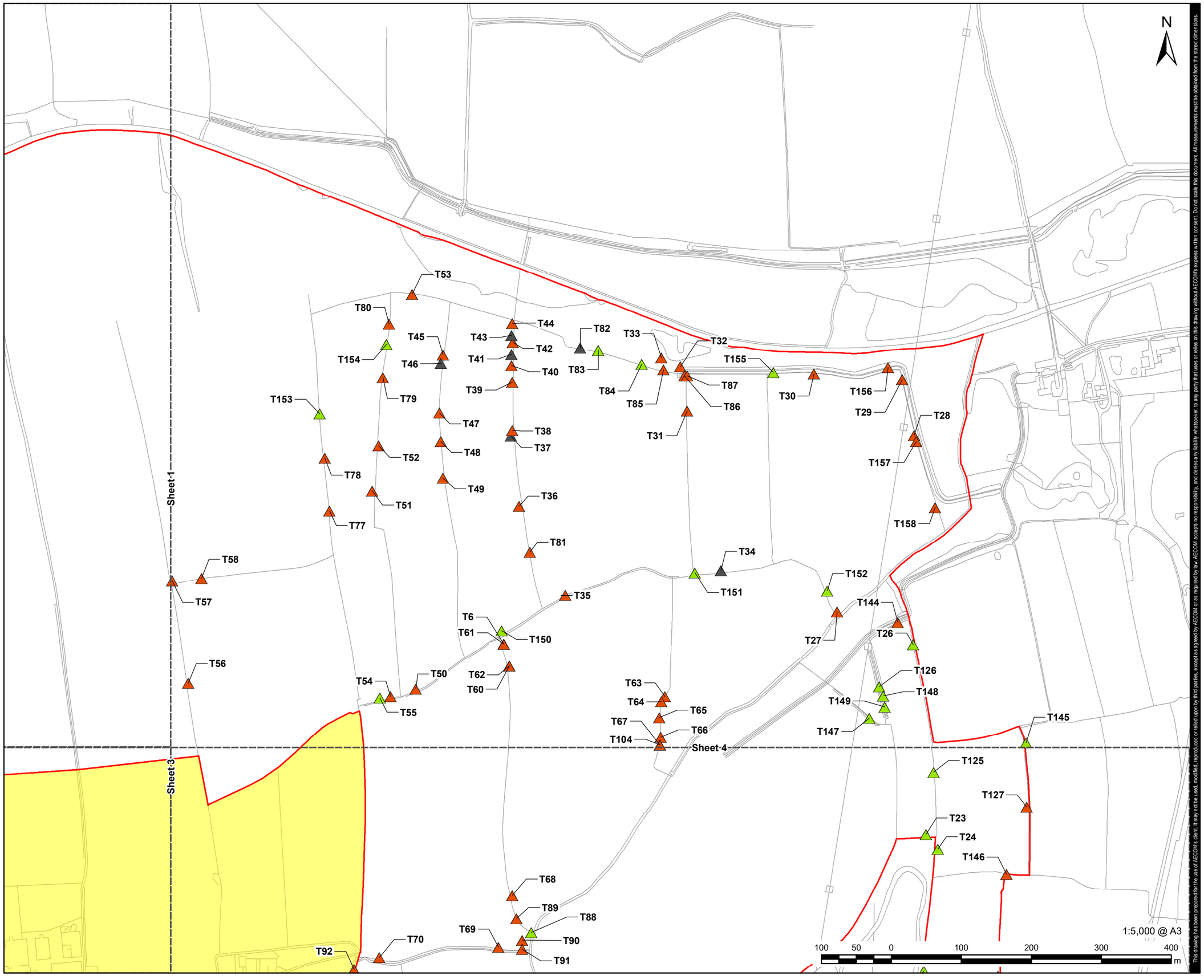

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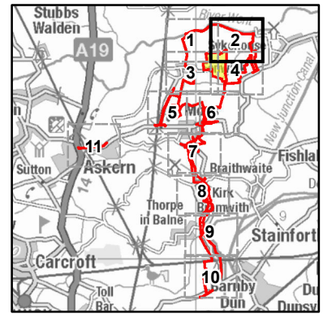
LEGEND

- Order limits
- Land not included in the Order limits

Daytime Bat Walkover Potential Suitability

- PRF
- FAR
- NONE



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Daytime Bat Walkover Results
Sheet 2 of 11

FIGURE NUMBER

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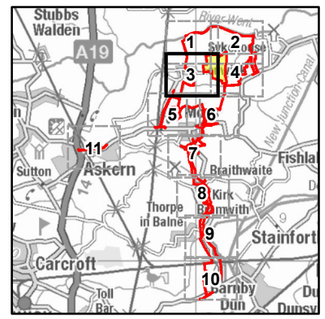
LEGEND
- Order limits
- Land not included in the Order limits

Daytime Bat Walkover Potential Suitability
- PRF
- FAR



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ISSUE PURPOSE
Environmental Statement

PROJECT NUMBER
60698207

FIGURE TITLE
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Sheet 3 of 11

FIGURE NUMBER
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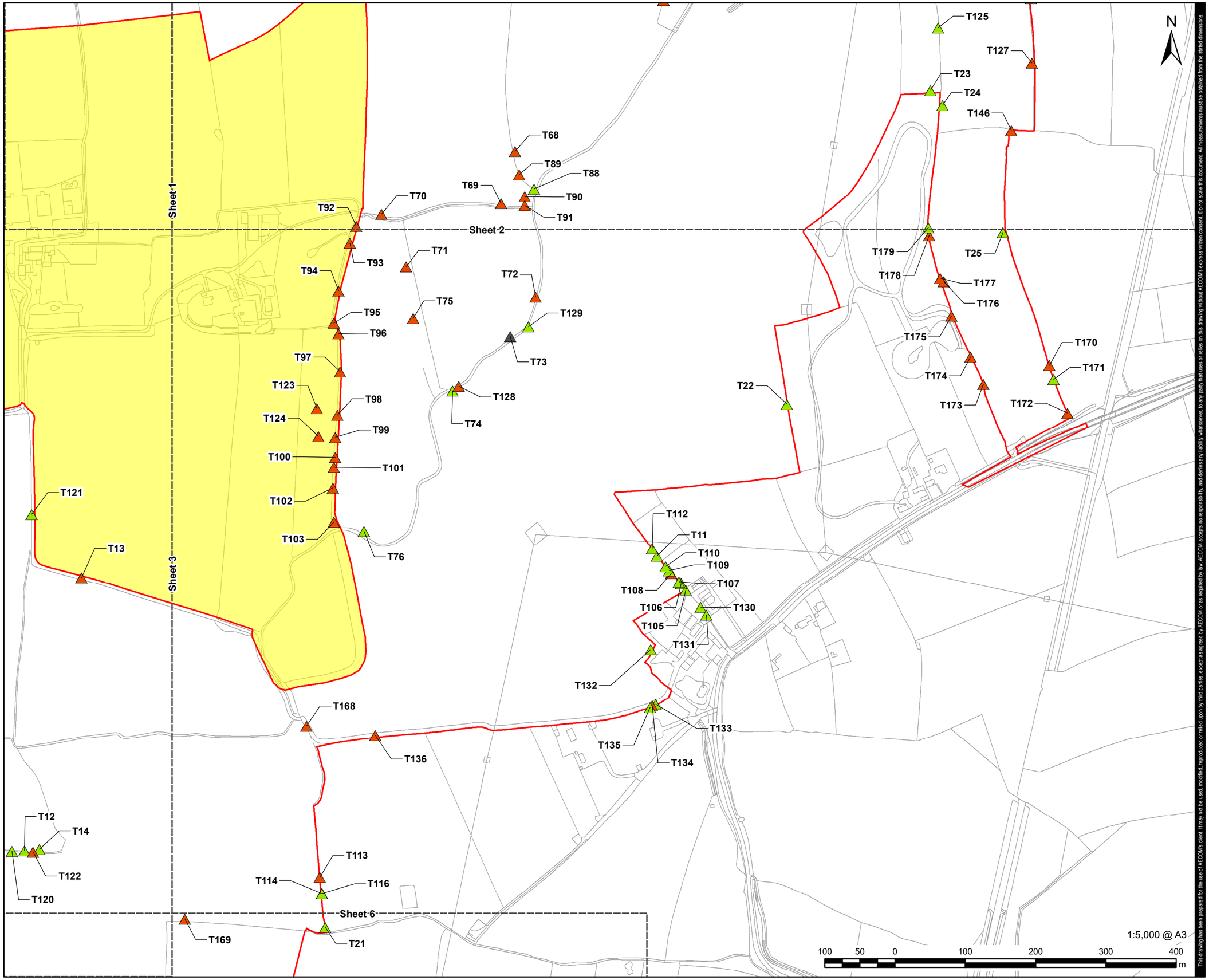

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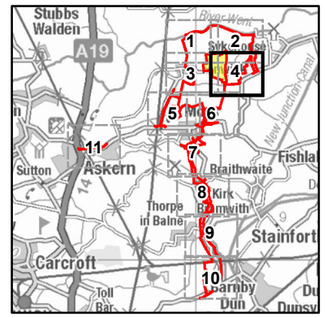
LEGEND

- Order limits
- Land not included in the Order limits

Daytime Bat Walkover Potential Suitability

- PRF
- FAR
- NONE



NOTES

ISSUE PURPOSE

Environmental Statement

PROJECT NUMBER

60698207

FIGURE TITLE

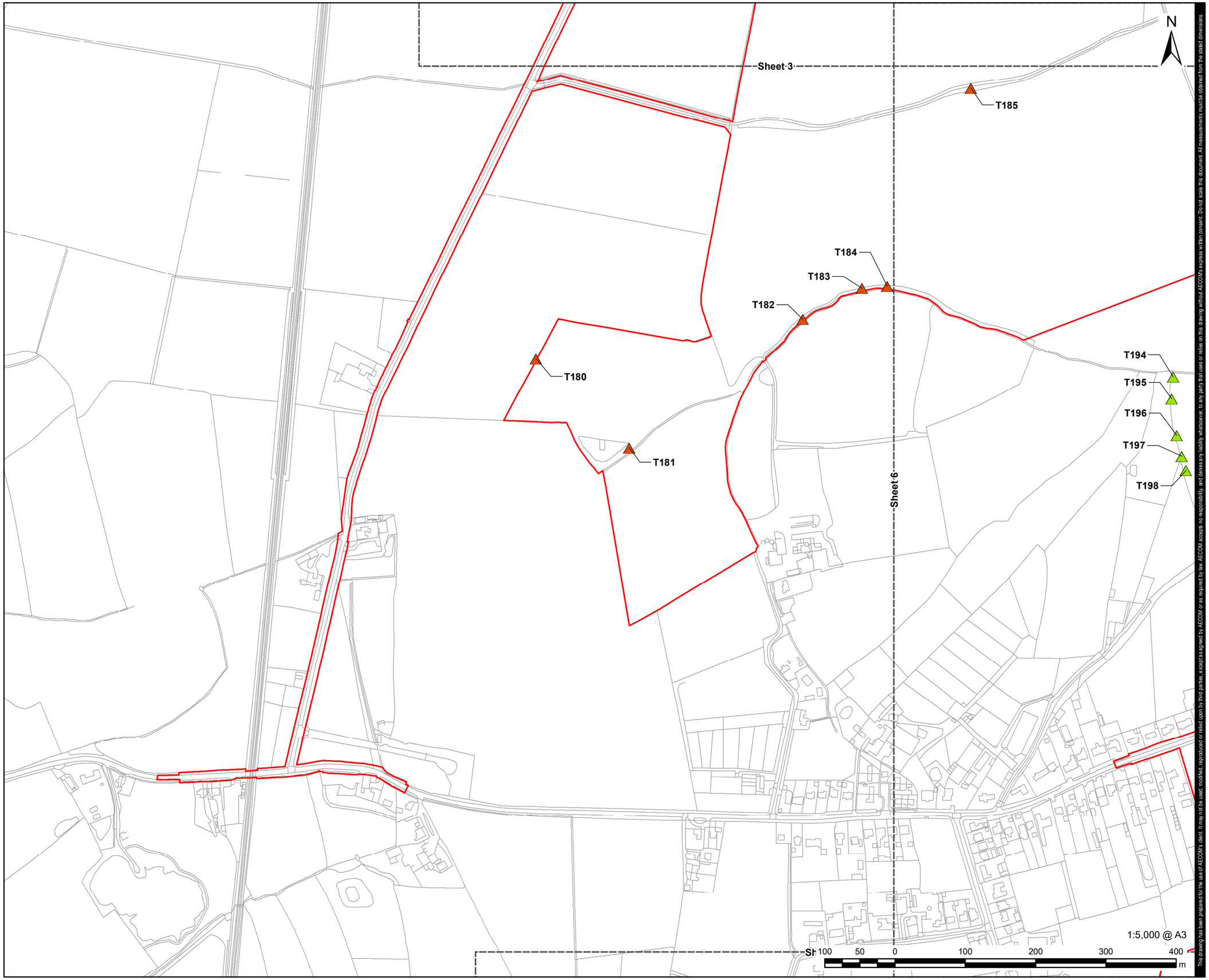
Daytime Bat Walkover Results
Sheet 4 of 11

FIGURE NUMBER

Figure 8-3-1

Revision: 0 Drawn: LP Checked: JW Approved: EW Date: 2024-10-16

Filename: I:\5004 - Information Systems\60698207_Fenwick_Solar_Farm\02_Maps\Environmental Statement\App8-3 Bat Report\ECO_BR_Fig8_3_1_Daytime_Bat_Walkover_Results_A3L_20241003_R0.mxd



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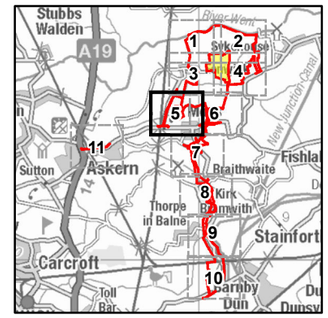
LEGEND

Order limits

Daytime Bat Walkover Potential Suitability

PRF

FAR



NOTES

ISSUE PURPOSE

Environmental Statement

PROJECT NUMBER

60698207

FIGURE TITLE

Daytime Bat Walkover Results
Sheet 5 of 11

FIGURE NUMBER

Figure 8-3-1

Revision: 0 Drawn: LP Checked: JW Approved: EW Date: 2024-10-16

Filename: I:\5004 - Information Systems\60698207_Fenwick_Solar_Farm\02_Maps\Environmental Statement\App8-3 Bat Report\ECO_BR_Fig8_3_1_Daytime_Bat_Walkover_Results_A3L_20241003_R0.mxd

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T204

Sheet 3
Sheet 4
Sheet 5
Sheet 7

N

1:5,000 @ A3

100 50 0 100 200 300 400 m

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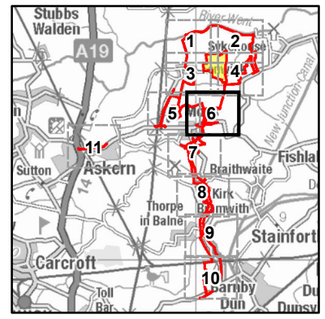
LEGEND
Order limits

Daytime Bat Walkover Potential Suitability
PRF
FAR



NOTES

ISSUE PURPOSE
Environmental Statement

PROJECT NUMBER
60698207

FIGURE TITLE
Daytime Bat Walkover Results
Sheet 6 of 11

FIGURE NUMBER
Figure 8-3-1

Revision: 0 Drawn: LP Checked: JW Approved: EW Date: 2024-10-16

Filename: I:\5004 - Information Systems\60698207_Fenwick_Solar_Farm\02_Maps\Environmental Statement\App8-3 Bat Report\ECO_BR_Fig8_3_1_Daytime_Bat_Walkover_Results_A3L_20241003_R0.mxd

Sheet 5

Sheet 6

Sheet 8

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T224
T225

N

1:5,000 @ A3

100 50 0 100 200 300 400 m

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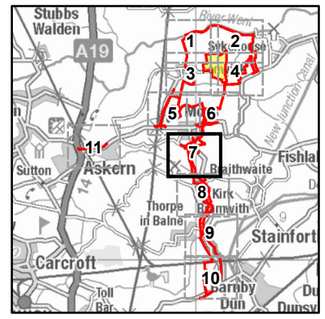
LEGEND

Order limits

Daytime Bat Walkover Potential Suitability

FAR



NOTES

ISSUE PURPOSE

Environmental Statement

PROJECT NUMBER

60698207

FIGURE TITLE

Daytime Bat Walkover Results
Sheet 7 of 11

FIGURE NUMBER

Figure 8-3-1

Revision: 0 Drawn: LP Checked: JW Approved: EW Date: 2024-10-16

Filename: I:\5004 - Information Systems\60698207_Fenwick_Solar_Farm\02_Maps\Environmental Statement\App8-3 Bat Report\ECO_BR_Fig8_3_1_Daytime_Bat_Walkover_Results_A3L_20241003_R0.mxd

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T253
T242
T252
T241
T239
T240

Sheet 7

Sheet 9

N

1:5,000 @ A3

100 50 0 100 200 300 400 m

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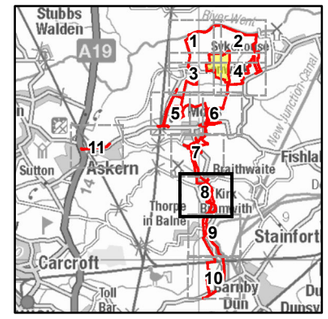
LEGEND

Order limits

Daytime Bat Walkover Potential Suitability

PRF

FAR



NOTES

ISSUE PURPOSE

Environmental Statement

PROJECT NUMBER

60698207

FIGURE TITLE

Daytime Bat Walkover Results
Sheet 8 of 11

FIGURE NUMBER

Figure 8-3-1

Revision: 0 Drawn: LP Checked: JW Approved: EW Date: 2024-10-16

Filename: I:\5004 - Information Systems\60698207_Fenwick_Solar_Farm\02_Maps\Environmental Statement\App8-3 Bat Report\ECO_BR_Fig8_3_1_Daytime_Bat_Walkover_Results_A3L_20241003_R0.mxd

Sheet 8

Sheet 10

T236

T235

T237

T230

T231

T232

T233

T234

N

1:5,000 @ A3

100 50 0 100 200 300 400 m

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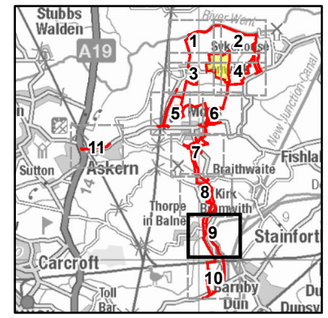
LEGEND

Order limits

Daytime Bat Walkover Potential Suitability

PRF

FAR



NOTES

ISSUE PURPOSE

Environmental Statement

PROJECT NUMBER

60698207

FIGURE TITLE

Daytime Bat Walkover Results
Sheet 9 of 11

FIGURE NUMBER

Figure 8-3-1

Revision: 0 Drawn: LP Checked: JW Approved: EW Date: 2024-10-16

Filename: I:\5004 - Information Systems\60698207_Fenwick_Solar_Farm\02_Maps\Environmental Statement\App8-3 Bat Report\ECO_BR_Fig8_3_1_Daytime_Bat_Walkover_Bat_Walkover_Results_A3L_20241003_R0.mxd

Sheet 9

N

1:5,000 @ A3

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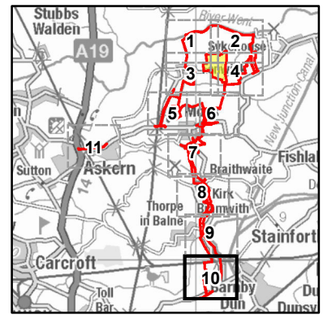

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LEGEND

Order limits

NOTES

ISSUE PURPOSE

Environmental Statement

PROJECT NUMBER

60698207

FIGURE TITLE

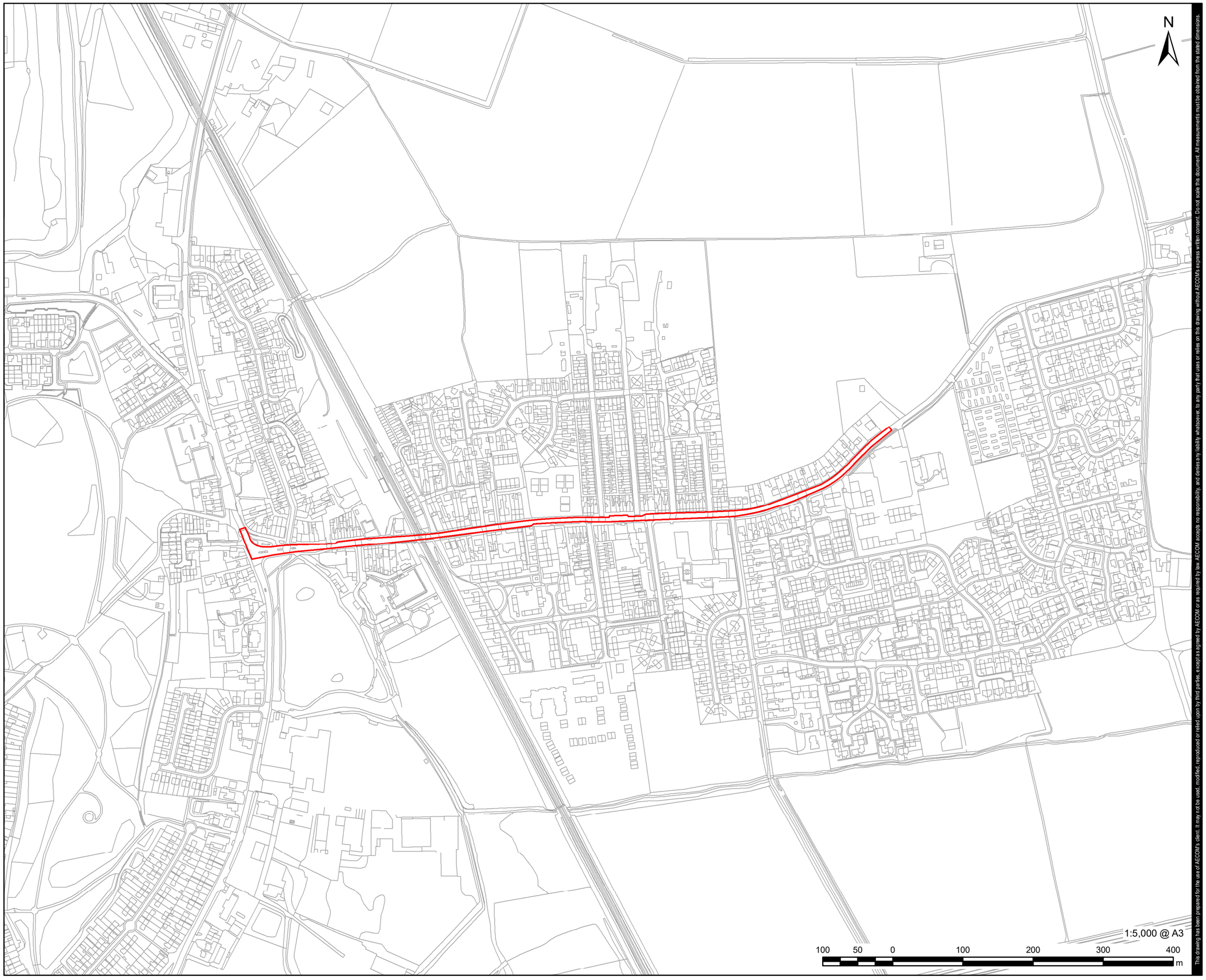
Daytime Bat Walkover Results
Sheet 10 of 11

FIGURE NUMBER

Figure 8-3-1

Revision: 0 Drawn: LP Checked: JW Approved: EW Date: 2024-10-16

Filename: I:\5004 - Information Systems\60698207_Fenwick_Solar_Farm\02_Maps\Environmental Statement\App8-3 Bat Report\ECO_BR_Fig8_3_1_Daytime_Bat_Walkover_Results_A3L_20241003_R0.mxd



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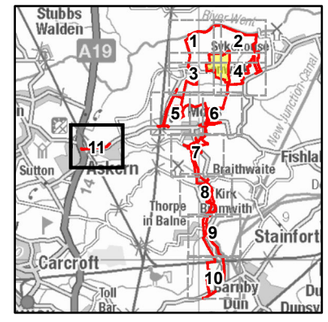
Order limits



NOTES

ISSUE PURPOSE

Environmental Statement

PROJECT NUMBER

60698207

FIGURE TITLE

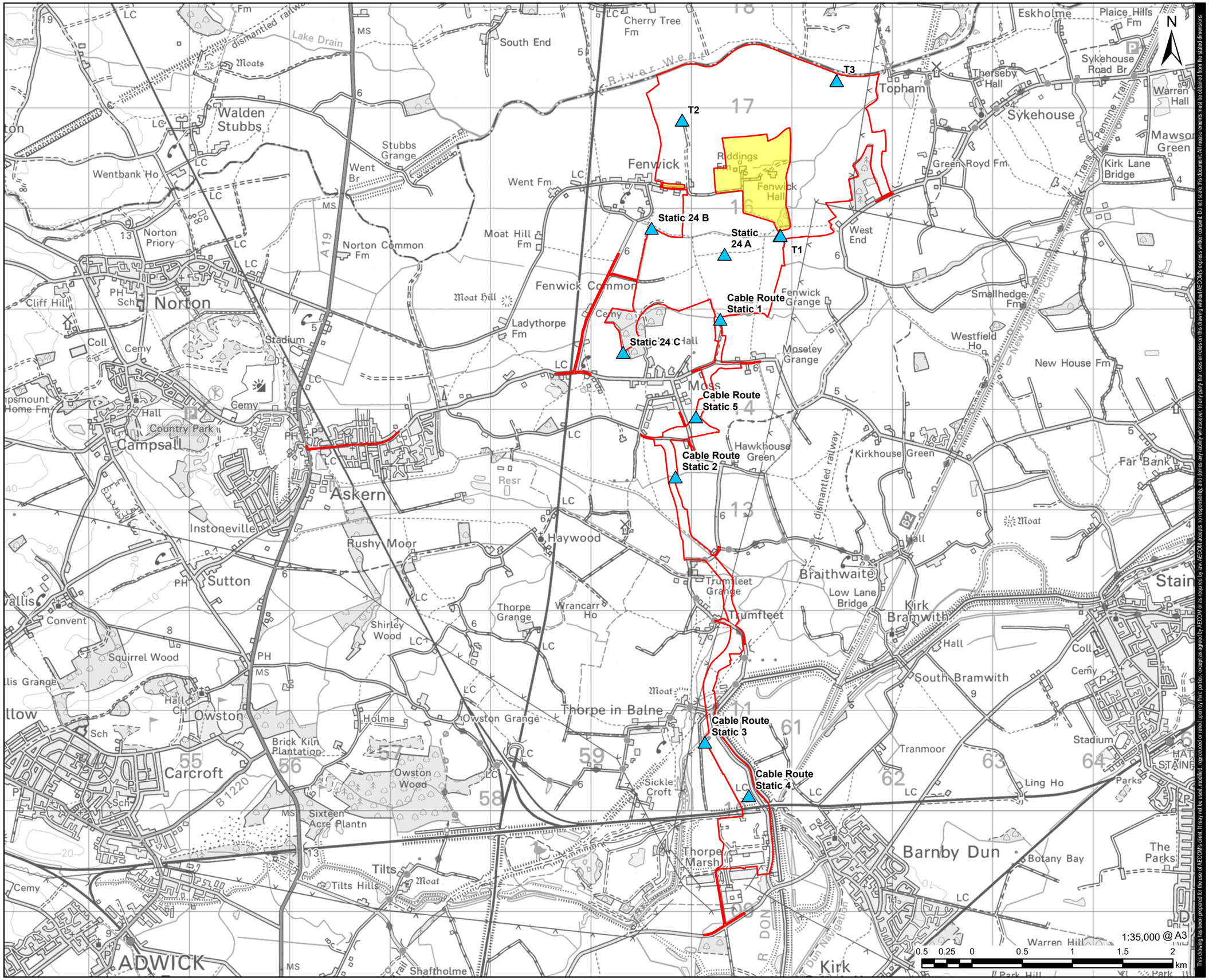
Daytime Bat Walkover Results
Sheet 11 of 11

FIGURE NUMBER

Figure 8-3-1

Revision: 0 Drawn: AR Checked: LP Approved: EW Date: 2024-10-16

Filename: I:\5004 - Information Systems\60698207_Fenwick_Solar_Farm\02_Maps\Environmental Statement\App8-3 Bat Report\ECO_BR_Fig8_3_2_Bat_Static_Locations_A3L_20241003_R0.aprx



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LEGEND

- Order limits
- Land not included in the Order limits
- Static Detector Location

NOTES

ISSUE PURPOSE

Environmental Statement

PROJECT NUMBER

60698207

FIGURE TITLE

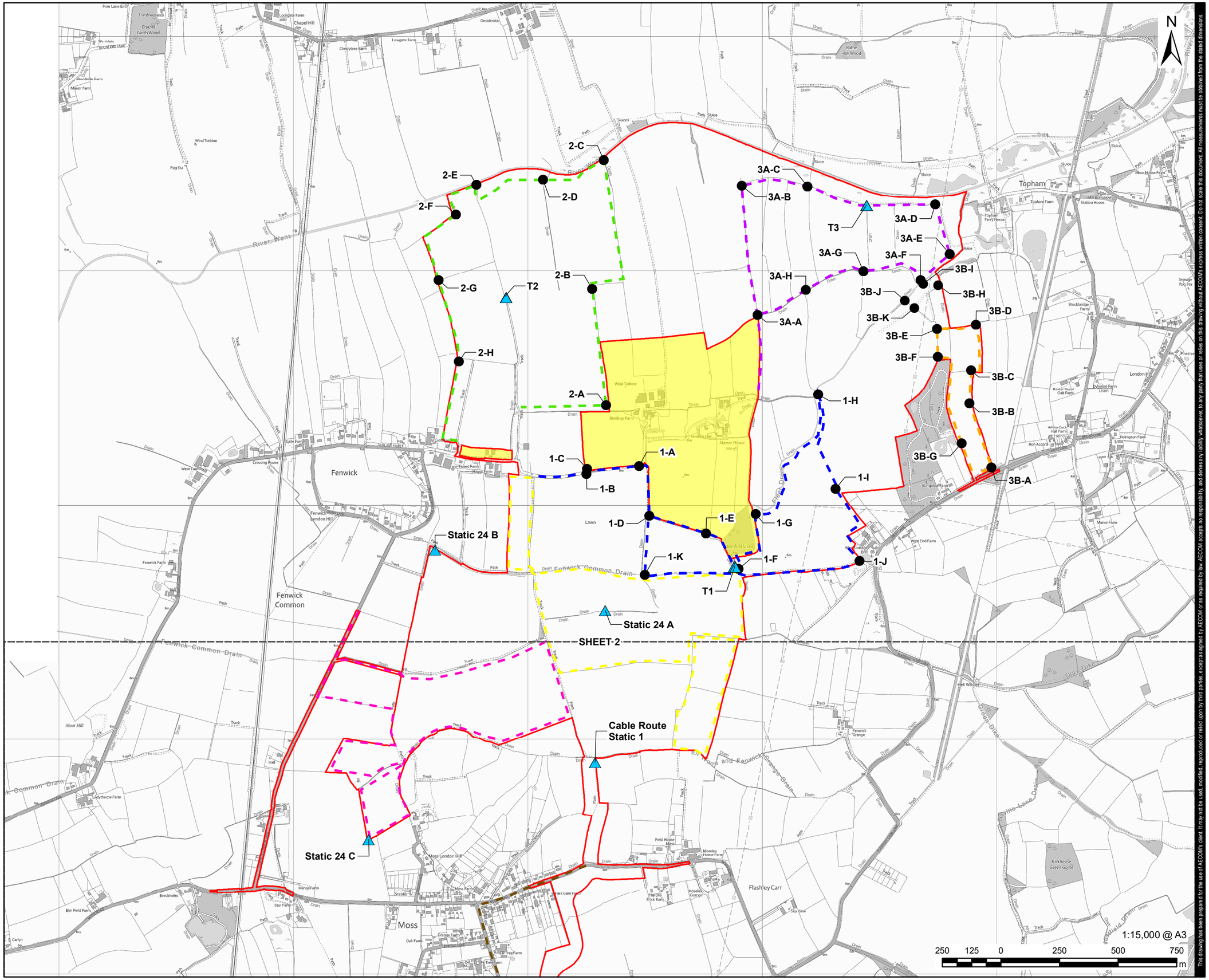
Static Detector Locations

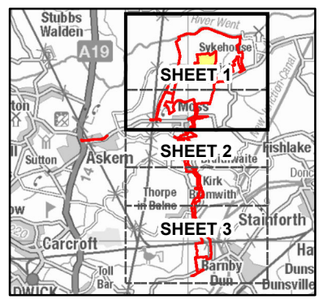
FIGURE NUMBER

Figure 8-3-2

Revision: 0 Drawn: LP Checked: JW Approved: EW Date: 2024-10-16

Filename: I:\5004 - Information Systems\60698207_Fenwick_Solar_Farm\02_Maps\Environmental Statement\App8-3 Bat Report\ECO_BR_Fig8_3_3_Bat_Activity_Overview_A3L_20241003_R0.mxd





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LEGEND

- Order limits
- Land not included in the Order limits
- Static Detector Location
- Stopping Point Location
- Transect 1
- Transect 2
- Transect 3a
- Transect 3b
- Transect 4
- Transect 5
- Transect 6

NOTES

ISSUE PURPOSE

Environmental Statement

PROJECT NUMBER

60698207

FIGURE TITLE

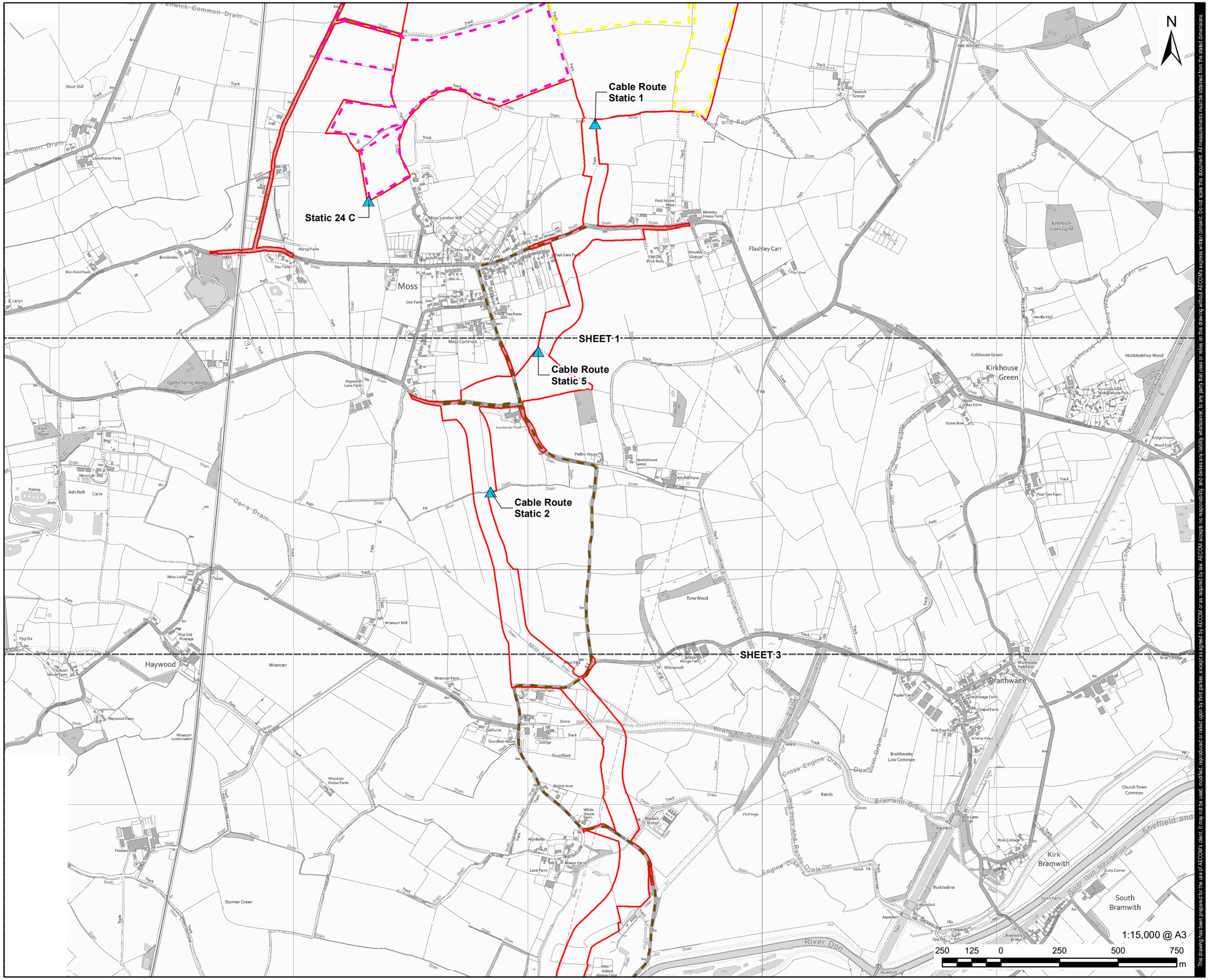
Bat Activity Overview
Sheet 1 of 3

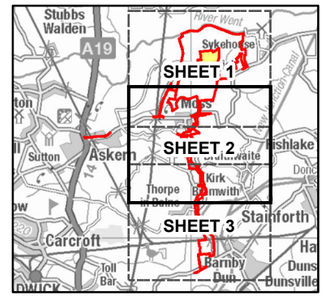
FIGURE NUMBER

Figure 8-3-3

Revision: 0 Drawn: LP Checked: JW Approved: EW Date: 2024-10-16

Filename: I:\5004 - Information Systems\60698207_Fenwick_Solar_Farm\02_Maps\Environmental Statement\App8-3 Bat Report\ECO_BR_Fig8_3_3_Bat_Activity_Overview_A3L_20241003_R0.mxd





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LEGEND

- Order limits
- Static Detector Location
- Transect 4
- Transect 5
- Transect 6

NOTES

ISSUE PURPOSE

Environmental Statement

PROJECT NUMBER

60698207

FIGURE TITLE

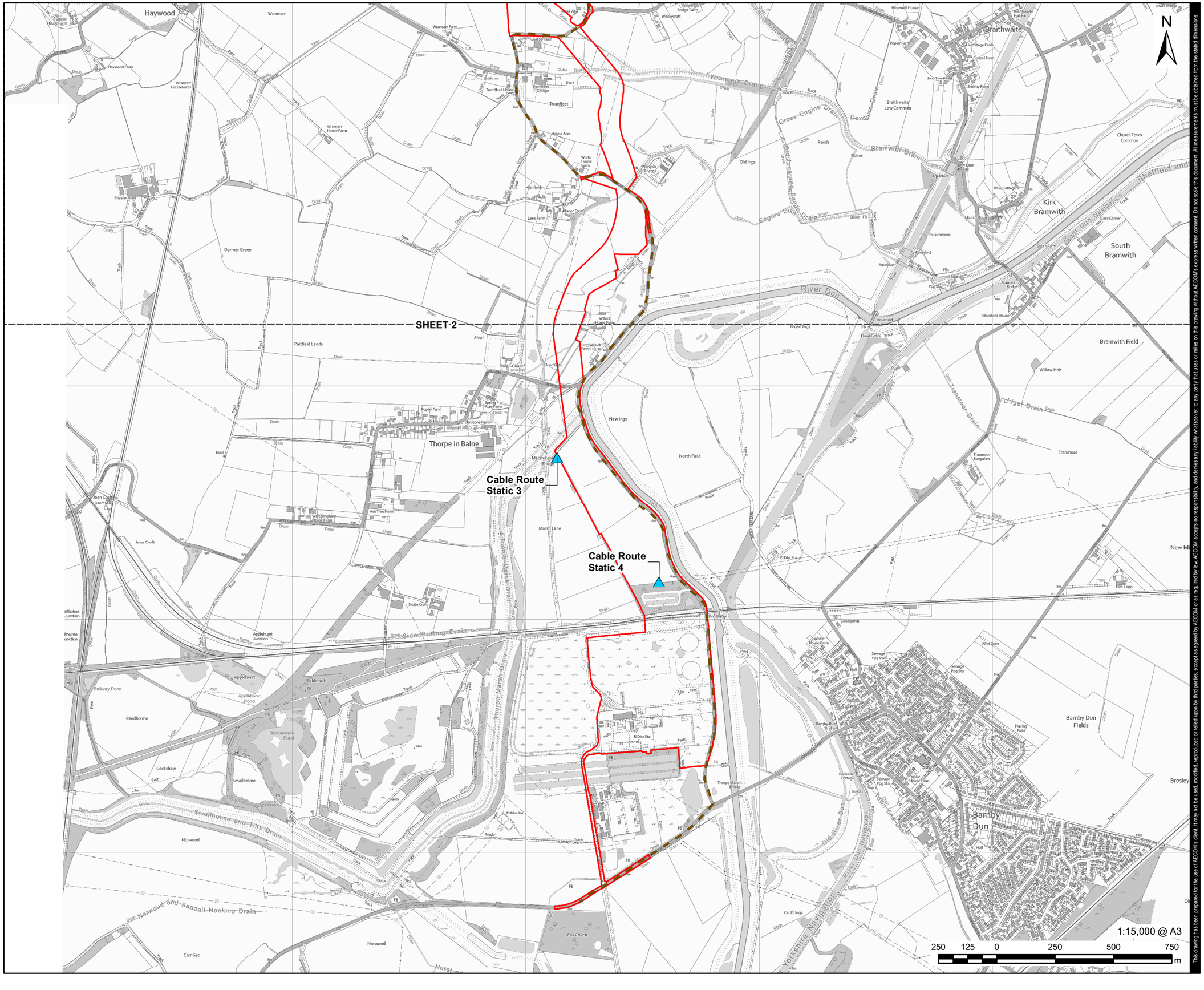
Bat Activity Overview
Sheet 2 of 3

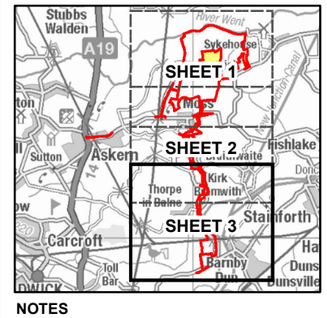
FIGURE NUMBER

Figure 8-3-3

Revision: 0 Drawn: LP Checked: JW Approved: EW Date: 2024-10-16

Filename: I:\5004 - Information Systems\60698207_Fenwick_Solar_Farm\02_Maps\Environmental Statement\App8-3 Bat Report\ECO_BR_Fig8_3_3_Bat_Activity_Overview_A3L_20241003_R0.mxd





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LEGEND

- Order limits
- Static Detector Location
- Transect 6

NOTES

ISSUE PURPOSE

Environmental Statement

PROJECT NUMBER

60698207

FIGURE TITLE

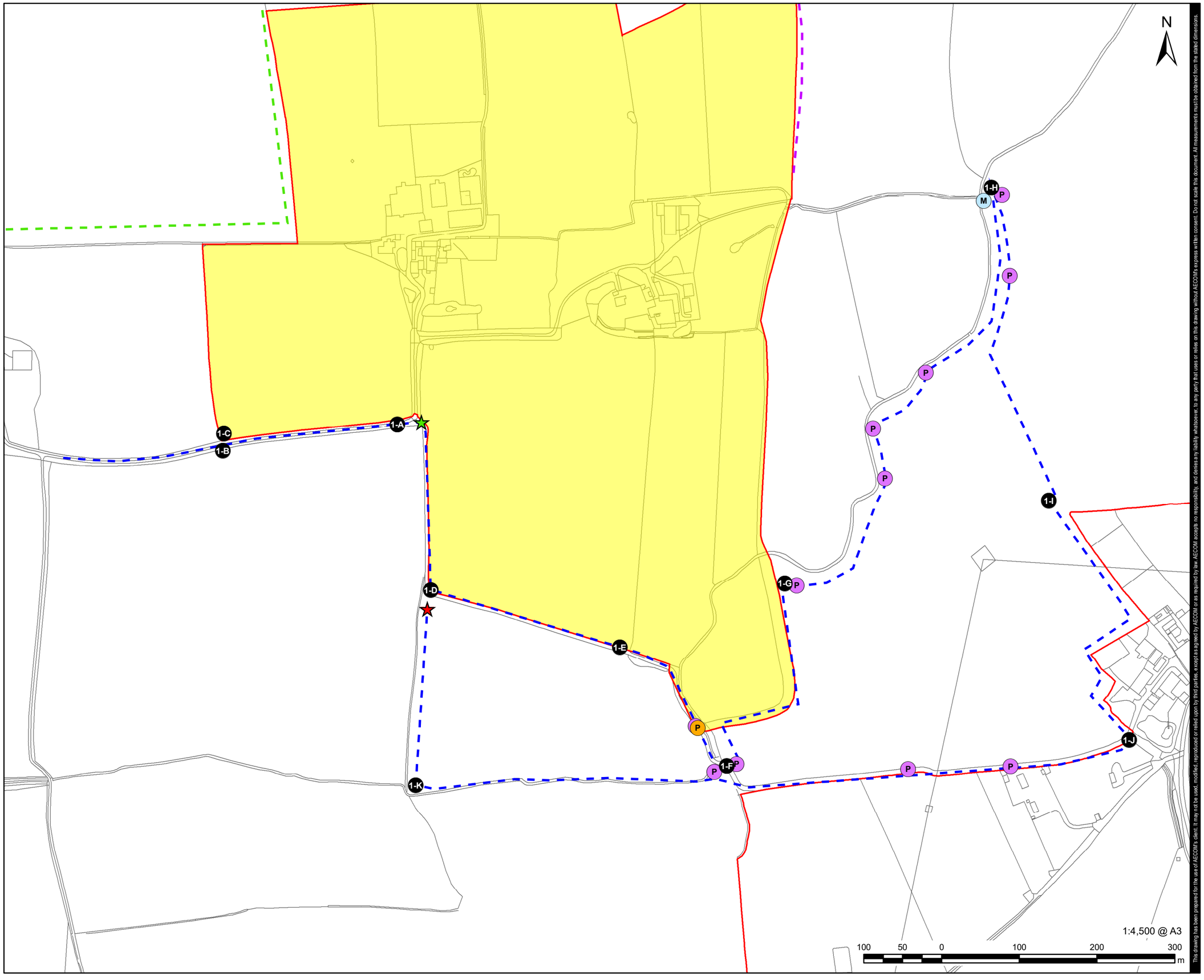
Bat Activity Overview
Sheet 3 of 3

FIGURE NUMBER

Figure 8-3-3

Revision: 0 Drawn: AR Checked: LP Approved: EW Date: 2024-10-16

Filename: I:\5004 - Information Systems\60698207_Fenwick_Solar_Farm\02_Maps\Environmental Statement\App8-3 Bat Report\ECO_BR_Fig8_3_4_Bat_Activity_Survey_Spring_Transect_1_A3L_20241003_R0.mxd



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LEGEND

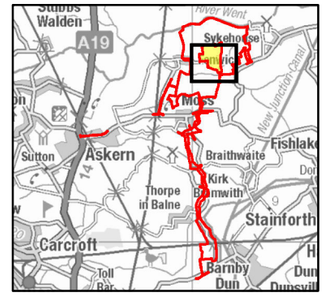
- Order limits
- Land not included in the Order limits
- Start Point
- End Point
- Location of Stopping Point
- Transect 1

Other Transect

- Transect 2
- Transect 3a

Bat Record

- M — Myotis sp.
- P — Pipistrellus pipistrellus
- P — Pipistrellus pygmaeus



NOTES

ISSUE PURPOSE

Environmental Statement

PROJECT NUMBER

60698207

FIGURE TITLE

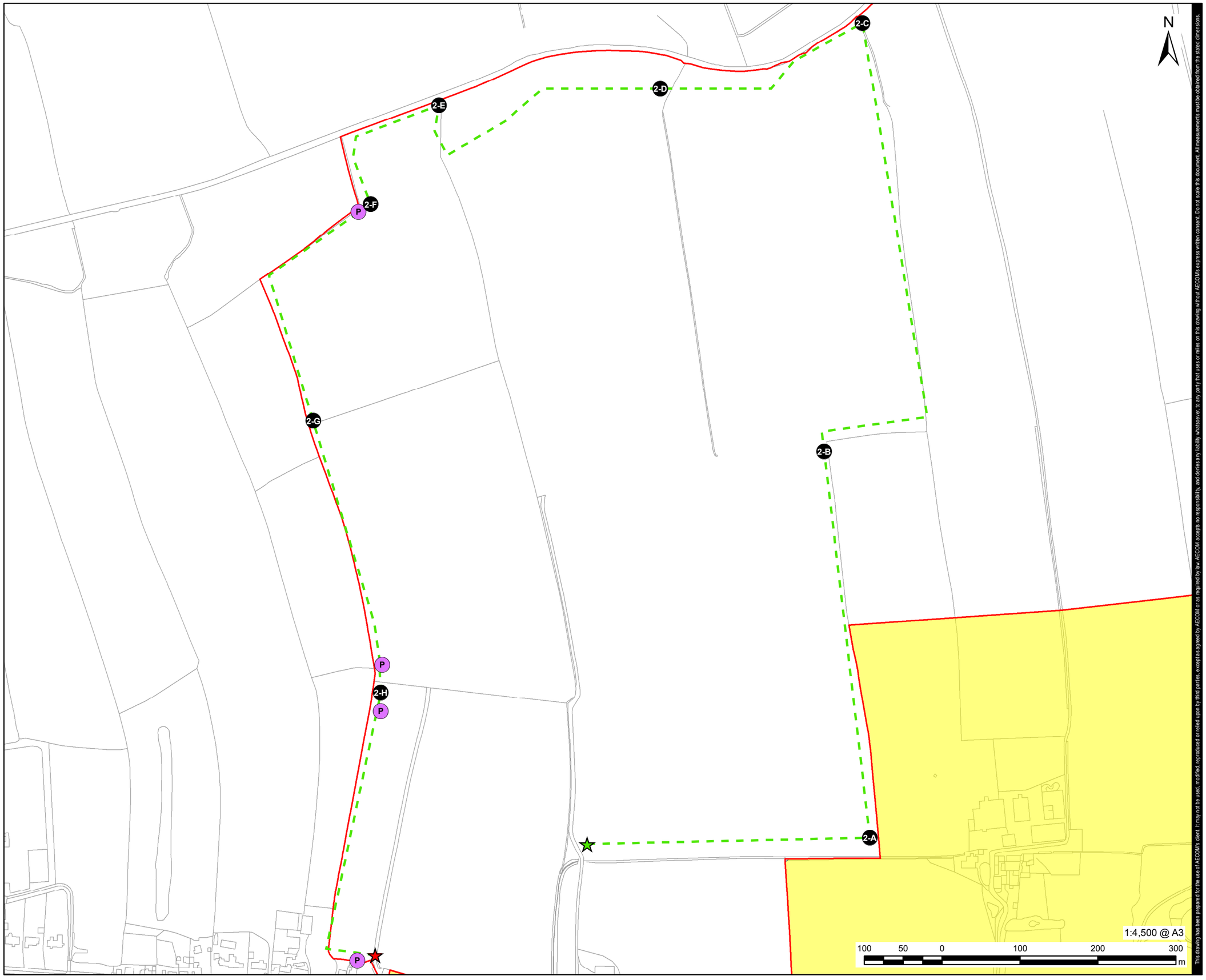
Bat Activity Survey, Spring - Transect 1

FIGURE NUMBER

Figure 8-3-4

Revision: 0 Drawn: AR Checked: LP Approved: EW Date: 2024-10-16

Filename: I:\5004 - Information Systems\60698207_Fenwick_Solar_Farm\02_Maps\Environmental Statement\App8-3 Bat Report\ECO_BR_Fig8_3_5_Bat_Activity_Survey_Spring_Transect_2_A3L_20241003_R0.mxd



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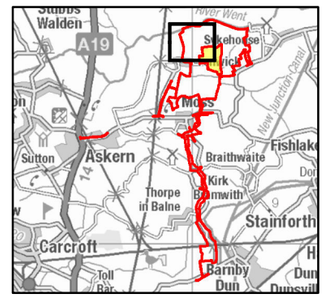
LEGEND

- Order limits
- Land not included in the Order limits
- Start Point
- End Point
- Location of Stopping Point
- Transect 2

Bat Record

- P — Pipistrellus pipistrellus



NOTES

ISSUE PURPOSE

Environmental Statement

PROJECT NUMBER

60698207

FIGURE TITLE

Bat Activity Survey, Spring - Transect 2

FIGURE NUMBER

Figure 8-3-5

Revision: 0 Drawn: AR Checked: LP Approved: EW Date: 2024-10-16

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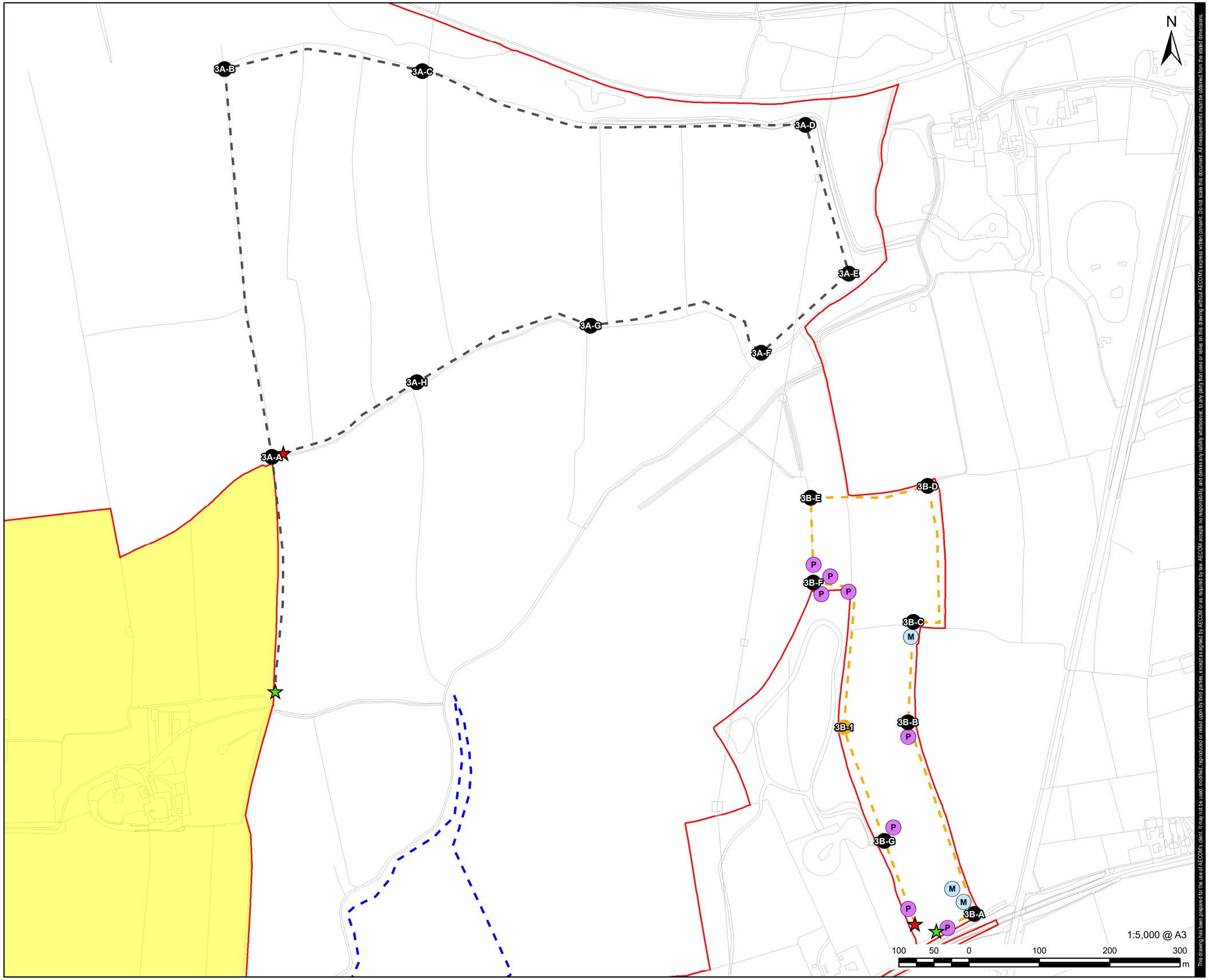

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LEGEND

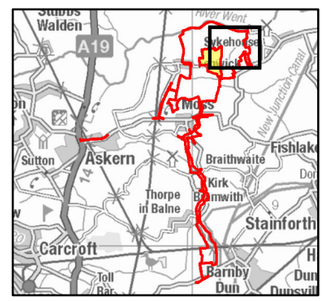
- Order limits
- Land not included in the Order limits
- Start Point
- End Point
- Location of Stopping Point
- Additional Stopping Point for Spring Visit
- Transect 3a (No Access)
- Transect 3b

Other Transect

- Transect 1

Bat Record

- M — Myotis sp.
- P — Pipistrellus pipistrellus



NOTES

ISSUE PURPOSE

Environmental Statement

PROJECT NUMBER

60698207

FIGURE TITLE

Bat Activity Survey, Spring - Transect 3

FIGURE NUMBER

Figure 8-3-6

Revision: 0 Drawn: LP Checked: JW Approved: EW Date: 2024-10-16

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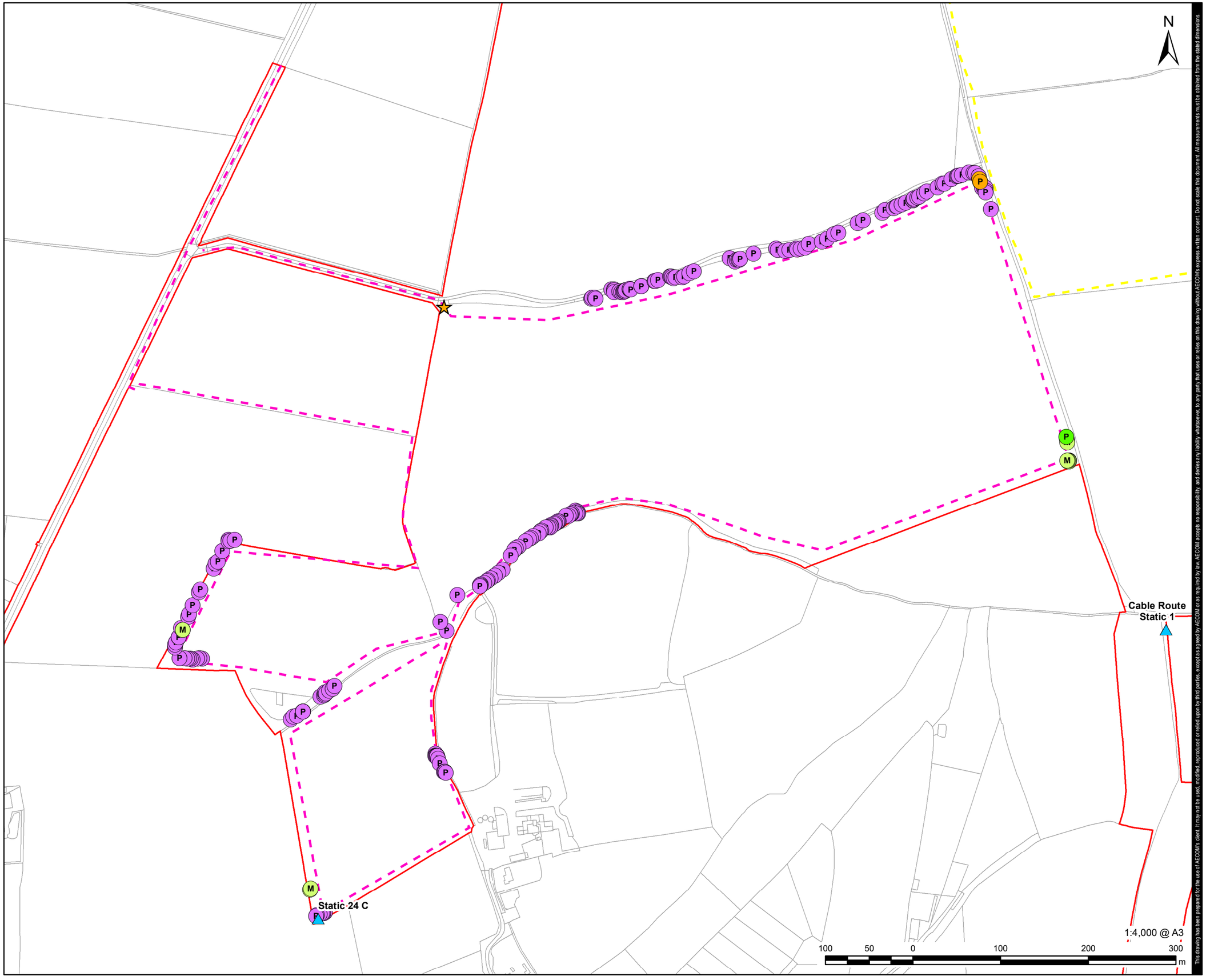

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LEGEND

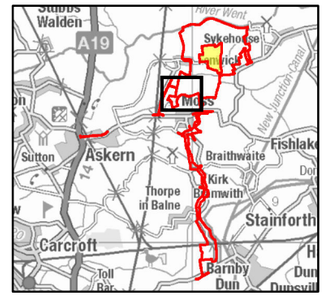
- Order limits
- Start & End Point
- Static Detector Location
- Transect 4

Other Transect

- Transect 5

Bat Record

- M — Myotis spec.
- P — Pipistrellus pipistrellus
- P — Pipistrellus pygmaeus
- P — Plecotus auritus



NOTES

ISSUE PURPOSE

Environmental Statement

PROJECT NUMBER

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FIGURE TITLE

Bat Activity Survey, Spring - Transect 4

FIGURE NUMBER

Figure 8-3-7

Revision: 0 Drawn: LP Checked: JW Approved: EW Date: 2024-10-16

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Static 24 A

Cable Route Static 1

N

1:4,500 @ A3

100 50 0 100 200 300 m

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LEGEND

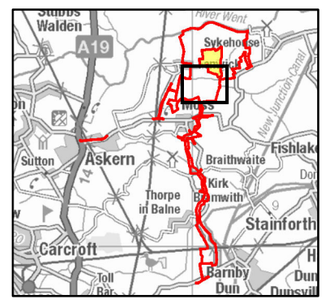
- Order limits
- Land not included in the Order limits
- Start & End Point
- Static Detector Location
- Transect 5

Other Transect

- Transect 1
- Transect 4

Bat Record

- M — Myotis spec.
- P — Pipistrellus pipistrellus
- P — Pipistrellus pygmaeus
- P — Plecotus auritus



NOTES

ISSUE PURPOSE

Environmental Statement

PROJECT NUMBER

60698207

FIGURE TITLE

Bat Activity Survey, Spring - Transect 5

FIGURE NUMBER

Figure 8-3-8

Cable Route
Static 5

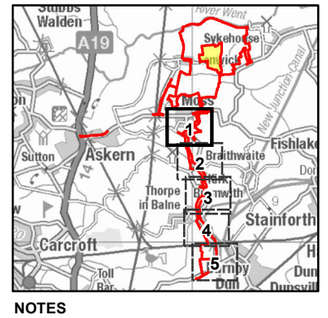
Cable Route
Static 2

SHEET 2

1:4,500 @ A3

100 50 0 100 200 300 m

N



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CLIENT
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CONSULTANT
AECOM Limited
Midpoint,
Alencon Link
Basingstoke, RG21 7PP
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LEGEND
- Order limits
- Start Point
- Static Detector Location
- Transect 6

Bat Record
- P — Pipistrellus pipistrellus

NOTES
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ISSUE PURPOSE
Environmental Statement

PROJECT NUMBER
60698207

FIGURE TITLE
Bat Activity Survey, Spring - Transect 6
Sheet 1 of 5

FIGURE NUMBER
Figure 8-3-9

Revision: 0 Drawn: LP Checked: JW Approved: EW Date: 2024-10-16

Filename: I:\5004 - Information Systems\60698207_Fenwick_Solar_Farm\02_Maps\Environmental Statement\App8-3 Bat Report\ECO_BR_Fig8_3_9_Bat_Activity_Survey_Spring_Transect_6_A3L_20241003_R0.mxd

Revision: 0 Drawn: LP Checked: JW Approved: EW Date: 2024-10-16

Filename: I:\5004 - Information Systems\60698207_Fenwick_Solar_Farm\02_Maps\Environmental Statement\App8-3 Bat Report\ECO_BR_Fig8_3_9_Bat_Activity_Survey_Spring_Transect_6_A3L_20241003_R0.mxd

Cable Route
Static 2

SHEET 1

SHEET 3

N

1:4,500 @ A3

100 50 0 100 200 300 m

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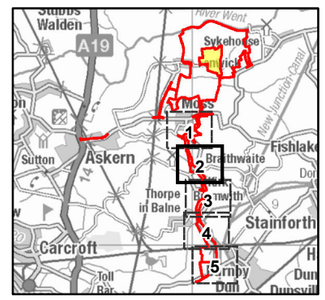
LEGEND

- Order limits
- Static Detector Location
- Transect 6

Bat Record

- P — Pipistrellus pipistrellus



NOTES

ISSUE PURPOSE

Environmental Statement

PROJECT NUMBER

60698207

FIGURE TITLE

Bat Activity Survey, Spring - Transect 6
Sheet 2 of 5

FIGURE NUMBER

Figure 8-3-9

Revision: 0 Drawn: LP Checked: JW Approved: EW Date: 2024-10-16

Filename: I:\5004 - Information Systems\60698207_Fenwick_Solar_Farm\02_Maps\Environmental Statement\App8-3 Bat Report\ECO_BR_Fig8_3_9_Bat_Activity_Survey_Spring_Transect_6_A3L_20241003_R0.mxd

SHEET 2

N

P

SHEET 4

1:4,500 @ A3

100 50 0 100 200 300 m

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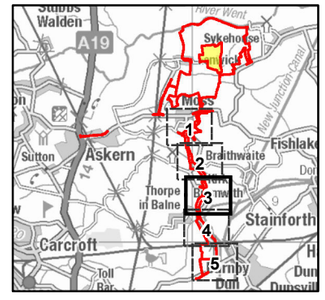
LEGEND

Order limits

Transect 6

Bat Record

P Pipistrellus pipistrellus



NOTES

ISSUE PURPOSE

Environmental Statement

PROJECT NUMBER

60698207

FIGURE TITLE

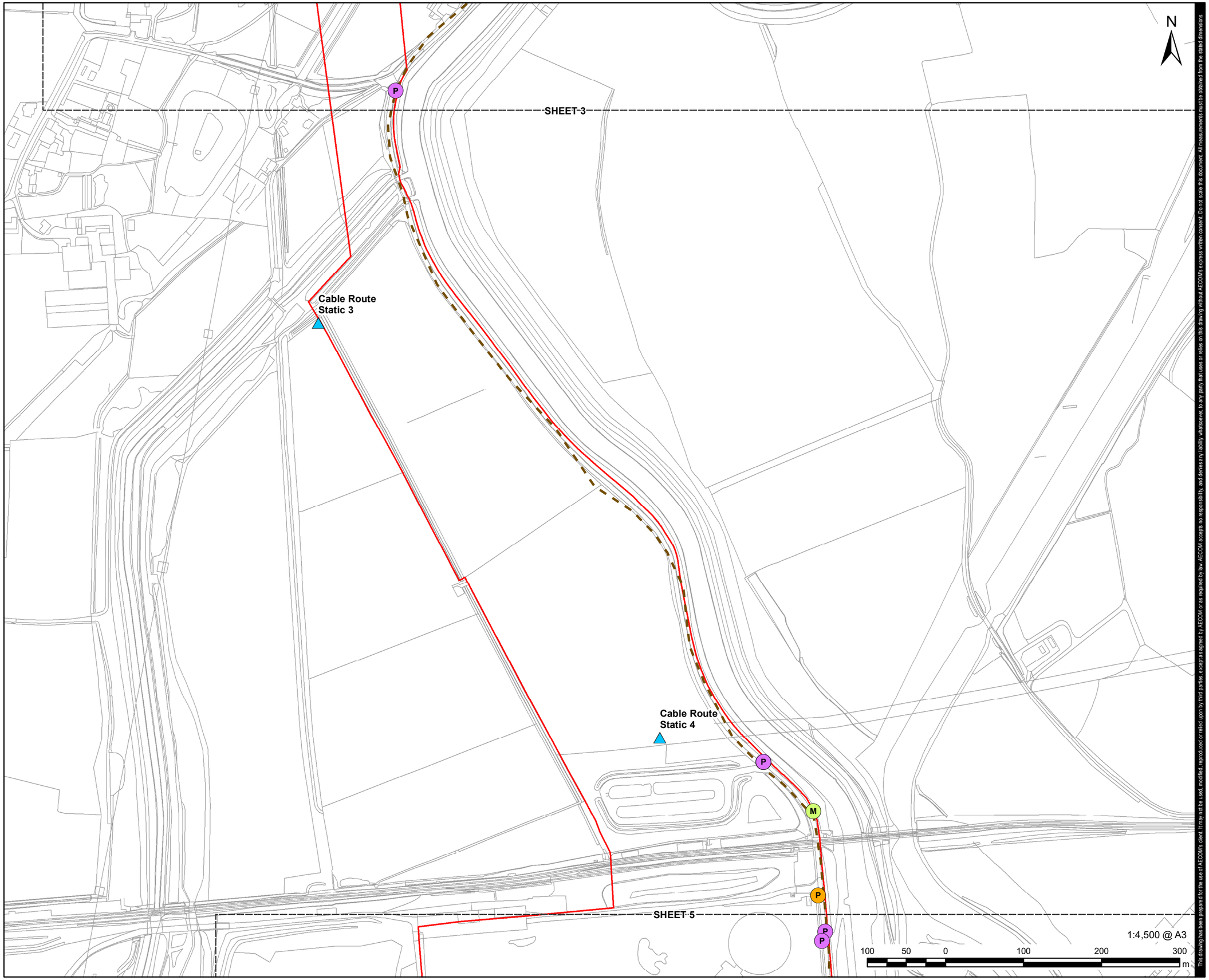
Bat Activity Survey, Spring - Transect 6
Sheet 3 of 5

FIGURE NUMBER

Figure 8-3-9

Revision: 0 Drawn: LP Checked: JW Approved: EW Date: 2024-10-16

Filename: I:\5004 - Information Systems\60698207_Fenwick_Solar_Farm\02_Maps\Environmental Statement\App8-3 Bat Report\ECO_BR_Fig8_3_9_Bat_Activity_Survey_Spring_Transect_6_A3L_20241003_R0.mxd



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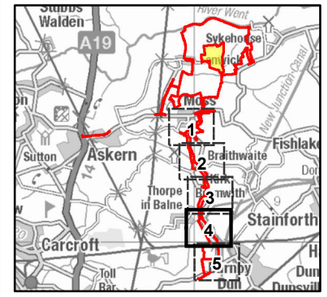
LEGEND

- Order limits
- Static Detector Location
- Transect 6

Bat Record

- M — Myotis spec.
- P — Pipistrellus pipistrellus
- P — Pipistrellus pygmaeus



NOTES

ISSUE PURPOSE

Environmental Statement

PROJECT NUMBER

60698207

FIGURE TITLE

Bat Activity Survey, Spring - Transect 6
Sheet 4 of 5

FIGURE NUMBER

Figure 8-3-9

Revision: 0 Drawn: LP Checked: JW Approved: EW Date: 2024-10-16

Filename: I:\5004 - Information Systems\60698207_Fenwick_Solar_Farm\02_Maps\Environmental Statement\App8-3 Bat Report\ECO_BR_Fig8_3_9_Bat_Activity_Survey_Spring_Transect_6_A3L_20241003_R0.mxd

SHEET 4

N

1:4,500 @ A3

100 50 0 100 200 300 m

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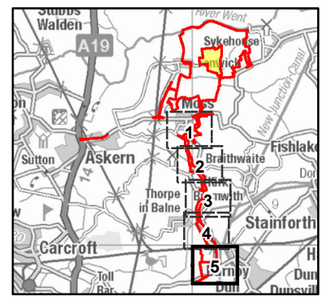
LEGEND

- Order limits
- End Point
- Transect 6

Bat Record

- P Pipistrellus pipistrellus
- P Pipistrellus pygmaeus



NOTES

ISSUE PURPOSE

Environmental Statement

PROJECT NUMBER

60698207

FIGURE TITLE

Bat Activity Survey, Spring - Transect 6
Sheet 5 of 5

FIGURE NUMBER

Figure 8-3-9

Revision: 0 Drawn: AR Checked: LP Approved: EW Date: 2024-10-16

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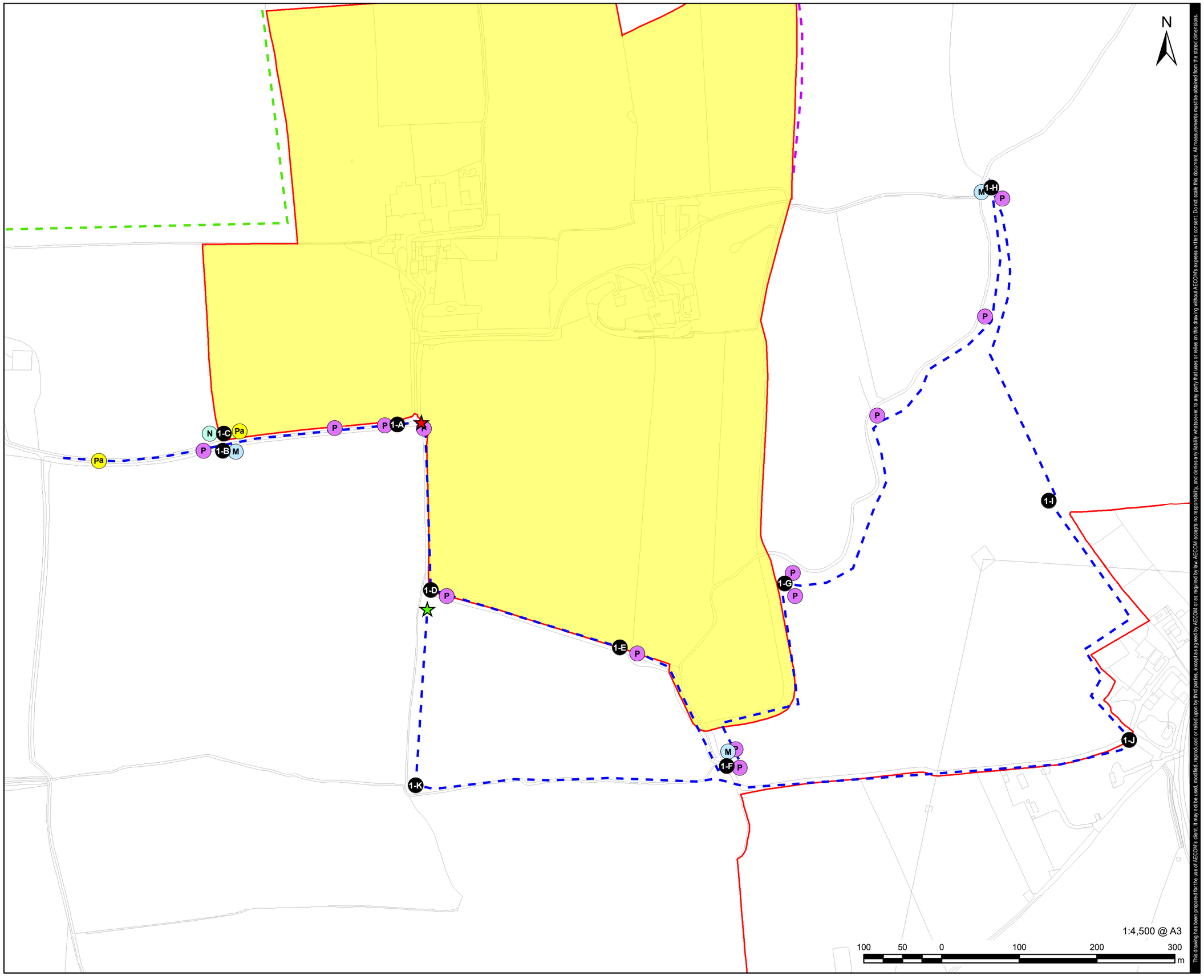

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LEGEND

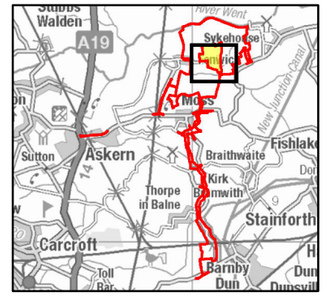
- Order limits
- Land not included in the Order limits
- End Point
- Start Point
- Location of Stopping Point
- Transect 1

Other Transect

- Transect 2
- Transect 3a

Bat Record

- M Myotis sp.
- N Nyctalus noctula
- P Pipistrellus pipistrellus
- Pa Plecotus auritus



NOTES

ISSUE PURPOSE

Environmental Statement

PROJECT NUMBER

60698207

FIGURE TITLE

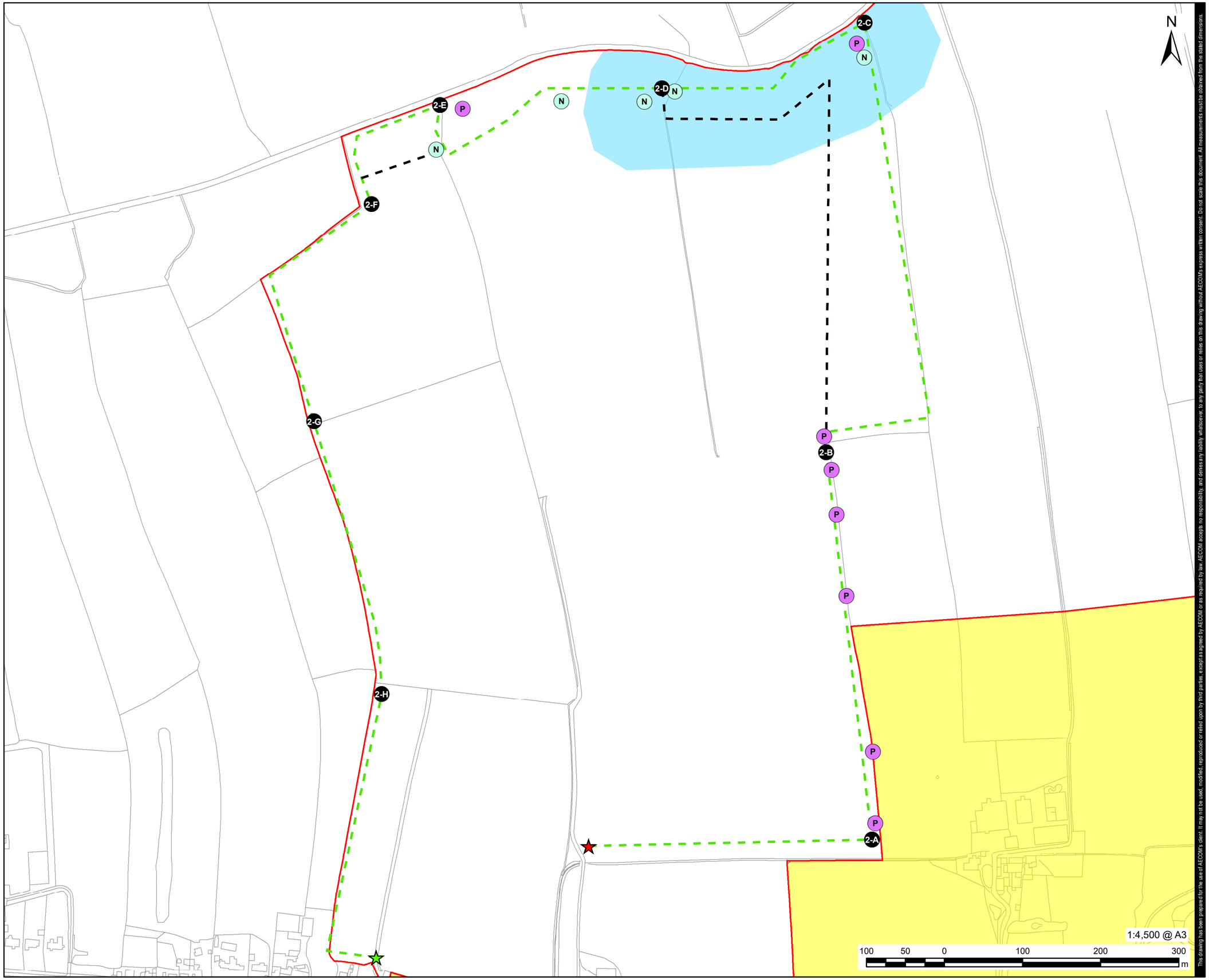
Bat Activity Survey, Summer - Transect 1

FIGURE NUMBER

Figure 8-3-10

Revision: 0 Drawn: AR Checked: LP Approved: EW Date: 2024-10-16

Filename: I:\5004 - Information Systems\60698207_Fenwick_Solar_Farm\02_Maps\Environmental Statement\App8-3 Bat Report\ECO_BR_Fig8_3_11_Bat_Activity_Survey_Summer_Transect_2_A3L_20241003_R0.mxd



N

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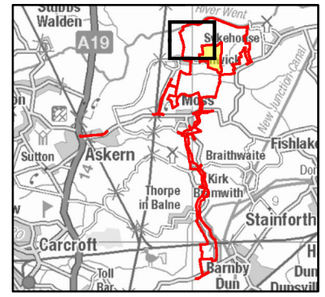
LEGEND

- Order limits
- Land not included in the Order limits
- Start Point
- End Point
- Location of Stopping Point
- Transect 2
- Diversion due to Flooding

Bat Record

- N Nyctalus noctula
- P Pipistrellus pipistrellus
- Flooded Area



NOTES

ISSUE PURPOSE

Environmental Statement

PROJECT NUMBER

60698207

FIGURE TITLE

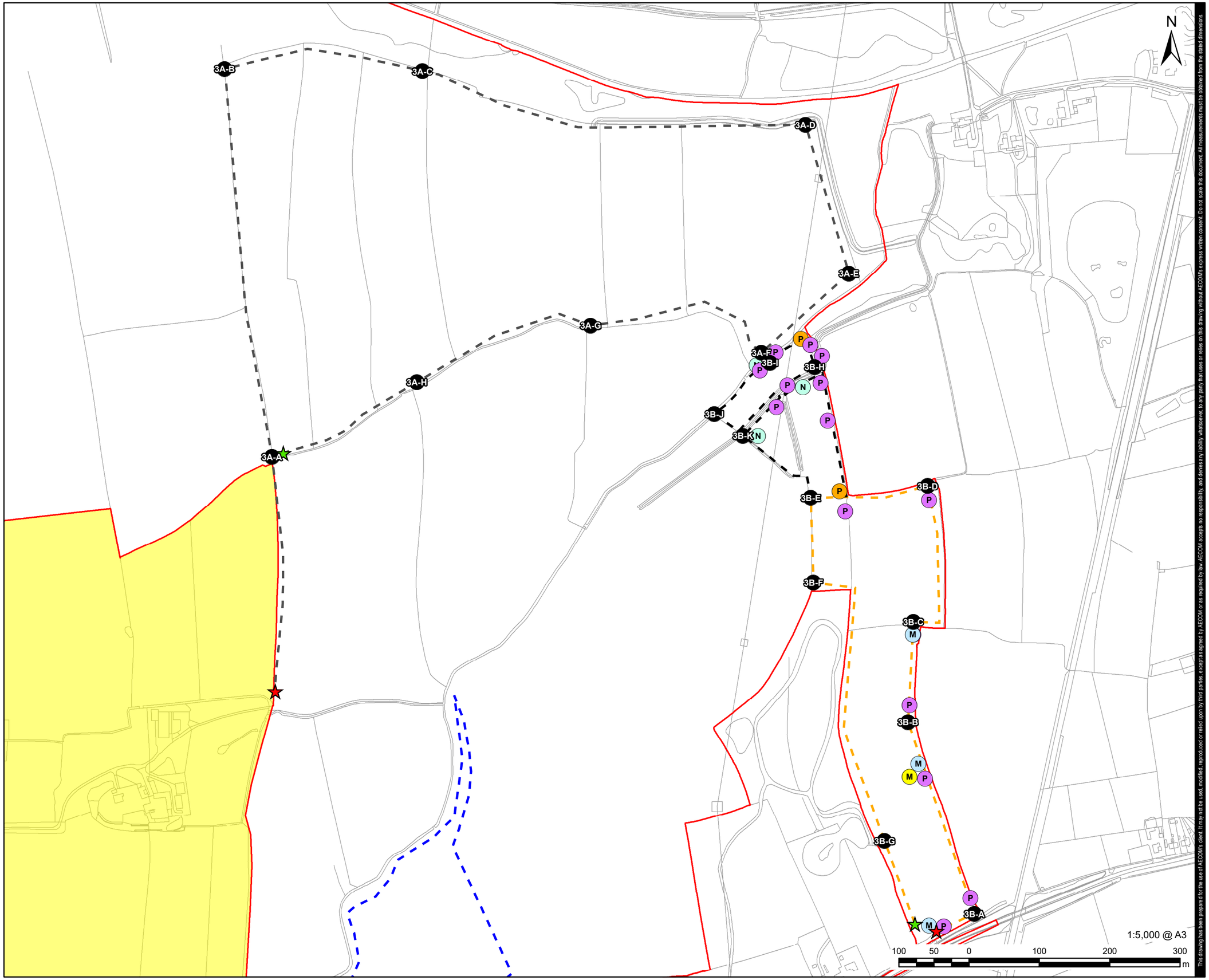
Bat Activity Survey, Summer - Transect 2

FIGURE NUMBER

Figure 8-3-11

Revision: 0 Drawn: LP Checked: EW Approved: TN Date: 2024-10-16

Filename: I:\5004 - Information Systems\60698207_Fenwick_Solar_Farm\02_Maps\Environmental Statement\App8-3 Bat Report\ECO_BR_Fig8_3_12_Bat_Activity_Survey_Summer_Transect_3_A3L_20241003_R0.mxd



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LEGEND

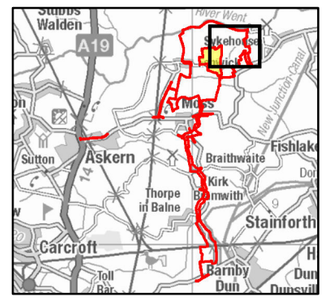
- Order limits
- Land not included in the Order limits
- Start Point
- End Point
- Location of Stopping Point
- Transect 3a (No Access)
- Transect 3b
- Diverted Route Used for Summer Visit for Transect 3b

Other Transect

- Transect 1

Bat Record

- M — Myotis daunbentonii
- M — Myotis sp.
- N — Nyctalus noctula
- P — Pipistrellus pipistrellus
- P — Pipistrellus pygmaeus



NOTES

ISSUE PURPOSE

Environmental Statement

PROJECT NUMBER

60698207

FIGURE TITLE

Bat Activity Survey, Summer - Transect 3

FIGURE NUMBER

Figure 8-3-12

Revision: 0 Drawn: LP Checked: JW Approved: EW Date: 2024-10-16

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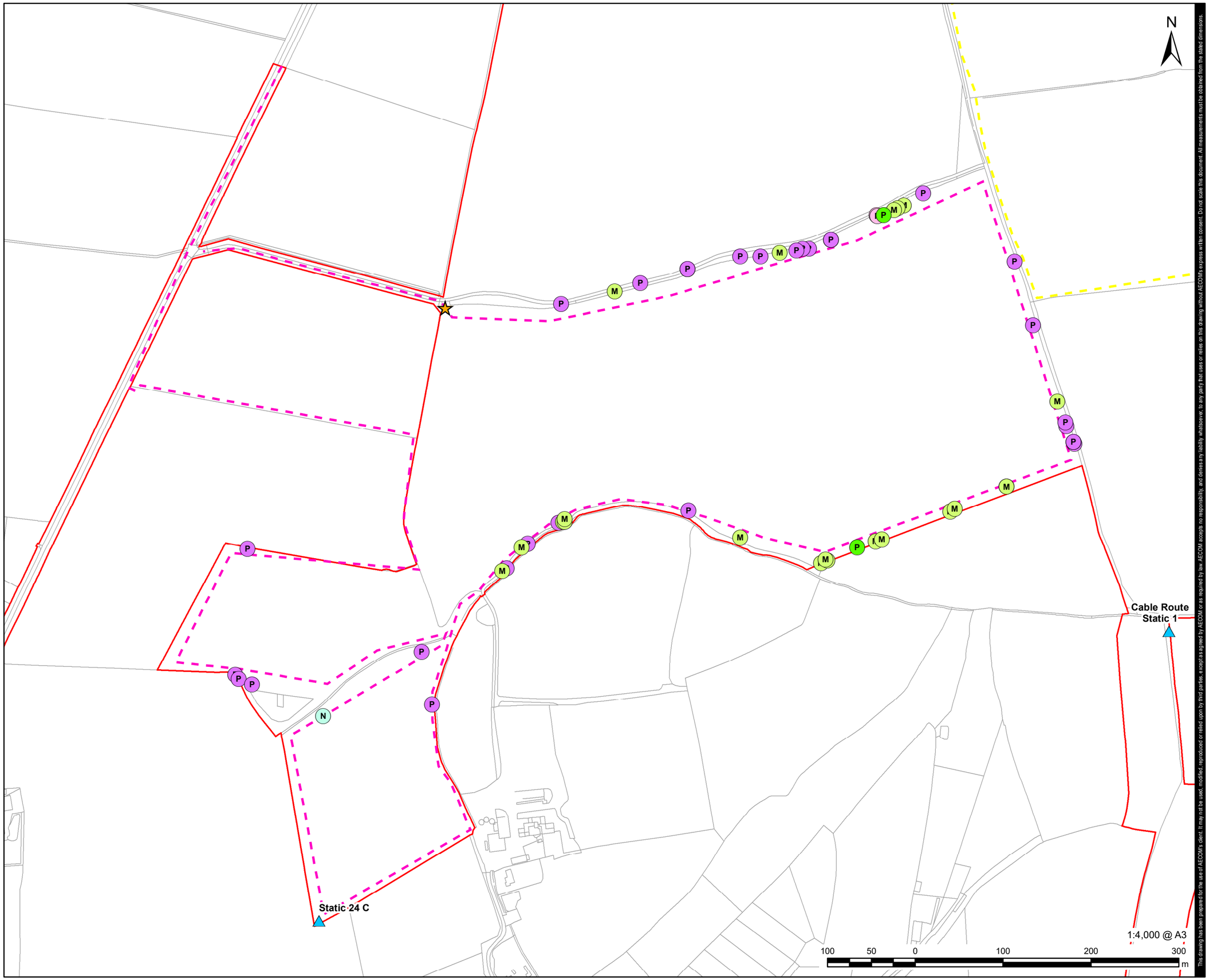

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LEGEND

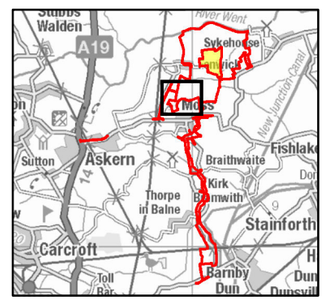
- Order limits
- Start & End Point
- Static Detector Location
- Transect 4

Other Transect

- Transect 5

Bat Record

- M — Myotis spec.
- N — Nyctalus leisleri
- N — Nyctalus noctula
- P — Pipistrellus pipistrellus
- P — Plecotus auritus



NOTES

ISSUE PURPOSE

Environmental Statement

PROJECT NUMBER

60698207

FIGURE TITLE

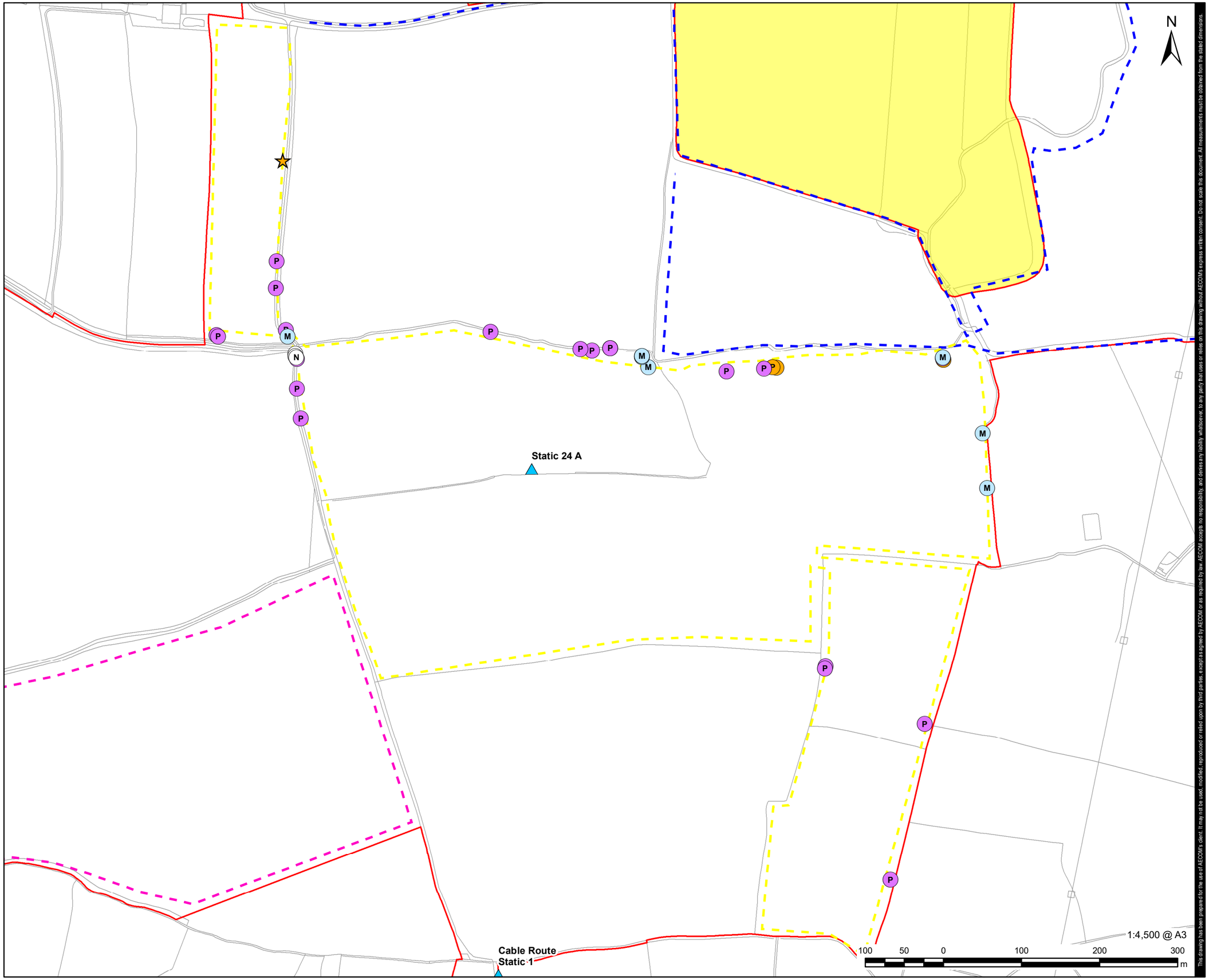
Bat Activity Survey, Summer - Transect 4

FIGURE NUMBER

Figure 8-3-13

Revision: 0 Drawn: LP Checked: JW Approved: EW Date: 2024-10-16

Filename: I:\5004 - Information Systems\60698207_Fenwick_Solar_Farm\02_Maps\Environmental Statement\App8-3 Bat Report\ECO_BR_Fig8_3_14_Bat_Activity_Survey_Summer_Transect_5_A3L_20241003_R0.mxd



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LEGEND

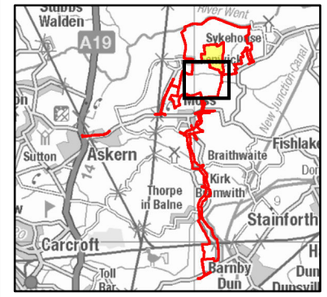
- Order limits
- Land not included in the Order limits
- Start & End Point
- Static Detector Location
- Transect 5

Other Transect

- Transect 1
- Transect 4

Bat Record

- M Myotis sp.
- N Nytalus noctula
- P Pipistrellus pipistrellus
- P Pipistrellus pygmaeus



NOTES

ISSUE PURPOSE

Environmental Statement

PROJECT NUMBER

60698207

FIGURE TITLE

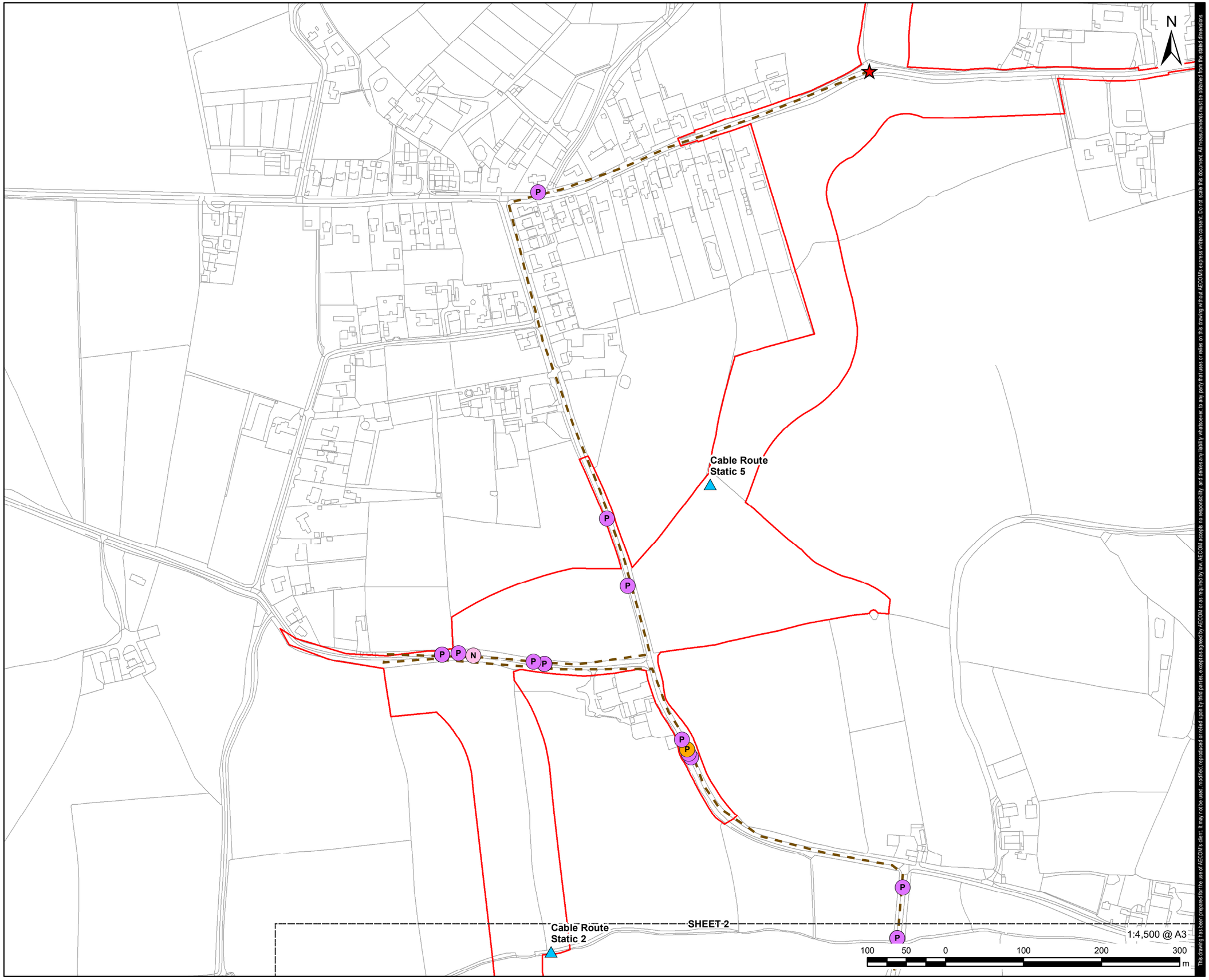
Bat Activity Survey, Summer - Transect 5

FIGURE NUMBER

Figure 8-3-14

Revision: 0 Drawn: LP Checked: JW Approved: EW Date: 2024-10-16

Filename: I:\5004 - Information Systems\60698207_Fenwick_Solar_Farm\02_Maps\Environmental Statement\App8-3 Bat Report\ECO_BR_Fig8_3_15_Bat_Activity_Survey_Summer_Transect_6_A3L_20241003_R0.mxd



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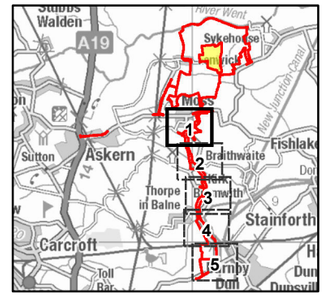
LEGEND

- Order limits
- End Point
- Static Detector Location
- Transect 6

Bat Record

- N — Nyctalus leisleri
- P — Pipistrellus pipistrellus
- P — Pipistrellus pygmaeus
- P — Plecotus auritus



NOTES

ISSUE PURPOSE

Environmental Statement

PROJECT NUMBER

60698207

FIGURE TITLE

Bat Activity Survey, Summer - Transect 6
Sheet 1 of 5

FIGURE NUMBER

Figure 8-3-15

Revision: 0 Drawn: LP Checked: JW Approved: EW Date: 2024-10-16

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Cable Route
Static 2

SHEET 1

SHEET 3

N

1:4,500 @ A3

100 50 0 100 200 300 m

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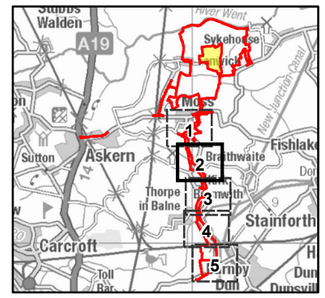
LEGEND

- Order limits
- Static Detector Location
- Transect 6

Bat Record

- P Pipistrellus pipistrellus
- P Plecotus auritus



NOTES

ISSUE PURPOSE

Environmental Statement

PROJECT NUMBER

60698207

FIGURE TITLE

Bat Activity Survey, Summer - Transect 6
Sheet 2 of 5

FIGURE NUMBER

Figure 8-3-15

Revision: 0 Drawn: LP Checked: JW Approved: EW Date: 2024-10-16

Filename: I:\5004 - Information Systems\60698207_Fenwick_Solar_Farm\02_Maps\Environmental Statement\App8-3 Bat Report\ECO_BR_Fig8_3_15_Bat_Activity_Survey_Summer_Transect_6_A3L_20241003_R0.mxd

SHEET 2

SHEET 4

N

P

P

P

N

1:4,500 @ A3

100 50 0 100 200 300 m

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LEGEND

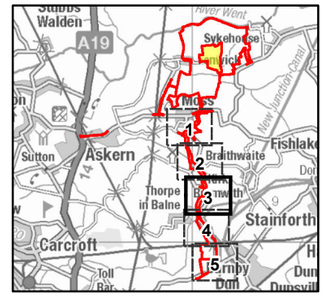
Order limits

Transect 6

Bat Record

N Nyctalus noctula

P Pipistrellus pipistrellus



NOTES

ISSUE PURPOSE

Environmental Statement

PROJECT NUMBER

60698207

FIGURE TITLE

Bat Activity Survey, Summer - Transect 6
Sheet 3 of 5

FIGURE NUMBER

Figure 8-3-15

Revision: 0 Drawn: LP Checked: JW Approved: EW Date: 2024-10-16

Filename: I:\5004 - Information Systems\60698207_Fenwick_Solar_Farm\02_Maps\Environmental Statement\App8-3 Bat Report\ECO_BR_Fig8_3_15_Bat_Activity_Survey_Summer_Transect_6_A3L_20241003_R0.mxd

N

SHEET 3

N

Cable Route
Static 3

Cable Route
Static 4

SHEET 5

1:4,500 @ A3

100 50 0 100 200 300 m

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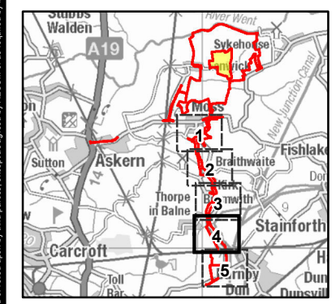
LEGEND

- Order limits
- Static Detector Location
- Transect 6

Bat Record

- N — Nyctalus noctula



NOTES

ISSUE PURPOSE

Environmental Statement

PROJECT NUMBER

60698207

FIGURE TITLE

Bat Activity Survey, Summer - Transect 6
Sheet 4 of 5

FIGURE NUMBER

Figure 8-3-15

Revision: 0 Drawn: LP Checked: JW Approved: EW Date: 2024-10-16

Filename: I:\5004 - Information Systems\60698207_Fenwick_Solar_Farm\02_Maps\Environmental Statement\App8-3 Bat Report\ECO_BR_Fig8_3_15_Bat_Activity_Survey_Summer_Transect_6_A3L_20241003_R0.mxd

SHEET 4

N

1:4,500 @ A3

100 50 0 100 200 300 m

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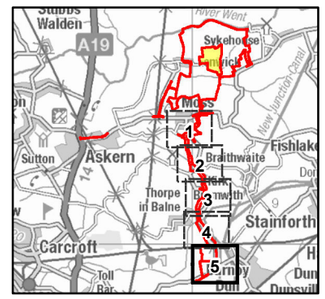
LEGEND

- Order limits
- Start Point
- Transect 6



NOTES

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Environmental Statement

PROJECT NUMBER

60698207

FIGURE TITLE

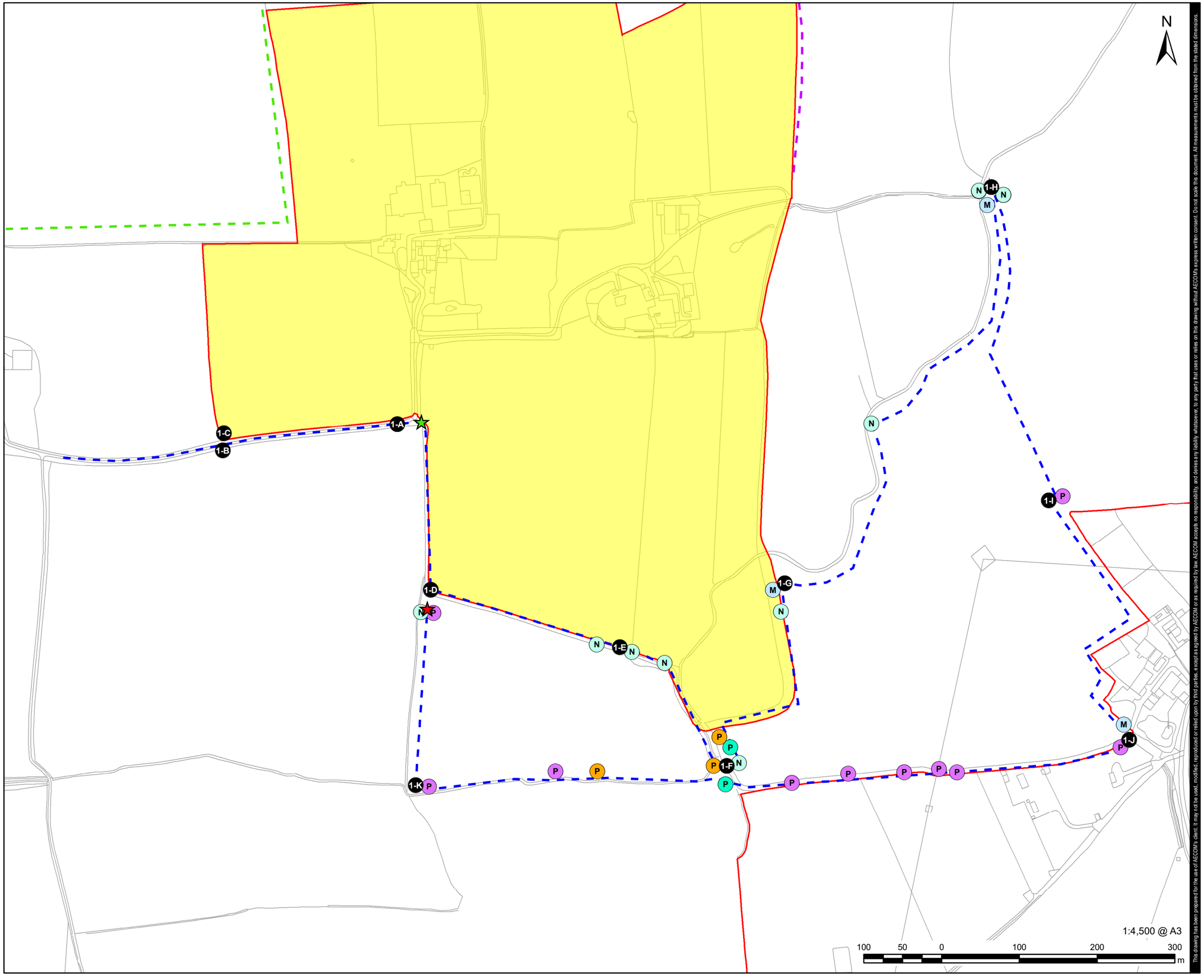
Bat Activity Survey, Summer - Transect 6
Sheet 5 of 5

FIGURE NUMBER

Figure 8-3-15

Revision: 0 Drawn: AR Checked: LP Approved: EW Date: 2024-10-16

Filename: I:\5004 - Information Systems\60698207_Fenwick_Solar_Farm\02_Maps\Environmental Statement\App8-3 Bat Report\ECO_BR_Fig8_3_16_Bat_Activity_Survey_Autumn_Transect_1_A3L_20241003_R0.mxd



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LEGEND

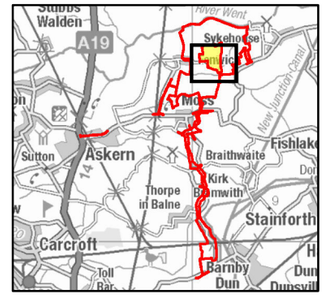
- Order limits
- Land not included in the Order limits
- Start Point
- End Point
- Location of Stopping Point
- Transect 1

Other Transect

- Transect 2
- Transect 3a

Bat Record

- M Myotis sp.
- N Nyctalus noctula
- P Pipistrellus pipistrellus
- P Pipistrellus pygmaeus
- P Pipistrellus species



NOTES

ISSUE PURPOSE

Environmental Statement

PROJECT NUMBER

60698207

FIGURE TITLE

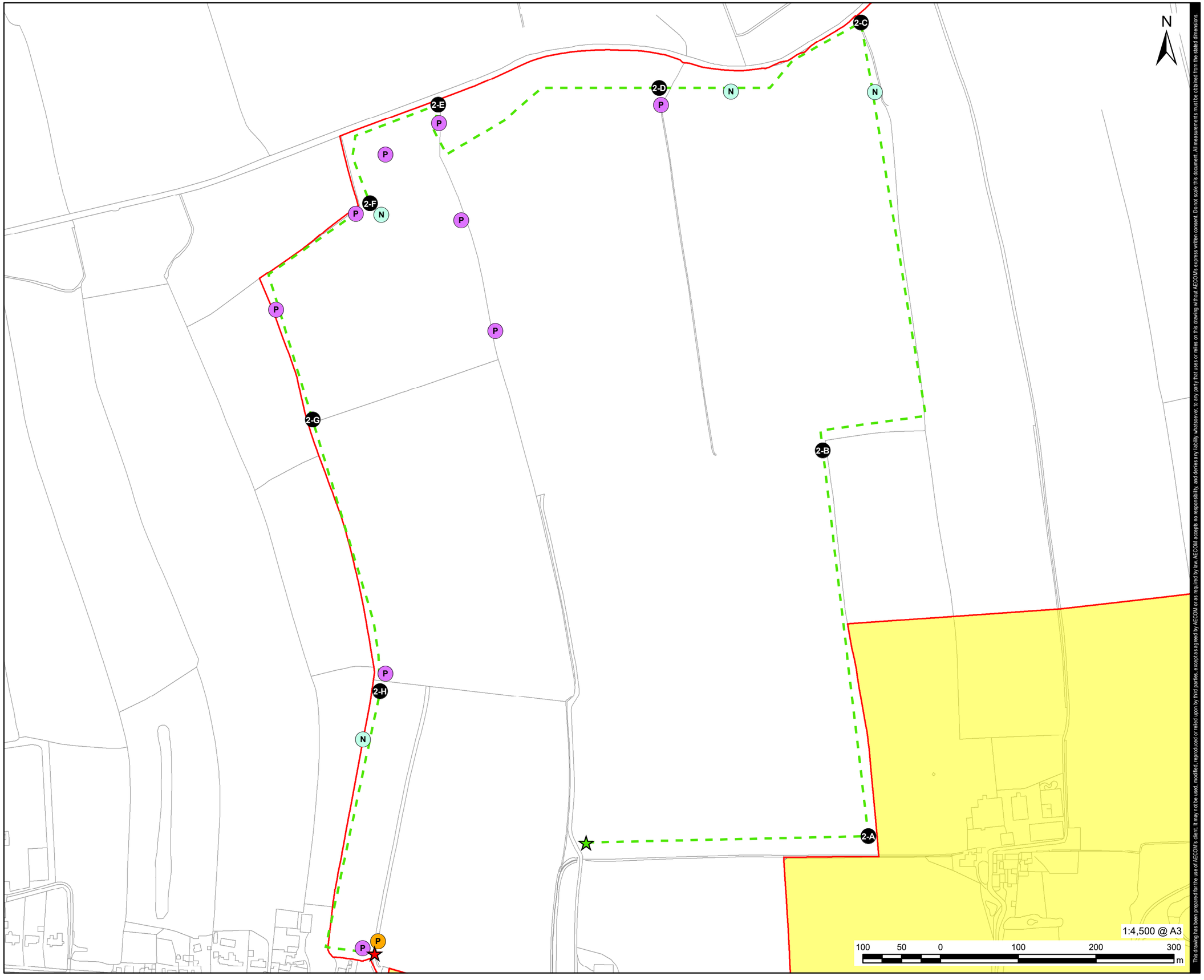
Bat Activity Survey, Autumn - Transect 1

FIGURE NUMBER

Figure 8-3-16

Revision: 0 Drawn: AR Checked: LP Approved: EW Date: 2024-10-16

Filename: I:\5004 - Information Systems\60698207_Fenwick_Solar_Farm\02_Maps\Environmental Statement\App8-3 Bat Report\ECO_BR_Fig8_3_17_Bat_Activity_Survey_Autumn_Transect_2_A3L_20241003_R0.mxd



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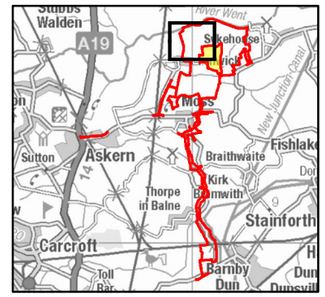
LEGEND

- Order limits
- Land not included in the Order limits
- Start Point
- End Point
- Location of Stopping Point
- Transect 2

Bat Record

- N — Nyctalus noctula
- P — Pipistrellus pipistrellus
- P — Pipistrellus pygmaeus



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ISSUE PURPOSE

Environmental Statement

PROJECT NUMBER

60698207

FIGURE TITLE

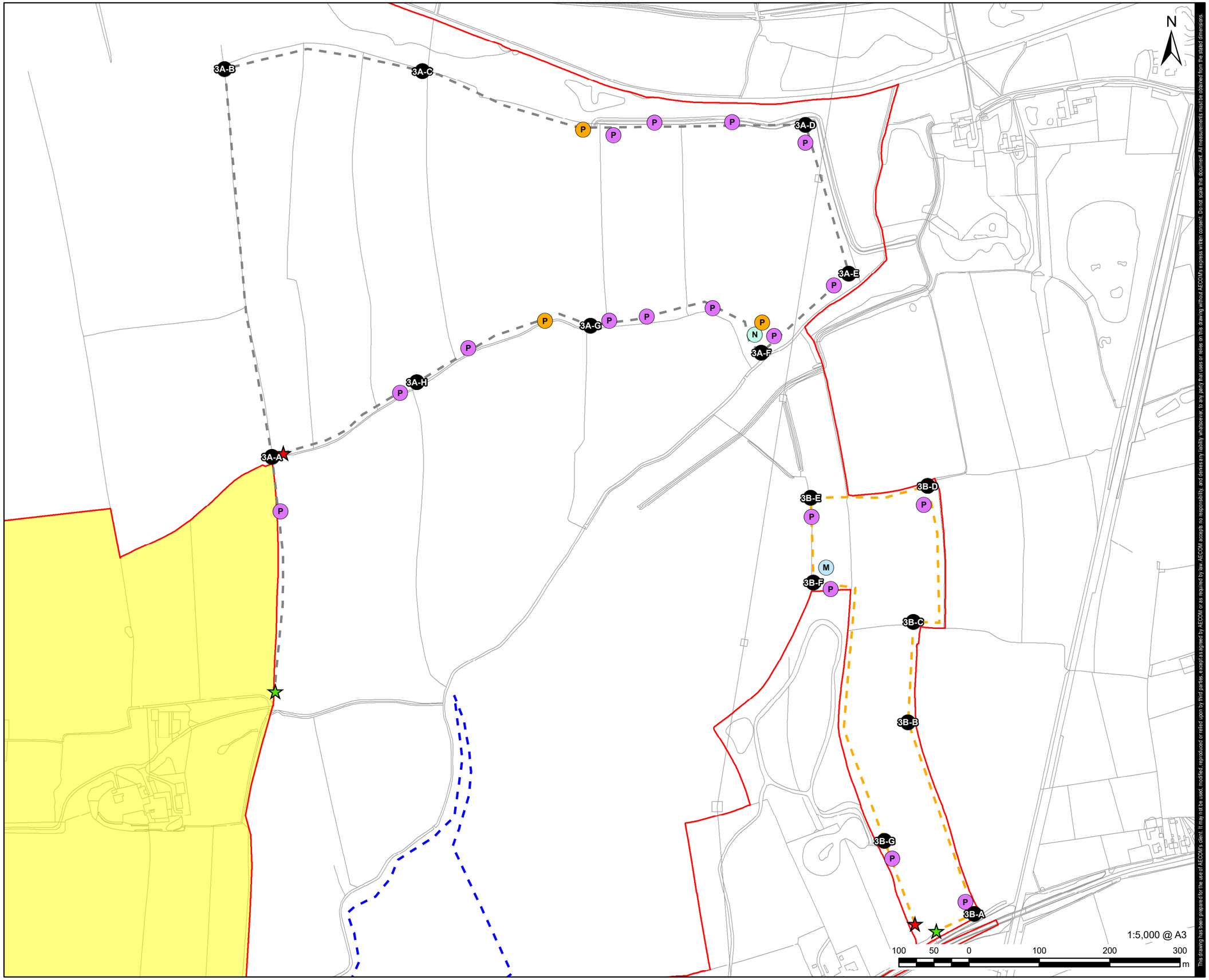
Bat Activity Survey, Autumn - Transect 2

FIGURE NUMBER

Figure 8-3-17

Revision: 0 Drawn: AR Checked: LP Approved: EW Date: 2024-10-16

Filename: I:\5004 - Information Systems\60698207_Fenwick_Solar_Farm\02_Maps\Environmental Statement\App8-3 Bat Report\ECO_BR_Fig8_3_18_Bat_Activity_Survey_Autumn_Transect_3_A3L_20240103_R0.mxd



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LEGEND

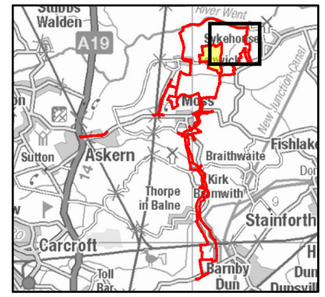
- Order limits
- Land not included in the Order limits
- Start Point
- End Point
- Location of Stopping Point
- Transect 3a (No Access)
- Transect 3b

Other Transect

- Transect 1

Bat Record

- M Myotis sp.
- N Nyctalus noctula
- P Pipistrellus pipistrellus
- P Pipistrellus pygmaeus



NOTES

ISSUE PURPOSE

Environmental Statement

PROJECT NUMBER

60698207

FIGURE TITLE

Bat Activity Survey, Autumn - Transect 3

FIGURE NUMBER

Figure 8-3-18

Revision: 0 Drawn: LP Checked: JW Approved: EW Date: 2024-10-16

Filename: I:\5004 - Information Systems\60698207_Fenwick_Solar_Farm\02_Maps\Environmental Statement\App8-3 Bat Report\ECO_BR_Fig8_3_19_Bat_Activity_Survey_Autumn_Transect_4_A3L_20241003_R0.mxd

N

Static 24 C

Cable Route Static 1

1:4,000 @ A3

100 50 0 100 200 300 m

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LEGEND

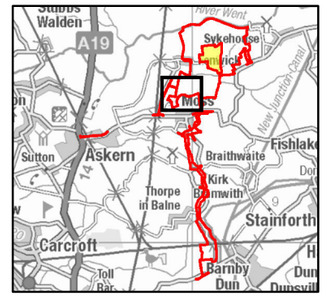
- Order limits
- Start & End Point
- Static Detector Location
- Transect 4

Other Transect

- Transect 5

Bat Record

- M — Myotis sp.
- N — Nytalus noctula
- P — Pipistrellus pipistrellus
- P — Pipistrellus pygmaeus



NOTES

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Environmental Statement

PROJECT NUMBER

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FIGURE TITLE

Bat Activity Survey, Autumn - Transect 4

FIGURE NUMBER

Figure 8-3-19

Revision: 0 Drawn: LP Checked: JW Approved: EW Date: 2024-10-16

Filename: I:\5004 - Information Systems\60698207_Fenwick_Solar_Farm\02_Maps\Environmental Statement\App8-3 Bat Report\ECO_BR_Fig8_3_20_Bat_Activity_Survey_Autumn_Transect_5_A3L_20241003_R0.mxd

Static 24 A

Cable Route Static 1

N

1:4,500 @ A3

100 50 0 100 200 300 m

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LEGEND

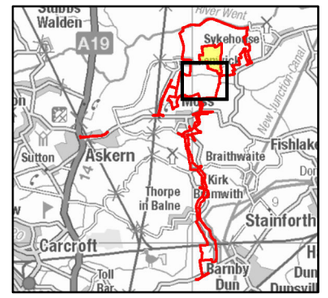
- Order limits
- Land not included in the Order limits
- Start & End Point
- Static Detector Location
- Transect 5

Other Transect

- Transect 1
- Transect 4

Bat Record

- M — Myotis spec.
- P — Pipistrellus pipistrellus



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Environmental Statement

PROJECT NUMBER

60698207

FIGURE TITLE

Bat Activity Survey, Autumn - Transect 5

FIGURE NUMBER

Figure 8-3-20

Revision: 0 Drawn: LP Checked: JW Approved: EW Date: 2024-10-16

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N

Cable Route
Static 5

Cable Route
Static 2

SHEET 2

1:4,500 @ A3

100 50 0 100 200 300 m

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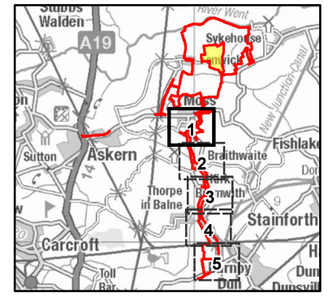
LEGEND

- Order limits
- Start Point
- Static Detector Location
- Transect 6

Bat Record

- M Myotis sp.
- P Pipistrellus pipistrellus



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ISSUE PURPOSE

Environmental Statement

PROJECT NUMBER

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FIGURE TITLE

Bat Activity Survey, Autumn - Transect 6
Sheet 1 of 5

FIGURE NUMBER

Figure 8-3-21

Revision: 0 Drawn: LP Checked: JW Approved: EW Date: 2024-10-16

Filename: I:\5004 - Information Systems\60698207_Fenwick_Solar_Farm\02_Maps\Environmental Statement\App8-3 Bat Report\ECO_BR_Fig8_3_21_Bat_Activity_Survey_Autumn_Transect_6_A3L_20241003_R0.mxd

Cable Route
Static 2

SHEET 1

SHEET 3

N

1:4,500 @ A3

100 50 0 100 200 300 m

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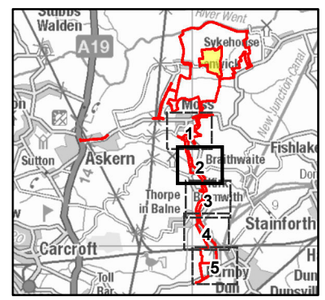
LEGEND

- Order limits
- Static Detector Location
- Transect 6

Bat Record

- N — Nytalus noctula
- P — Pipistrellus pipistrellus



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ISSUE PURPOSE

Environmental Statement

PROJECT NUMBER

60698207

FIGURE TITLE

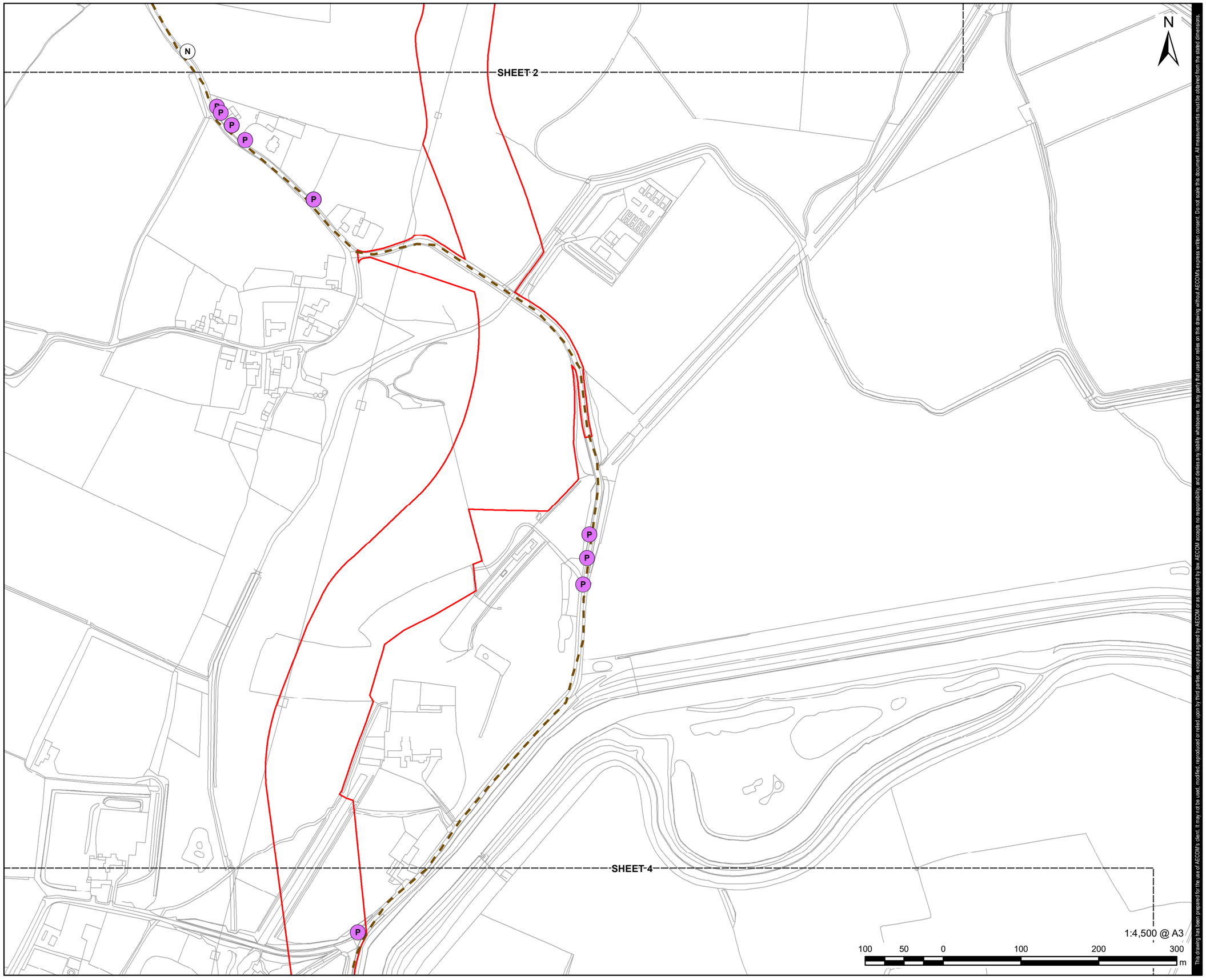
Bat Activity Survey, Autumn - Transect 6
Sheet 2 of 5

FIGURE NUMBER

Figure 8-3-21

Revision: 0 Drawn: LP Checked: JW Approved: EW Date: 2024-10-16

Filename: I:\5004 - Information Systems\60698207_Fenwick_Solar_Farm\02_Maps\Environmental Statement\App8-3 Bat Report\ECO_BR_Fig8_3_21_Bat_Activity_Survey_Autumn_Transect_6_A3L_20241003_R0.mxd



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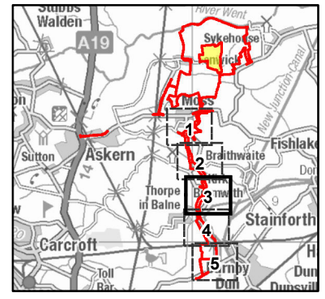
LEGEND

- Order limits
- Transect 6

Bat Record

- N — Nytalus noctula
- P — Pipistrellus pipistrellus



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Environmental Statement

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60698207

FIGURE TITLE

Bat Activity Survey, Autumn - Transect 6
Sheet 3 of 5

FIGURE NUMBER

Figure 8-3-21

Revision: 0 Drawn: LP Checked: JW Approved: EW Date: 2024-10-16

Filename: I:\5004 - Information Systems\60698207_Fenwick_Solar_Farm\02_Maps\Environmental Statement\App8-3 Bat Report\ECO_BR_Fig8_3_21_Bat_Activity_Survey_Autumn_Transect_6_A3L_20241003_R0.mxd

SHEET 3

N

P

Cable Route
Static 3

P

P

Cable Route
Static 4

SHEET 5

1:4,500 @ A3

100 50 0 100 200 300 m

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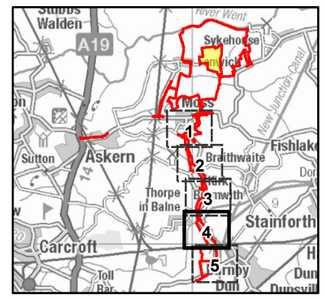
LEGEND

- Order limits
- Static Detector Location
- Transect 6

Bat Record

- P — Pipistrellus pipistrellus



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Environmental Statement

PROJECT NUMBER

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FIGURE TITLE

Bat Activity Survey, Autumn - Transect 6
Sheet 4 of 5

FIGURE NUMBER

Figure 8-3-21

SHEET 4

N

1:4,500 @ A3

100 50 0 100 200 300 m

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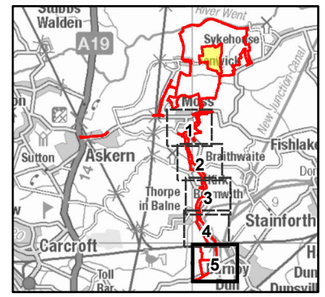
LEGEND

- Order limits
- End Point
- Transect 6

Bat Record

- P Pipistrellus pipistrellus
- P Pipistrellus pygmaeus



NOTES

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Environmental Statement

PROJECT NUMBER

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FIGURE TITLE

Bat Activity Survey, Autumn - Transect 6
Sheet 5 of 5

FIGURE NUMBER

Figure 8-3-21

Revision: 0 Drawn: LP Checked: JW Approved: EW Date: 2024-10-16

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~~Figure 8-3-1: Daytime Bat Walkover Results~~

~~Figure 8-3-2: Static Detector Locations~~

~~Figure 8-3-3: Bat Activity Overview~~

~~Figure 8-3-4: Bat Activity Survey, Spring – Transect 1~~

~~Figure 8-3-5: Bat Activity Survey, Spring – Transect 2~~

~~Figure 8-3-6: Bat Activity Survey, Spring – Transect 3~~

~~Figure 8-3-7: Bat Activity Survey, Spring – Transect 4~~

~~Figure 8-3-8: Bat Activity Survey, Spring – Transect 5~~

~~Figure 8-3-9: Bat Activity Survey, Spring – Transect 6~~

~~Figure 8-3-10: Bat Activity Survey, Summer – Transect 1~~

~~Figure 8-3-11: Bat Activity Survey, Summer – Transect 2~~

~~Figure 8-3-12: Bat Activity Survey, Summer – Transect 3~~

~~Figure 8-3-13: Bat Activity Survey, Summer – Transect 4~~

~~Figure 8-3-14: Bat Activity Survey, Summer – Transect 5~~

~~Figure 8-3-15: Bat Activity Survey, Summer – Transect 6~~

~~Figure 8-3-16: Bat Activity Survey, Autumn – Transect 1~~

~~Figure 8-3-17: Bat Activity Survey, Autumn – Transect 2~~

~~Figure 8-3-18: Bat Activity Survey, Autumn – Transect 3~~

~~Figure 8-3-19: Bat Activity Survey, Autumn – Transect 4~~

~~Figure 8-3-20: Bat Activity Survey, Autumn – Transect 5~~

~~Figure 8-3-21: Bat Activity Survey, Autumn – Transect 6~~

Annex B Daytime Bat Walkover (DBW) Survey Results

Feature Ref.	Grid Reference	Tree/group species	Tree Description	PRF Description (if applicable)	Suitability (NONE, FAR OR PRF)
T1	SE 59694 16679	Oak (*Quercus* sp.)	Immature (25-30 years old), single stem	West facing woodpecker hole, east facing split in trunk	PRF
T2	SE 59674 16784	Oak	Immature, single stem	South-east facing hole in trunk	PRF
T3	SE 59648 16861	Oak	Single stem	South-east facing hole and snapped branches	PRF
T4	SE 59617 16964	Oak	Single stem	Two south east facing broken branches; hazard beam on lower branch approx. 1 m from the ground	PRF
T5	SE 59599 17027	Oak	Single stem	South facing hole, 3 m high	PRF
T6	SE 61187 16897	Oak	Semi-mature, single stem	South facing hole in an east facing branch.	PRF
T7	SE 59682 17239	Willow (*Salix* sp.)	Some deadwood, single stemmed	Many cracks in trunk, snapped branches	PRF

Feature Ref.	Grid Reference	Tree/group species	Tree Description	PRF Description (if applicable)	Suitability (NONE, FAR OR PRF)
T8	SE 59856 17047	Ash (*Fraxinus* sp.)	Standing deadwood, single stem	Large trunk cavity to east, ground level to 3.5 m. Open branch cavity, 4.5 m east.	PRF
T9	SE 60069 17380	Willow	Single stem	N/A	FAR
T10	SE 60289 16943	Willow	Multi-stem	Lots of cracks in stem and snapped branches.	PRF
T11	SE 61401 15963	Willow	Multi-stem	Many cracks and snaps.	PRF
T12	SE 60501 15544	Oak	Single stem	0. dbh, long trunk cavity and lifted bark on south east at 2 m to 4.5 m	PRF
T13	SE 60582 15932	Oak	Single immature oak	N/A	FAR
T14	SE 60522 15546	Ash	Single stem	North facing hole in branch, snapped branches.	PRF
T15	SE 60196 15531	Oak	Single stem	South facing holes, hard to see if holes go all the way in.	FAR
T16	SE 60135 15523	Willow	Multi-stem	Snapped stem and deadwood, north facing. Hollow stem	PRF

Feature Ref.	Grid Reference	Tree/group species	Tree Description	PRF Description (if applicable)	Suitability (NONE, FAR OR PRF)
				on south side. Previously listed as High potential	
T17	SE 60118 15522	Oak	Single stem	4 m south west facing hole and a north facing hole, and a torn branch.	FAR
T18	SE 60135 15523	Oak	Single stem	North facing lifted bark	FAR
T19	SE 60118 15522	Oak	Semi-mature oak, single stem	5 m north facing branch with tear out.	FAR
T20	SE 60600 15322	Oak	Single stem	Potential roost features visible up northern aspect. Lifted bark and trunk crack	FAR
T21	SE 60929 15435	Oak	Semi-mature oak, single stem	Woodpecker hole 3.5 m high on eastern side. Previously listed as Moderate PRF	PRF
T22	SE 61586 16179	Oak	Single stem	0.7 m dbh, trunk split from 1.5 m high to 4 m. Light visible. Previously listed as Moderate PRF.	PRF

Feature Ref.	Grid Reference	Tree/group species	Tree Description	PRF Description (if applicable)	Suitability (NONE, FAR OR PRF)
T23	SE 61790 16625	Ash	Multi stemmed ash	50 cm dbh, two woodpecker holes at 4 and 4.5 m eastern aspect. Cluttered exit	PRF
T24	SE 61807 16604	Ash	Half dead ash tree	N/A	PRF
T25	SE 61893 16423	Oak and Ash	Group of trees	0.4 m dbh, branch split on eastern aspect to 2.5 m high on oak Oak and ash trees with knothole and lifted bark western extent 4/5 m high	PRF
T26	SE 61772 16896	Oak	Single stem	Split in stem and broken branches	PRF
T27	SE 61663 16943	Willow	Multi-stemmed willow	Woodpecker hole 4 m high northern extent and snapped branches with peeling bark	FAR
T28	SE 61773 17195	Oak	Semi-mature, single stemmed	Snapped branches approximately 5 m up.	FAR
T29	SE 61756 17275	Oak	Semi-mature oak	Snapped branches, peeled bark and fissures causing potential cavities 4/5	FAR

Feature Ref.	Grid Reference	Tree/group species	Tree Description	PRF Description (if applicable)	Suitability (NONE, FAR OR PRF)
				m high on western extent	
T30	SE 61630 17283	Ash and Oak	Groupof trees	2x ash and 1x oak with multiple features at all extents	FAR
T31	SE 61449 17230	Willow	Mature willow with 10 stems	Cracks in stems	FAR
T32	SE 61439 17293	Willow	Multi- stem	Cracks in trunk and snapped branches.	FAR
T33	SE 61412 17306	Willow	Mature willow, single stem	Snapped branches, unsafe to climb	FAR
T34	SE 61497 17002	Oak	Single Stem	Previously listed as Negligible	NONE
T35	SE 61275 16967	Oak	Semi-mature oak	Tear out on north western side of tree approx. 4.5 m high	PRF
T36	SE 61209 17094	Willow	Single stem	Butt rot snapped branches, deadwood with cracks and crevices	FAR
T37	SE 61197 17194	Ash	Immature ash	Previously listed as Negligible	NONE
T38	SE 61199 17202	Oak	Semi-mature oak	N/A	FAR
T39	SE 61199 17271	Willow	Mature willow	Butt rot and fallen stems	FAR

Feature Ref.	Grid Reference	Tree/group species	Tree Description	PRF Description (if applicable)	Suitability (NONE, FAR OR PRF)
T40	SE 61198 17295	Willow	Mature willow	N/A	FAR
T41	SE 61198 17311	Hawthorn (*Crataegus* sp.)	Single stem	Previously listed as Negligible	NONE
T42	SE 61200 17328	Willow	Dead willow	Lots of fallen branches and deadwood	FAR
T43	SE 61198 17338	Hawthorn	Single stem	Previously listed as Negligible	NONE
T44	SE 61199 17355	Willow	Immature	N/A	FAR
T45	SE 61100 17310	Willow	Multi- stem	Split stems and snapped branches	FAR
T46	SE 61097 17298	Oak		Previously listed as Negligible	NONE
T47	SE 61095 17227	Willow		N/A	FAR
T48	SE 61097 17186	Oak	Single stem	N/A	FAR
T49	SE 61100 17134	Ash	Single stem	Two rot holes in the stem	FAR
T50	SE 61061 16833	Ash	Single stem	Possible dieback potential for cavities in crown not visible from ground	FAR
T51	SE 60999 17116	Oak	Two stems – split from trunk	Tear outs and snapped branches	FAR

Feature Ref.	Grid Reference	Tree/group species	Tree Description	PRF Description (if applicable)	Suitability (NONE, FAR OR PRF)
T52	SE 61008 17180	Deadwood	Standing dead wood tree	N/A	FAR
T53	SE 61056 17397	Willow		Split trunk	FAR
T54	SE 61025 16822	Ash		N/A	FAR
T55	SE 61010 16820	Ash	Single stem	Dead branches, tear outs, has bat roost potential.	PRF
T56	SE 60736 16841	Oak	Single stem	Tear outs in stem and broken branches	FAR
T57	SE 60713 16987	Ash	Single stem	Tear out on one of the branches	FAR
T58	SE 60755 16991	Willow	Multi-stem, unsafe to climb	Large split	FAR
T59	SE 60333 17460	Oak	Semi-mature oak	0.5 m dbh, tear out/branch cavity at 4.5 m to west aspect. Previously listed as Moderate PRF	PRF
T60	SE 61195 16866	Ash	Dead	Half of the trunk has fallen away, upwards facing holes.	PRF
T61	SE 61187 16897	Ash	Immature ash	Snapped branch on east side	FAR

Feature Ref.	Grid Reference	Tree/group species	Tree Description	PRF Description (if applicable)	Suitability (NONE, FAR OR PRF)
T62	SE 61195 16866	Ash	Single stem	Snapped branches, lifted bark	FAR
T63	SE 61417 16822	Willow	Mature willow adjacent to a ditch	Cracked branches, butt rot.	FAR
T64	SE 61412 16815	Willow	Single stem	Half snapped off, deadwood, butt rot, not safe to climb as it's dropping to pieces	FAR
T65	SE 61409 16792	Unsure	Single stem	Snapped branch, 6 m up	FAR
T66	SE 61411 16764	Ash	Single stem	Snapped branches and rot holes approximately 6 m high.	FAR
T67	SE 61410 16753	Willow	Mature willow	Butt rot, dropping to pieces	FAR
T68	SE 61199 16538	Ash	Single stem	Tear out 6 m up on west side	FAR
T69	SE 61179 16464	Ash	Single stem	Ash dieback present hallow decaying trunk	FAR
T70	SE 61009 16449	Ash	Single stem	snapped branches	FAR
T71	SE 61044 16374	Oak	Single semi-mature oak	N/A	FAR

Feature Ref.	Grid Reference	Tree/group species	Tree Description	PRF Description (if applicable)	Suitability (NONE, FAR OR PRF)
T72	SE 61228 16331	Oak	Immature oak	Split in stem, tear out approximately 4 m high, west facing.	FAR
T73	SE 61192 16275	Oak	Semi-mature oak	Previously listed as Negligible	NONE
T74	SE 61110 16198	Oak	Semi-mature oak	But rot and snapped branches	PRF
T75	SE 61054 16301	Oak	Single semi-mature oak	N/A	FAR
T76	SE 60984 15998	Oak	Ivy-covered oak, semi-mature	Tear outs and missing branches	PRF
T77	SE 60938 17087	Oak	Mature oak within a large gap in the hedgerow along field boundary	N/A	FAR
T78	SE 60931 17163	Ash	Single stem	Splits in stem and snapped branches	FAR
T79	SE 61014 17278	Unknown	Half dead	Branch snaps and split stem	FAR
T80	SE 61023 17354	Willow	Mature, multi-stem	Snapped branches	FAR
T81	SE 61224 17028	Oak	Multi-stem	N/A	FAR
T82	SE 61296 17320	Oak	Single stem	Previously listed as Negligible	NONE

Feature Ref.	Grid Reference	Tree/group species	Tree Description	PRF Description (if applicable)	Suitability (NONE, FAR OR PRF)
T83	SE 61322 17317	Willow	Multi-stem	Previously listed as Moderate/High potential	PRF
T84	SE 61384 17297	Willow	Two stems	Previously listed as High potential	PRF
T85	SE 61415 17289	Oak	Single stem	Previously listed as Low potential	FAR
T86	SE 61445 17280	Willow	Single stem	Previously listed as Low potential	FAR
T87	SE 61449 17280	Willow	Multi-stem	Previously listed as low potential	FAR
T88	SE 61226 16485	Oak	Single stem	Snapped branch southern extent 6 m	PRF
T89	SE 61205 16505	Willow		N/A	FAR
T90	SE 61213 16474	Unknown		N/A	FAR
T91	SE 61213 16461	Unknown	Single stem	N/A	FAR
T92	SE 60973 16432	Willow	Multi-stem	N/A	FAR
T93	SE 60964 16408	Unknown	Two stems	N/A	FAR
T94	SE 60948 16340	Ash	Multi-stem	N/A	FAR
T95	SE 60941 16294	Unknown		N/A	FAR
T96	SE 60948 16279	Willow (needs verifying)	Single stem, snapped in half	N/A	FAR
T97	SE 60950 16225	Unknown	Single stem	N/A	FAR

Feature Ref.	Grid Reference	Tree/group species	Tree Description	PRF Description (if applicable)	Suitability (NONE, FAR OR PRF)
T98	SE 60946 16163	Unknown	Multi-stem	N/A	FAR
T99	SE 60943 16132	Unknown	Single stem	N/A	FAR
T100	SE 6094316103	Unknown	Single stem	N/A	FAR
T101	SE 6094116089	Unknown	Single stem	N/A	FAR
T102	SE 6094016060	Unknown	Multi-stem?	N/A	FAR
T103	SE 60941 16011	Unknown	Single stem	N/A	FAR
T104	SE 61410 16753	Willow	Dead and fallen willow tree stump, approximately 2.5 m tall.	N/A	FAR
T105	SE 61442 15915	Oak		Damaged limbs, previously listed as Low potential	PRF
T106	SE 61435 15924	Oak	Dead wood at the top	Dead wood at the top and lifted bark. Previously listed as Low potential	PRF
T107	SE 61432 15926	Oak		Snapped branches and damage limbs. Previously listed as Low potential.	PRF
T108	SE 61421 15938	Oak		Ivy covered oak with a split in trunk, previously listed as Low potential	FAR

Feature Ref.	Grid Reference	Tree/group species	Tree Description	PRF Description (if applicable)	Suitability (NONE, FAR OR PRF)
T109	SE 61418 15942	Oak		Tear out, previously listed as Moderate potential	PRF
T110	SE 61413 15948	Oak		Cracked bark	PRF
T111	SE 60392 16951	Oak		N/A	PRF
T112	SE 61394 15974	Oak	Dead, hollow oak	Rot holes all the way up the trunk. Previously listed as High potential.	PRF
T113	SE 60921 15506	Oak		N/A	FAR
T114	SE 60924 15483	Oak		N/A	FAR
T115	SE 60382 15546	Oak		Snapped limbs. Previously listed as Low potential	FAR
T116	SE 60924 15483	Willow	Many stemmed willow	Cracks in stem, previously listed as Moderate potential	PRF
T117	SE 60382 15546	Oak		Cavity 4 m up on the south side, snapped branches and splits. Previously listed as High potential.	PRF
T118	SE 60438 15545	Oak		Cracked or lifted bark. Cracks in trunk. Previously	FAR

Feature Ref.	Grid Reference	Tree/group species	Tree Description	PRF Description (if applicable)	Suitability (NONE, FAR OR PRF)
				listed as Low potential.	
T119	SE 60460 15544	Willow		Snaps in and off limbs. Trunk rot	FAR
T120	SE 60483 15543	Oak		Butt rot and dead and snapped branches. Previously listed as High potential	PRF
T121	SE 60511 16022	Oak		Broken limbs and lifted bark. Previously listed as Moderate potential.	PRF
T122	SE 60513 15542	Unknown		N/A	FAR
T123	SE 60917 16173	Unknown		N/A	FAR
T124	SE 60919 16133	Unknown		N/A	FAR
T125	SE6180116714	Oak	Single stem	Large cavity in main trunk.	PRF
T126	SE6172316836	Oak	Single stem	Tear out with splits on surface.	PRF
T127	SE6193416664	Oak	Single stem	Broken limbs seen only surveyed from western side. 7/8 m high Woodpecker holes and snapped branches	PRF

Feature Ref.	Grid Reference	Tree/group species	Tree Description	PRF Description (if applicable)	Suitability (NONE, FAR OR PRF)
T128	SE6111916204	Oak	Single stem	Snapped limb, unable to see if it goes into the main trunk.	FAR
T129	SE6121816289	Oak	Single stem	Snapped limb and split on main trunk facing south.	PRF
T130	SE6146315890	Oak	Single stem	Ivy covered tree with snapped limbs and knot holes facing east.	PRF
T131	SE6147115879	Oak	Single stem	Ivy covered tree with snapped limbs and knot holes facing east.	PRF
T132	SE6139215830	Ash	Single stem	Ivy covered tree, dead wood section with rot holes.	PRF
T133	SE6139915752	Willow	Multi-stem	Woodpecker hole, 4 m high facing north with lifted bark on upper branches.	PRF
T134	SE6139415750	Willow	Multi-stem	Cavity opening on main trunk 2 m, further inspection needed to verify if it	FAR

Feature Ref.	Grid Reference	Tree/group species	Tree Description	PRF Description (if applicable)	Suitability (NONE, FAR OR PRF)
				goes further into a cavity.	
T135	SE6139115748	Oak	Single stem	Snapped branches with potential entry points at the base facing north (1 m and 3 m high).	PRF
T136	SE6100015708	Oak	Group of two trees	Snapped branch on northern side 4-5 m high.	FAR
T137	SE5996016613	Ash and Oak	Group of four trees	Ash with hollows and three neighbouring oaks to the north which all have features of snapped branches	PRF
T138	SE5956517157	Oak	Group of four trees	4x old oaks with snapped branches to the southern extent - no obvious PRF but snapped branches may have created deeper cavities	FAR
T139	SE5964717212	Willow	Multi-stem	Large willow with knot hole which faces upwards off main trunk around 2	PRF

Feature Ref.	Grid Reference	Tree/group species	Tree Description	PRF Description (if applicable)	Suitability (NONE, FAR OR PRF)
				m high to western extent	
T140	SE6040016951	Willow	Multi-stem	Large willow unable to see full extent of tree	FAR
T141	SE6031416707	Willow and Oak	Group of trees	Several large oaks and willows with some features	PRF
T142	SE5980417251	Ash	Single stem	Ash with cavity facing upwards 2 m on main stem next to another ash with snapped branches	PRF
T143	SE5991416848	Oak	Single stem	Oak with large cavity 1 m high	PRF
T144	SE6175016928	Ash	Single Stem	Pruning scars creating possible cavities 5 m high on southern extent	FAR
T145	SE6193316756	Oak	Single stem	Large oak in hedgerow snapped branches western extent 5/6 m	PRF
T146	SE6190516568	Oak	Single stem	North facing snapped branched	FAR

Feature Ref.	Grid Reference	Tree/group species	Tree Description	PRF Description (if applicable)	Suitability (NONE, FAR OR PRF)
T147	SE6170916791	Unknown - dead tree	Single Stem	In hedgerow, roting wood causing cavities	PRF
T148	SE6172916823	Prunus sp.	Single stem	In hedgerow large cavities in main stem from 0.5 m to 4 m	PRF
T149	SE6173116807	Oak	Single stem	Knotholes on main trunk 5 m high eastern extent	PRF
T150	SE6118416916	Ash	Single stem	Cavities in main trunk 5 m high on northern extent	PRF
T151	SE6146016999	Oak	Group of trees	2 x oak trees snapped branches and peeling bark all extents	PRF
T152	SE6164916973	Willow	Single Stem	Fallen tree with multiple features present	PRF
T153	SE6092417226	Ash	Single Stem	Possible dieback large cavities in main trunk 6 m high on east. Branch tear out and butt rot	PRF
T154	SE 61019 17325	Ash	Single Stem	Possible dieback causing cavities along full trunk ok	PRF

Feature Ref.	Grid Reference	Tree/group species	Tree Description	PRF Description (if applicable)	Suitability (NONE, FAR OR PRF)
				the western extent 1-3 m high	
T155	SE 61572 17285	Field Maple	Single Stem	Small cavities along full trunk from base to 4 m high on southern extent	PRF
T156	SE 61736 17292	Plum	Single Stem	Large weld in bark 5 m on southern extent	FAR
T157	SE 61776 17186	Hawthorn	Single stem	Fissures in main stem from ground level to 4 m high on eastern extent	FAR
T158	SE 61803 17092	Oak	Single stem	Snapped branches causing possible cavities 2/5 m high on western extent	FAR
T159	SE 59663 16436	Oak	Single stem	Split in main trunk	FAR
T160	SE 59649 16361	Oak	Single stem	Oak tree with decaying main stem - several cavities in main trunk	FAR
T161	SE 59646 16319	Ash	Single stem	Ash with three deep knotholes around 3 m off lower branches	PRF
T162	SE 59640 16285	Ash	Single stem	Ash with deep knotholes about 3 m	PRF

Feature Ref.	Grid Reference	Tree/group species	Tree Description	PRF Description (if applicable)	Suitability (NONE, FAR OR PRF)
				up on main stem with ivy cover	
T163	SE 60313 16406	Willow	Group of trees	Three cracked willows with lots of fallen branches	FAR
T164	SE 60230 16404	Willow	Single stem	Willow with broken stem	FAR
T165	SE 60167 16402	Willow	Single stem	Willow with missing bark on stem	FAR
T166	SE 60031 15610	Oak	Single stem	Old oak with snapped branches 1 m high on the western extent	PRF
T167	SE 60051 15522	Oak	Single stem	Woodpecker hole 1.5 m high on the western extent	FAR
T168	SE 60902 15721	Ash and Oak	Group of trees	Snapped branches and small cracks in main trunk eastern extent 5 m high	FAR
T169	SE 60729 15447	Oak	Single Stem	Oak with large tear out on northern extent of main stem other dead and fallen branches with potential features	FAR

Feature Ref.	Grid Reference	Tree/group species	Tree Description	PRF Description (if applicable)	Suitability (NONE, FAR OR PRF)
T170	SE 61959 16234	Oak	Single Stem	Side of arable field hollows in pruned branches to the western extent 4/5 m high	FAR
T171	SE 61965 16214	Oak	Single Stem	Side of arable field - cavity on western extent lower branch	PRF
T172	SE 61985 16166	Oak	Single Stem	Snapped branches creating possible cavities on main trunk western facing ¾ m high	FAR
T173	SE 61865 16207	Oak	Single Stem	Peeled bark and snapped branches 1-3 m high eastern extent	FAR
T174	SE 61847 16246	Oak	Single Stem	Snapped branches and hazard beams eastern extent 5 m high	FAR
T175	SE 61820 16304	Willow	Single Stem	Large cracks in main trunk could be endoscoped from ground	FAR

Feature Ref.	Grid Reference	Tree/group species	Tree Description	PRF Description (if applicable)	Suitability (NONE, FAR OR PRF)
T176	SE 61809 16353	Unknown Dead Tree	Single Stem	Lifted bark and snapped branches along dead trunk	FAR
T177	SE 61804 16358	Unknown Dead Tree	Single Stem	Lifted bark along dead trunk eastern extent	FAR
T178	SE 61788 16419	Oak	Single Stem	Frost/shearing cracks eastern extent along full trunk	FAR
T179	SE 61787 16430	Ash	Single Stem	Woodpecker hole northern extent 4 m high	PRF
T180	SE 59182 14949	Unknown Dead Tree	group of trees	Dead trees with decaying trunks large cavities upward facing oak and silver birch	FAR
T181	SE 59315 14822	Oak	Group of trees	2x Oak next to each other 1. Butt rot creating large central cavity and 2. with several cavities about 3 m high facing north and some snapped	FAR

Feature Ref.	Grid Reference	Tree/group species	Tree Description	PRF Description (if applicable)	Suitability (NONE, FAR OR PRF)
				branches creating cavities	
T182	SE 59562 15005	Oak	Single Stem	Oak stump with deep cavities in main trunk 0.5 m high northern extent	FAR
T183	SE 59646 15049	Oak	Single Stem	Oak with several snapped branches off of main stem and frost crack on front branch 2 m high northern extent	FAR
T184	SE 59682 15052	Oak	Group of trees	Two large oaks no specific features but both showing crown death possible there are features that can't be assessed from ground	FAR
T185	SE 59801 15334	Oak	Group of trees	Group of oak along the field boundary with features along the southern and eastern extents	FAR
T186	SE 60160 15288	Oak	Single Stem	Oak with split hazard beam 2 m on north extent	PRF

Feature Ref.	Grid Reference	Tree/group species	Tree Description	PRF Description (if applicable)	Suitability (NONE, FAR OR PRF)
T187	SE 60207 15294	Oak	Single Stem	Oak tree with hallow trunk - barn owl pellets surrounding tree	FAR
T188	SE 60246 15297	Ash	Single Stem	Ash dying with two cavities where branches have broken off 2 and 3 m on southern extent	FAR
T189	SE 60274 15300	Oak	Single Stem	Large oak split in main trunk on the southern extent about 2 m high	FAR
T190	SE 60649 15322	Oak	Single Stem	Snapped branches creating cavities to the southern extent of oak tree about 2 m high	FAR
T191	SE 60705 15330	Willow	Multi-stem	Snapped branch creating cavity on underside of branch 2 m high southern extent	FAR
T192	SE 60419 14939	Willow	Multi-stem	Salix sp. Cavities at northern extent 2-3 m high	FAR
T193	SE 60184 14929	Oak	Single stem	N/A	PRF

Feature Ref.	Grid Reference	Tree/group species	Tree Description	PRF Description (if applicable)	Suitability (NONE, FAR OR PRF)
T194	SE 60089 14923	Oak	Single stem	dead wood	PRF
T195	SE 60087 14892	Oak	Single stem	dead wood	PRF
T196	SE 60094 14840	Oak	Single stem	Dead limbs	PRF
T197	SE 60101 14810	Oak	Single stem	N/A	PRF
T198	SE 60107 14790	Unknown	Single stem	N/A	PRF
T199	SE 60129 14711	Oak	Single stem	N/A	PRF
T200	SE 60137 14673	Oak	Single stem	N/A	PRF
T201	SE 60304 14773	Unknown	Single stem	Weld on main trunk	PRF
T202	SE 60304 14767	Oak	Single stem	N/A	PRF
T203	SE 60419 14473	Oak	Single stem	N/A	PRF
T204	SE 60369 14467	Oak	Single stem	N/A	PRF
T205	SE 60026 13928	Oak	Group of trees	some appear to have cracks but unable to access other side to fully check	FAR
T206	SE 60080 13924	Oak	Single stem	N/A	FAR
T207	SE 60119 13889	Oak	Single stem	Oak with dead wood	FAR
T208	SE 60237 13766	Mixed Woodland	Mixed broadleaved woodland	Unable to fully survey	FAR
T209	SE 60164 13756	Oak	Single stem	knot holes near base of branches and tree	FAR

Feature Ref.	Grid Reference	Tree/group species	Tree Description	PRF Description (if applicable)	Suitability (NONE, FAR OR PRF)
T210	SE 60138 13751	Oak	Single stem	dead branches with splits	FAR
T211	SE 60104 13743	Oak	Single stem	Multiple Knot holes	FAR
T212	SE 60057 13733	Oak	Single stem	loose bark with some callusing	FAR
T213	SE 59792 13691	Oak	Single stem	ivy cover. Fused limbs and splits.	FAR
T214	SE 59802 13602	Willow	Single stem	Split in trunk with features	FAR
T215	SE 59807 13573	Willow	Group of trees	Two trees with split branches	FAR
T216	SE 59808 13552	Oak	Single stem	Young oak tree within hedgerow, containing a few knot holes off dead limbs	FAR
T217	SE 59660 13501	Multiple	Line of trees	Line of trees around field, currently outside RLB but would require further assessment if RLB changes	FAR
T218	SE 59929 13360	Unknown	Line of trees along ditch	Line of trees along ditch, currently outside RLB but would require further	FAR

Feature Ref.	Grid Reference	Tree/group species	Tree Description	PRF Description (if applicable)	Suitability (NONE, FAR OR PRF)
				assessment if RLB changes	
T219	SE 59891 13132	Unknown	Group of trees	Group of 4 trees in hedgerow	FAR
T220	SE 59810 12964	Ash	Single stem	Single dead ash tree in field containing multiple features. Knot holes, splits, lifting bark	FAR
T221	SE 59971 13007	Willow	Single stem	Willow, loose bark and splits. Areas of lifted bark where small mammals and inverts may enter.	FAR
T222	SE 60098 13022	Oak	Group of trees	Four oak trees in hedgerow that contain multiple features	FAR
T223	SE 59937 12942	Oak	Group of trees	3 oak trees amongst hedgerow. Multiple features such as splits, lifting bark, hollow stem and callus roll	FAR
T224	SE 59942 12862	Oak	Single stem	Oak tree. Knot holes and dead branches with splits	FAR

Feature Ref.	Grid Reference	Tree/group species	Tree Description	PRF Description (if applicable)	Suitability (NONE, FAR OR PRF)
T225	SE 59876 12797	Multiple	Group of trees	Multiple Ash, willow and hawthorn trees in hedgerow that have features	FAR
T226	SE 59990 12705	Oak and Ash	Group of trees	Oak and ash trees on both sides of hedgerow have multiple features	FAR
T227	SE 60106 12619	Hawthorn	Group of trees	Two hawthorns with features	FAR
T228	SE 59907 12602	Unknown	Single Stem	N/A	FAR
T229	SE 59773 12592	Unknown	Single Stem	N/A	FAR
T230	SE 60104 10685	Oak	Single Stem	located within hedgerw with lifting bark present	FAR
T231	SE 60199 10489	Ash	Single Stem	Trunk with hollows located in a defunt hawthorn hedgerow on dry drain	PRF
T232	SE 60417 10436	Ash	Single Stem	Trunk with hollows, nesting barn owl present	PRF
T233	SE 60117 10343	Oak and Willow	Group of trees	N/A	FAR
T234	SE 59937 10371	Oak	Single Stem	Holes on northern side and broken limbs. Located in	PRF

Feature Ref.	Grid Reference	Tree/group species	Tree Description	PRF Description (if applicable)	Suitability (NONE, FAR OR PRF)
				species rich hedgerow	
T235	SE 60218 10964	Ash	Single Stem	Tree with holes present. Located in hedgerow	PRF
T236	SE 60167 10990	Ash	Single Stem	Ivy clading	PRF
T237	SE 60086 10916	Ash	Single Stem	holes and trunk cavity	PRF
T238	SE 59543 10655	Unknown	Group of trees	N/A	FAR
T239	SE 59925 11805	Oak	Single Stem	trunk voids present. Located in species rich hedgerow	PRF
T240	SE 59906 11785	Unknown	Group of trees	N/A	FAR
T241	SE 59728 11825	Ash	Single Stem	tree with holes located in species rich hedgerow	PRF
T242	SE 59485 11946	Ash	Single Stem	tree with holes located in species rich hedgerow	PRF
T243	SE 59325 11973	Oak	Single Stem	void in base and cracks on main trunk	PRF
T244	SE 59213 12022	Oak	Single Stem	barn owl box present on tree. Trunk has splits	PRF
T245	SE 59393 12200	Oak	Single Stem	N/A	FAR

Feature Ref.	Grid Reference	Tree/group species	Tree Description	PRF Description (if applicable)	Suitability (NONE, FAR OR PRF)
T246	SE 59500 12409	Oak	Single Stem	N/A	FAR
T247	SE 59636 12432	Oak	Single Stem	N/A	FAR
T248	SE 59619 12131	Oak	Group of trees	N/A	FAR
T249	SE 59809 12250	Oak	Single Stem	N/A	FAR
T250	SE 59806 12123	Oak	Group of trees	N/A	FAR
T251	SE 60080 12499	Unknown	Group of trees	N/A	FAR
T252	SE 59565 11921	Oak	Group of trees	N/A	FAR
T253	SE 59824 11986	Oak	Single Stem	N/A	FAR

Annex C Bat Activity Survey Results

Beaufort wind force scale: 0 = No wind, 1 = Light air *smoke drifts*, 2 = Light Breeze *leaves rustle*, 3 = Gentle Breeze *small twigs move*, 4 = Mod Breeze *small branches move,* 5 = Fresh Breeze *small trees sway*, 6 = Strong Breeze *large branches move*, 7 = Mod Gale *whole trees in motion*
Rain Scale: 0-none, 1-drizzle 2-shower 3-rain 4-downpour 5-flood.
Oktas cloud scale: 0 = complete absence of cloud (fine), 1 = cloud amount of 1 eighth or less, but not zero (fine), 2 = 2/8 of sky covered (fine), 3 = 3/8 of sky covered (partly cloudy), 4 = 4/8 of sky covered (partly cloudy), 5 = 5/8 of sky covered (partly cloudy), 6 = 6/8 of sky covered (cloudy), 7 = 7/8 of sky covered (cloudy), 8 = sky completely covered (overcast**).**
Abbreviations: H&S = heard and seen; HNS = heard but not seen; QA = Species confirmed following a review of the recorded bat call:

SPRING

Surveyor:	**TC, MR**	**Temp C:**	**13**
Site:	**Transect 1**	**Wind:**	0
Date:	10/05/2023	**Rain:**	Recent rain
Sunset:	20:50	**Cloud:**	4
Start/end:	20:50 to 10:36		

Timestamp	Species	Comment
21:20	*Pipistrellus pipistrellus*	Heard not seen (HNS), several passes foraging activity
21:22	*Pipistrellus pygmaeus*	Added post QA
21:26	*Pipistrellus pipistrellus*	Heard and seen (H&S), commuting north to south along tree line
21:29	*Pipistrellus pipistrellus*	HNS
21:37	*Pipistrellus pipistrellus*	HNS, commuting
21:40	*Pipistrellus pipistrellus*	HNS
21:43	*Pipistrellus pipistrellus*	HNS, multiple passes

21:45	*Pipistrellus pipistrellus*	H&S, multiple passes along hedgerow
21:50	*Pipistrellus pipistrellus*	H&S, continuous distance foraging activity
21:50	*Myotis species*	Added post QA, multiple passes
21:54	*Pipistrellus pipistrellus*	HNS
22:14	*Pipistrellus pipistrellus*	HNS, brief pass
22:16	*Pipistrellus pipistrellus*	HNS

Surveyor:	**AJ, CM**	**Temp C:**	**13**
Site:	**Transect 2**	**Wind:**	0
Date:	10/05/2023	**Rain:**	Recent rain
Sunset:	20:50	**Cloud:**	4
Start/end:	20:50 to 10:36		

Timestamp	**Species**	**Comment**
21:45	*Pipistrellus pipistrellus*	Added post QA
21:55	*Pipistrellus pipistrellus*	HNS, two brief passes, likely commuting
22:16	*Pipistrellus pipistrellus*	Added post QA
22:19	*Pipistrellus pipistrellus*	H&S, one pipistrelle foraging around the trees
22:27	*Pipistrellus pipistrellus*	Added post QA

Surveyor:	**TC, MR**	**Temp C:**	**14**
Site:	**Transect 3**	**Wind:**	0
Date:	11/05/2023	**Rain:**	Recent rain
Sunset:	20:52	**Cloud:**	4
Start/end:	20:52 to 10:33		

Timestamp	Species	Comment
21:30	*Pipistrellus pipistrellus*	H&S, foraging in corner of field
21:31	*Pipistrellus pipistrellus*	HNS, commuting
21:35	*Pipistrellus pipistrellus*	H&S, foraging around corner
21:38	*Pipistrellus pipistrellus*	HNS, several passes
21:50	*Pipistrellus pipistrellus*	HNS, faint passes
21:55	*Pipistrellus pipistrellus*	HNS, faint passes
22:00	*Pipistrellus pipistrellus*	HNS
22:01	*Myotis species*	HNS, brief pass
22:06	*Myotis species*	HNS, commuting
22:11	*Pipistrellus pipistrellus*	HNS, brief foraging pass
22:16	*Myotis species*	HNS

Surveyor:	**NP, LG**	**Temp C:**	**13**
Site:	**Transect 4**	**Wind:**	3
Date:	30/05/2024	**Rain:**	0
Sunset:	21:21	**Cloud:**	4
Start/end:	21:21 to 00:00		

Timestamp	Species	Number Of Passes - Comments
21:59-22:06	*Pipistrellus pipistrellus*	38 – H&S foraging multiple passes

22:08 - 22:22	*Pipistrellus pipistrellus*	49 – H&S foraging multiple passes
22:22	*Pipistrellus pygmaeus*	2 – H&S foraging multiple passes
22:22 - 22:31	*Pipistrellus pipistrellus*	10 – H&S foraging multiple passes
22:31	*Plecotus auritus*	1 – H&S foraging multiple passes
22:32 - 22:34	*Myotis species*	10 – Added post QA
22:48 - 22:55	*Pipistrellus pipistrellus*	46 – HNS foraging multiple passes
22:58 - 23:00	*Pipistrellus pipistrellus*	13 – HNS foraging multiple passes
23:05	*Pipistrellus pipistrellus*	9 – HNS foraging multiple passes
23:06	*Myotis species*	2 – Added post QA
23:11 - 23:14	*Pipistrellus pipistrellus*	14 – HNS foraging multiple passes
23:19	*Pipistrellus pipistrellus*	1 – HNS foraging multiple passes
23:26 - 23:28	*Pipistrellus pipistrellus*	14 – HNS foraging multiple passes
23:28	*Myotis species*	1 – Added post QA
23:28	*Pipistrellus pipistrellus*	1 – HNS foraging multiple passes
23:29	*Myotis species*	1 – Added post QA
23:29 - 23:32	*Pipistrellus pipistrellus*	14 – Added post QA

Surveyor:	**JL, MG**	**Temp C:**	**13**
Site:	**Transect 5**	**Wind:**	4
Date:	30/05/2024	**Rain:**	0
Sunset:	21:21	**Cloud:**	4
Start/end:	21:21 to 00:01		

Timestamp	**Species**	**Number of passes - Comments**
21:49	*Pipistrellus pipistrellus*	4 – Added post QA
21:54 - 21:55	*Pipistrellus pipistrellus*	2 – Added post QA
22:00 - 22:01	*Pipistrellus pipistrellus*	2 – HNS foraging
22:01	*Myotis spec.*	1 – HNS foraging
22:02 - 22:03	*Pipistrellus pipistrellus*	3 – H&S commuting along tree line
22:05	*Pipistrellus pipistrellus*	3 – HNS foraging
22:08	*Pipistrellus pipistrellus*	1 – H&S multiple bats foraging along tree line

22:08	*Myotis spec.*	3 – Added post QA
22:08 - 22:09	*Pipistrellus pipistrellus*	6 – H&S multiple bats foraging along tree line
22:09	*Myotis spec.*	1 – Added post QA
22:09 - 22:12	*Pipistrellus pipistrellus*	18 – Added post QA
22:13	*Plecotus auritus*	1 – Added post QA
22:13 - 22:18	*Pipistrellus pipistrellus*	25 – Added post QA
22:18	*Myotis spec.*	5 – Added post QA
22:19	*Pipistrellus pipistrellus*	1 – H&S foraging
22:19	*Myotis spec.*	1 – Added post QA
22:19 - 22:24	*Pipistrellus pipistrellus*	16 – HNS foraging, multiple passes
22:25	*Pipistrellus pygmaeus*	1 – Added post QA
22:25	*Pipistrellus pipistrellus*	3 – Added post QA
22:25	*Pipistrellus pygmaeus*	1 – Added post QA
22:25	*Pipistrellus pipistrellus*	2 – Added post QA
22:25	*Pipistrellus pygmaeus*	1 – Added post QA
22:25 - 22:26	*Pipistrellus pipistrellus*	3 – Added post QA
22:26	*Pipistrellus pygmaeus*	1 – Added post QA
22:26 - 22:27	*Pipistrellus pipistrellus*	9 – Added post QA
22:32 - 22:33	*Pipistrellus pipistrellus*	5 – HNS foraging
22:36	*Pipistrellus pipistrellus*	1 – Added post QA
22:40	*Pipistrellus pipistrellus*	1 – HNS foraging
22:43 - 22:47	*Pipistrellus pipistrellus*	20 – HNS foraging multiple passes
22:49	*Pipistrellus pipistrellus*	1 – Added post QA
23:09 - 23:11	*Pipistrellus pipistrellus*	17 – HNS foraging
23:13	*Pipistrellus pipistrellus*	1 – Added post QA
23:23	*Myotis spec.*	2 – Added post QA
23:23 - 23:24	*Pipistrellus pipistrellus*	3 – HNS foraging multiple passes
23:24	*Myotis spec.*	1 – Added post QA
23:28 - 23:30	*Pipistrellus pipistrellus*	12 – HNS foraging
23:31	*Myotis spec.*	1 – Added post QA

23:31 - 23:32	*Pipistrellus pipistrellus*	9 – Added post QA
23:32	*Pipistrellus pygmaeus*	1 – Added post QA
23:40	*Pipistrellus pipistrellus*	1 – HNS foraging
23:42 - 23:43	*Pipistrellus pipistrellus*	5 – Added post QA
23:43	*Pipistrellus pygmaeus*	3 – Added post QA
23:43 - 23:44	*Pipistrellus pipistrellus*	4 – Added post QA
23:53	*Pipistrellus pygmaeus*	3 – Added post QA

Surveyor:	**EW, AB**	**Temp C:**	**13**
Site:	**Transect 6**	**Wind:**	4
Date:	30/05/2024	**Rain:**	0
Sunset:	21:21	**Cloud:**	4
Start/end:	21:21 to 00:00		

Timestamp	Species	Number of passes
21:55	*Pipistrellus pipistrellus*	1 – Added post QA
22:00 - 22:02	*Pipistrellus pipistrellus*	9 – H&S foraging along lane multiple passes
22:05 - 22:06	*Pipistrellus pipistrellus*	5 – Added post QA
22:13 - 22:15	*Pipistrellus pipistrellus*	8 – HNS foraging along road
22:17 - 22:18	*Pipistrellus pipistrellus*	4 – HNS foraging along road
22:21 - 22:22	*Pipistrellus pipistrellus*	3 – HNS foraging along road
22:32 - 22:34	*Pipistrellus pipistrellus*	4 – HNS foraging along road
22:38	*Pipistrellus pipistrellus*	1 – HNS foraging along road
22:48	*Myotis spec.*	1 – Added post QA
22:49	*Pipistrellus pipistrellus*	1 – HNS foraging along river
22:50	*Pipistrellus pygmaeus*	1 – HNS foraging along river
22:52	*Pipistrellus pipistrellus*	1 – Added post QA
22:52 - 22:53	*Pipistrellus pygmaeus*	2 – Added post QA
22:53	*Pipistrellus pipistrellus*	1 – Added post QA
22:53	*Pipistrellus pygmaeus*	1 – Added post QA
22:53	*Pipistrellus pipistrellus*	1 – Added post QA

22:54	*Pipistrellus pygmaeus*	1 – Added post QA
22:55 - 22:56	*Pipistrellus pipistrellus*	6 – Added post QA
22:57	*Pipistrellus pygmaeus*	1 – HNS multiple bats foraging along road
22:57 - 22:58	*Pipistrellus pipistrellus*	5 – HNS multiple bats foraging along road
22:59 - 23:01	*Pipistrellus pygmaeus*	4 – HNS foraging along hedgerow
23:03 - 23:04	*Pipistrellus pipistrellus*	2 – HNS foraging along hedgerow
23:04	*Pipistrellus pygmaeus*	1 – HNS foraging along hedgerow
23:04	*Pipistrellus pipistrellus*	2 – HNS foraging along hedgerow
23:15	*Pipistrellus pipistrellus*	4 – HNS foraging along hedgerow

SUMMER

Surveyor:	**TC, IW**	**Temp C:**	**15**
Site:	**Transect 1**	**Wind:**	1
Date:	25/07/2023	**Rain:**	Dry
Sunset:	21:11	**Cloud:**	2
Start/end:	21:11 to 23:11		

Timestamp	Species	Comment
21:12	*Pipistrellus pipistrellus*	H&S, commuting
21:55	*Pipistrellus pipistrellus*	H&S, continuous foraging along hedgerow
21:56	*Myotis species*	Added post QA
22:01	*Pipistrellus pipistrellus*	HNS, foraging
22:05	*Pipistrellus pipistrellus*	HNS, commuting
22:10	*Pipistrellus pipistrellus*	H&S, seen commuting into tree line
22:12	*Pipistrellus pipistrellus*	H&S, commuting
22:19	*Pipistrellus pipistrellus*	H&S, foraging along woodland edge
22:21	*Pipistrellus pipistrellus*	H&S, x2 bats foraging along woodland edge
21:56	*Myotis species*	Added post QA
22:28	*Pipistrellus pipistrellus*	Added post QA
22:35	*Pipistrellus pipistrellus*	HNS, commuting
22:41	*Pipistrellus pipistrellus*	HNS, foraging passes
22:49	*Plecotus auritus*	Added post QA
22:52	*Plecotus auritus*	Added post QA
22:57	*Nyctalus noctula*	HNS, commuting
22:59	*Myotis species*	Added post QA

23:00	*Pipistrellus pipistrellus*	Added post QA
23:05	*Pipistrellus pipistrellus*	H&S, continuous foraging along road
23:08	*Pipistrellus pipistrellus*	HNS foraging

Surveyor:	**KC, EB**	**Temp C:**	**15**
Site:	**Transect 2**	**Wind:**	1
Date:	25/07/2023	**Rain:**	Dry
Sunset:	21:11	**Cloud:**	2
Start/end:	21:11 to 23:11		

Timestamp	Species	Comment
21:02	*Nyctalus noctula*	H&S, foraging activity. Circled tree for a while then disappears into canopy
21:23	*Nyctalus noctula*	H&S, foraging activity.
21:45	*Nyctalus noctula*	HNS
21:48	*Nyctalus noctula*	HNS, foraging
21:56	*Nyctalus noctula*	HNS, foraging
21:59	*Nyctalus noctula*	HNS, foraging
22:01	*Nyctalus noctula*	H&S, seen circling tree during listening point
22:21	*Nyctalus noctula*	HNS, continuous foraging throughout listening point
22:22	*Pipistrellus pipistrellus*	HNS, foraging
22:39	*Pipistrellus pipistrellus*	HNS
22:41	*Pipistrellus pipistrellus*	HNS, foraging
22:43	*Pipistrellus pipistrellus*	HNS, social calls
22:44	*Pipistrellus pipistrellus*	HNS, foraging
22:47	*Pipistrellus pipistrellus*	HNS, foraging

22:53	*Pipistrellus pipistrellus*	HNS, foraging
22:56	*Pipistrellus pipistrellus*	HNS
22:58	*Pipistrellus pipistrellus*	HNS, foraging

Surveyor:	**TC, IW**	**Temp C:**	**18**
Site:	**Transect 3b**	**Wind:**	0
Date:	27/07/2023	**Rain:**	Dry
Sunset:	21:09	**Cloud:**	2
Start/end:	21:09 to 23:09		

Timestamp	Species	Comment
21:05	*Pipistrellus pipistrellus*	H&S, commuting above hedgerow
21:14	*Pipistrellus pipistrellus*	H&S, x2 bats foraging along tree line
21:21	*Pipistrellus pipistrellus*	H&S, commuting along tree line
21:46	*Nyctalus noctula*	HNS, very faint pass commuting
21:51	*Pipistrellus pipistrellus*	HNS, commuting
22:04	*Nyctalus noctula*	Added post QA
22:06	*Pipistrellus pipistrellus*	HNS, commuting
22:14	*Pipistrellus pygmaeus*	Added post QA
22:17	*Pipistrellus pipistrellus*	HNS, commuting, intermittent activity
22:24	*Nyctalus noctula*	Added post QA
22:24	*Pipistrellus pipistrellus*	HNS, commuting
22:27	*Pipistrellus pipistrellus*	HNS, commuting

22:30	*Pipistrellus pygmaeus*	Added post QA
22:31	*Pipistrellus pipistrellus*	HNS, commuting
22:37	*Pipistrellus pipistrellus*	HNS, very faint pass
22:45	*Pipistrellus pipistrellus*	HNS, commuting
22:47	*Myotis species*	Added post QA
22:51	*Pipistrellus pipistrellus*	HNS, commuting
22:55	*Myotis daubentonii*	Added post QA
22:55	*Myotis species*	Added post QA
22:55	*Pipistrellus pipistrellus*	HNS, foraging
23:01	*Pipistrellus pipistrellus*	HNS, foraging
23:06	*Myotis species*	Added post QA
23:06	*Pipistrellus pipistrellus*	HNS, commuting

Surveyor:	**AS, JC**	**Temp C:**	**15**
Site:	**Transect 4**	**Wind:**	1
Date:	29/07/2024	**Rain:**	0
Sunset:	21:05	**Cloud:**	2
Start/end:	21:05 to 23:19		

Timestamp	**Species**	**Number of passes - comment**
22:01	*Pipistrellus pipistrellus*	1 – HNS foraging
22:06 - 22:07	*Pipistrellus pipistrellus*	3 – HNS foraging
22:11	*Pipistrellus pipistrellus*	1 – HNS foraging
22:13	*Nyctalus noctula*	1 – added post QA
22:36	*Pipistrellus pipistrellus*	1– added post QA
22:38	*Myotis spec.*	1 – HNS foraging

22:38	*Pipistrellus pipistrellus*	1 – H&S foraging
22:40	*Myotis spec.*	1 – HNS commuting
22:43	*Pipistrellus pipistrellus*	2 – HNS foraging
22:43 - 22:45	*Myotis spec.*	3 – added post QA
22:47	*Pipistrellus pipistrellus*	1 – added post QA
22:48	*Myotis spec.*	1 – HNS
22:51	*Myotis spec.*	2 – HNS foraging
22:51	*Pipistrellus pipistrellus*	1 – HNS foraging
22:52	*Myotis spec.*	1 – added post QA
22:53	*Plecotus auritus*	1 – added post QA
22:53	*Myotis spec.*	2 – HNS foraging
22:56	*Myotis spec.*	2 – HNS foraging
22:59	*Myotis spec.*	2 - HNS
23:01 - 23:02	*Pipistrellus pipistrellus*	5 – HNS foraging
23:03	*Myotis spec.*	1 - HNS
23:04 - 23:05	*Pipistrellus pipistrellus*	2 – added post QA
23:07	*Pipistrellus pipistrellus*	1 – HNS foraging
23:08	*Myotis spec.*	3 – added post QA
23:08	*Plecotus auritus*	1 – added post QA
23:09 - 23:10	*Nyctalus leisleri*	2 – HNS foraging
23:11 - 23:12	*Pipistrellus pipistrellus*	5 – HNS foraging
23:12	*Myotis spec.*	1 – added post QA
23:12 - 23:15	*Pipistrellus pipistrellus*	5 – HNS foraging
23:15	*Myotis spec.*	1 - HNS
23:16	*Pipistrellus pipistrellus*	1 – added post QA

Surveyor:	**AS, JC**	**Temp C:**	**14**
Site:	**Transect 5**	**Wind:**	2
Date:	30/07/2024	**Rain:**	0
Sunset:	21:05	**Cloud:**	3

Start/end: 21:05 – 23:15

Timestamp	Species	Number of passes
21:42 - 21:43	*Pipistrellus pipistrellus*	2 – added post QA
21:45	*Myotis sp.*	1 – added post QA
21:46	*Nyctalus noctula*	3 – H&S foraging
21:48 - 21:50	*Pipistrellus pipistrellus*	3 – HNS foraging
22:08	*Pipistrellus pipistrellus*	2 – H&S foraging
22:18	*Pipistrellus pipistrellus*	1 – HNS foraging
22:24	*Pipistrellus pipistrellus*	1 – HNS foraging
22:40 - 22:41	*Myotis sp.*	2 - HNS
22:44	*Pipistrellus pygmaeus*	1 – HNS foraging
22:45	*Myotis sp.*	1 – HNS foraging
22:45	*Pipistrellus pipistrellus*	1 – HNS foraging
22:51	*Pipistrellus pygmaeus*	2 – HNS foraging
22:52	*Pipistrellus pipistrellus*	1 – added post QA
22:54	*Pipistrellus pipistrellus*	1 – HNS foraging
22:57 - 22:59	*Myotis sp.*	4 - HNS
23:00 - 23:01	*Pipistrellus pipistrellus*	4 – HNS foraging
23:03	*Pipistrellus pipistrellus*	1 – HNS foraging
23:07 - 23:08	*Pipistrellus pipistrellus*	3 – HNS foraging

Surveyor:	**EW, PM**	**Temp C:**	**13**
Site:	**Transect 6**	**Wind:**	2
Date:	29/07/2024	**Rain:**	0
Sunset:	21:05	**Cloud:**	3
Start/end:	23:08		

Timestamp	Species	Number of passes
21:52	*Nyctalus noctula*	2 – added post QA
22:00	*Pipistrellus pipistrellus*	1 – HNS foraging along road

22:05	*Pipistrellus pipistrellus*	1 – added post QA
22:18	*Pipistrellus pipistrellus*	2– HNS foraging along road
22:27	*Plecotus auritus*	1 – added post QA
22:32 - 22:33	*Pipistrellus pipistrellus*	2– HNS foraging along hedgerow
22:39 - 22:43	*Pipistrellus pipistrellus*	6– HNS foraging along tree line
22:47	*Pipistrellus pipistrellus*	2 – added post QA
22:47	*Pipistrellus pygmaeus*	1 – added post QA
22:47	*Pipistrellus pipistrellus*	1– HNS foraging along road
22:51	*Plecotus auritus*	1 – added post QA
22:51	*Pipistrellus pipistrellus*	2– HNS foraging along road
22:53	*Pipistrellus pipistrellus*	1 – added post QA
22:56	*Pipistrellus pipistrellus*	2– HNS foraging along road
22:57	*Nyctalus leisleri*	1– HNS foraging
23:02	*Pipistrellus pipistrellus*	1– HNS foraging
23:04	Pipistrellus pipistrellus	1– HNS foraging
23:09	Pipistrellus pipistrellus	1– HNS foraging

AUTUMN

Surveyor:	**TC, KW**	**Temp C:**	**16**
Site:	**Transect 1**	**Wind:**	3
Date:	20/09/2023	**Rain:**	Dry, rain during the day
Sunset:	19:09	**Cloud:**	7
Start/end:	19:09 to 21:09		

Timestamp	Species	Comment
19:34	*Nyctalus noctula*	Heard not seen (HNS), several passes commuting activity
19:37	*Nyctalus noctula*	HNS, commuting pass
19:41	*Nyctalus noctula*	HNS
19:44	*Nyctalus noctula*	HNS, commuting pass
19:45	*Pipistrellus species*	Added post QA
19:47	*Pipistrellus pipistrellus*	H&S, foraging into field
19:48	*Pipistrellus pygmaeus*	HNS
19:50	*Pipistrellus pygmaeus*	HNS
19:55	*Nyctalus noctula*	Added post QA
20:04	*Myotis species*	Added post QA
20:10	*Nyctalus noctula*	Added post QA
20:10	*Pipistrellus pipistrellus*	HNS, foraging throughout listening point
20:12	*Noctule*	HNS, quick commuting pass
20:13	*Myotis species*	Added post QA
20:21	*Pipistrellus pipistrellus*	Added post QA
20:27	*Pipistrellus pipistrellus*	Added post QA
20:31	*Pipistrellus pipistrellus*	HNS, foraging activity

20:38	*Pipistrellus pipistrellus*	HNS, commuting passes along hedgerow
20:41	*Pipistrellus pygmaeus*	HNS, foraging along hedgerow
20:43	*Pipistrellus pipistrellus*	HNS, foraging along hedgerow
20:45	*Pipistrellus pygmaeus*	HNS, foraging along hedgerow
20:51	*Pipistrellus pipistrellus*	HNS, foraging activity
20:53	*Pipistrellus pipistrellus*	HNS, foraging along hedgerow
20:53	*Pipistrellus pipistrellus*	HNS, activity along hedgerow
20:57	*Pipistrellus pipistrellus*	HNS, constant foraging with numerous passes throughout listening point
21:06	*Pipistrellus pipistrellus*	HNS, commuting
21:06	*Nyctalus noctula*	HNS, commuting
21:11	*Nyctalus noctula*	Added post QA
21:39	*Pipistrellus pipistrellus*	Added post QA

Surveyor:	**MR, EB**	**Temp C:**	**16**
Site:	**Transect 2**	**Wind:**	3
Date:	20/09/2023	**Rain:**	Dry, rain during the day
Sunset:	19:09	**Cloud:**	7
Start/end:	19:09 to 21:09		

Timestamp	**Species**	**Comment**
19:41	*Nyctalus noctula*	HNS
19:52	*Nyctalus noctula*	HNS
19:55	*Pipistrellus pipistrellus*	HNS, foraging
20:10	*Pipistrellus pipistrellus*	HNS, foraging

20:16	*Pipistrellus pipistrellus*	HNS, foraging
20:20	*Pipistrellus pipistrellus*	HNS, faint pass
20:22	*Pipistrellus pipistrellus*	Added post QA
20:25	*Nyctalus noctula*	HNS
20:28	*Pipistrellus pipistrellus*	HNS
20:32	*Pipistrellus pipistrellus*	HNS, foraging
20:44	*Pipistrellus pipistrellus*	HNS
20:49	*Nyctalus noctula*	HNS
20:56	*Pipistrellus pygmaeus*	HNS, foraging
20:59	*Pipistrellus pipistrellus*	HNS
21:01	*Nyctalus noctula*	HNS

Surveyor:	**MR, IW**	**Temp C:**	**14**
Site:	**Transect 3a**	**Wind:**	1
Date:	21/09/2023	**Rain:**	Dry
Sunset:	19:06	**Cloud:**	2
Start/end:	19:06 to 21:06 (for both Transect 3a and 3b)		

Timestamp	**Species**	**Comment**
19:50	*Pipistrellus pygmaeus*	Added post QA
19:51	*Pipistrellus pipistrellus*	H&S, foraging
19:55	*Pipistrellus pipistrellus*	HNS

19:57	*Pipistrellus pipistrellus*	HNS, foraging
19:59	*Pipistrellus pipistrellus*	H&S, x3 bats foraging
20:06	*Pipistrellus pipistrellus*	HNS, foraging
20:12	*Pipistrellus pipistrellus*	H&S, x2 bats foarging
20:15	*Nyctalus noctula*	Added post QA
20:15	*Pipistrellus pygmaeus*	Added post QA
20:17	*Pipistrellus pipistrellus*	HNS, foraging
20:18	*Pipistrellus pipistrellus*	HNS, foraging
20:19	*Pipistrellus pipistrellus*	HNS, foraging
20:22	*Pipistrellus pygmaeus*	Added post QA
20:24	*Pipistrellus pipistrellus*	HNS, foraging
20:24	*Pipistrellus pipistrellus*	HNS, foraging
20:29	*Pipistrellus pipistrellus*	HNS, foraging

Surveyor:	**MR, IW**	**Temp C:**	**14**
Site:	**Transect 3b**	**Wind:**	1
Date:	21/09/2023	**Rain:**	Dry
Sunset:	19:06	**Cloud:**	2
Start/end:	19:06 to 21:26 (for both Transect 3a and 3b)		

Timestamp	**Species**	**Comment**
20:55	*Pipistrellus pipistrellus*	HNS, foraging multi passes

21:07	*Pipistrellus pipistrellus*	H&S, x2 bats foraging
21:13	*Pipistrellus pipistrellus*	HNS, foraging
21:17	*Myotis species*	HNS, foraging
21:19	*Pipistrellus pipistrellus*	Added post QA
21:24	*Pipistrellus pipistrellus*	HNS, foraging multi passes

Surveyor:	**EB, JR**	**Temp C:**	**13**
Site:	**Transect 4**	**Wind:**	2
Date:	09/09/2024	**Rain:**	0
Sunset:	19:34	**Cloud:**	3
Start/end:	19:34 – 21:34		

Timestamp	Species	Number of passes - comment
19:59	*Nyctalus noctula*	1 – HNS commuting
20:10	*Nyctalus noctula*	1 – HNS foraging feeding buzz heard
20:12 - 20:17	*Pipistrellus pipistrellus*	20 – H&S foraging in circles near tree
20:19 - 20:23	*Pipistrellus pipistrellus*	21 – HNS commuting
20:29	*Myotis sp.*	1 – added post QA
20:31 - 20:36	*Pipistrellus pipistrellus*	27 – HNS foraging
20:36	*Pipistrellus pygmaeus*	1 – HNS foraging
20:36	*Pipistrellus pipistrellus*	1 – HNS foraging
20:46	*Pipistrellus pipistrellus*	1 – HNS foraging
20:57 - 20:58	*Pipistrellus pipistrellus*	5 – HNS foraging
21:02	*Pipistrellus pipistrellus*	5 – HNS distant pass
21:05 - 21:06	*Pipistrellus pipistrellus*	6 – added post QA
21:06	*Myotis sp.*	1 – added post QA
21:06	*Pipistrellus pipistrellus*	1 – added post QA
21:08 - 21:21	*Pipistrellus pipistrellus*	44 – HNS foraging

Surveyor:	**DR, TD**	**Temp C:**	**13**
Site:	**Transect 5**	**Wind:**	2
Date:	09/09/2024	**Rain:**	0
Sunset:	19:34	**Cloud:**	3
Start/end:	19:34 – 22:16		

Timestamp	Species	Number of passes
19:52	*Pipistrellus pipistrellus*	2 – HNS foraging
20:00	*Pipistrellus pipistrellus*	1 – added post QA
20:02	*Pipistrellus pipistrellus*	1 – added post QA
20:06	*Myotis spec.*	1 – added post QA
20:15 - 20:17	*Pipistrellus pipistrellus*	5 – HNS foraging
20:18	*Myotis spec.*	1 – added post QA
20:19 - 20:31	*Pipistrellus pipistrellus*	49 – H&S foraging along hedgerow
20:34	*Pipistrellus pipistrellus*	1 – added post QA
20:39	*Myotis spec.*	1 – added post QA
20:43	*Pipistrellus pipistrellus*	1 – added post QA
20:49 - 20:53	*Pipistrellus pipistrellus*	17 – HNS foraging
20:51 - 20:53	*Myotis spec.*	5 – added post QA
21:11	*Pipistrellus pipistrellus*	4 – added post QA
21:14 - 21:22	*Pipistrellus pipistrellus*	25 – H&S multiple bats forgaing along hedgerow
21:28 - 21:34	*Pipistrellus pipistrellus*	20 – HNS foraging
21:30	*Myotis spec.*	2 – added post QA
21:36 - 21:39	*Pipistrellus pipistrellus*	17 – HNS foraging
21:41 - 21:48	*Pipistrellus pipistrellus*	24 – HNS foraging
21:56	*Pipistrellus pipistrellus*	1 – added post QA
21:59 - 22:00	*Pipistrellus pipistrellus*	5 – added post QA
22:05	*Pipistrellus pipistrellus*	1 – added post QA
22:08 - 22:09	*Pipistrellus pipistrellus*	4 – HNS foraging
22:14 - 22:17	*Pipistrellus pipistrellus*	17 – HNS foraging

Surveyor:	**DR,JR**	**Temp C:**	**12**
Site:	**Transect 6 (CR)**	**Wind:**	0
Date:	12/09/2024	**Rain:**	Recent rain/drizzle
Sunset:	19:37	**Cloud:**	2
Start/end:	19:37 – 21:37		

Timestamp	Species	Number of passes
20:01	*Pipistrellus pipistrellus*	1 – added post QA
20:05 - 20:06	*Pipistrellus pipistrellus*	2 – added post QA
20:08	*Pipistrellus pipistrellus*	1 – added post QA
20:13	*Pipistrellus pipistrellus*	2 – added post QA
20:16 - 20:17	*Pipistrellus pipistrellus*	4 – added post QA
20:18	*Myotis sp.*	1 – HNS foraging
20:34	*Nyctalus noctula*	1 – added post QA
20:34 - 20:41	*Pipistrellus pipistrellus*	26 – HNS foraging
20:43	*Nyctalus noctula*	2 – added post QA
20:44	*Pipistrellus pipistrellus*	2 – HNS foraging
20:44	*Nyctalus noctula*	1 – added post QA
20:44 - 20:45	*Pipistrellus pipistrellus*	4 – HNS foraging
20:51	*Pipistrellus pipistrellus*	3 – HNS foraging
20:57	*Pipistrellus pipistrellus*	1 – added post QA
21:03	*Pipistrellus pipistrellus*	2 – HNS foraging
21:14	*Pipistrellus pygmaeus*	1 – added post QA
21:18	*Pipistrellus pygmaeus*	1 – HNS foraging
21:25	*Pipistrellus pipistrellus*	4 – added post QA

Annex D Static Survey Results

Species abbreviations: PIPI - Common Pipistrelle, PIPY - Soprano Pipistrelle, PINA – Nathusius' Pipistrelle, PISP – Common or Soprano Pipistrelle, NYNO - Noctule, NYSP - Noctule or Leisler's, MYSP - Myotis species, MYDA – Daubenton's Bat, PLAU - Brown Long-eared. BAI = Bat Activity Index; hrs/nt = hours per night.

Night temp. range	Season	Location	Dates	PIPI	PINA	PIPY	PISP	NYNO	NYSP	NYLE	MYSP	MYDA	BABA	PLAU	Species no.	Total	Nights	hrs/nt	BAI per hr	Activity Level
7°C - 18°C	Spring	T1	10/05/2023 - 23/05/2023	9566	0	172	1	159	2	0	820	1	0	19	8	**10740**	13	8	**103.27**	**High Activity**
7°C - 18°C	Spring	T2	10/05/2023 - 23/05/2023	8840	0	14	3	8	1	0	69	5	0	3	8	**8943**	13	8	**85.99**	**Moderate-high Activity**
7°C - 18°C	Spring	T3	10/05/2023 - 23/05/2023	3073	0	165	30	41	1	0	50	5	0	12	8	**3377**	13	8	**32.47**	**Low-moderate Activity**
N/A	Spring	24A	24/05/2024 - 30/05/2024	Static Failed																
N/A	Spring	24B	24/05/2024 - 30/05/2024	Static Failed																
9°C – 20°C	Spring	24C	24/05/2024 - 30/05/2024	1926	0	1	0	27	0	3	22	0	0	0	5	**1979**	6	7.5	**43.98**	**Moderate Activity**
9°C – 20°C	Spring	CR1	24/05/2024 - 30/05/2024	4001	6	121	21	9	0	0	1927	5	0	2	8	**6092**	6	7.5	**135.38**	**High Activity**
N/A	Spring	CR2	24/05/2024 - 30/05/2024	Static Failed																
9°C – 20°C	Spring	CR3	24/05/2024 - 30/05/2024	594	0	34	1	76	0	0	269	0	0	7	6	**981**	6	7.5	**21.80**	**Low Activity**
N/A	Spring	CR4	N/A	Static not Deployed - H&S																

Night temp. range	Season	Location	Dates	PIPI	PINA	PIPY	PISP	NYNO	NYSP	NYLE	MYSP	MYDA	BABA	PLAU	Species no.	Total	Nights	hrs/nt	BAI per hr	Activity Level
9°C – 20°C	Spring	CR5	24/05/2024 - 30/05/2024	3707	45	24	28	68	0	0	270	0	0	0	6	**4142**	6	7.5	**92.04**	**Moderate-high Activity**
9°C - 19°C	Summer	T1	25/07/2023 - 04/08/2023	7423	0	310	6	138	13	0	602	0	0	24	7	**8516**	10	8	**106.45**	**High Activity**
9°C - 19°C	Summer	T2	25/07/2023 - 04/08/2023	3682	2	26	13	116	0	0	423	0	0	6	7	**4268**	10	8	**53.35**	**Moderate Activity**
9°C - 19°C	Summer	T3	27/07/2023 - 04/08/2023	6872	0	221	0	61	7	0	252	0	0	0	5	**7413**	8	8	**115.83**	**High Activity**
13°C - 20°C	Summer	24A	30/07/2024 - 05/08/2024	2255	0	8	0	32	1	1	325	0	0	13	7	**2635**	5	8.5	**62.00**	**Moderate-high Activity**
13°C - 20°C	Summer	24B	30/07/2024 - 05/08/2024	742	0	5	2	19	0	0	115	18	0	2	7	**903**	5	8.5	**21.25**	**Low Activity**
13°C - 20°C	Summer	24C	30/07/2024 - 05/08/2024	840	0	9	0	28	0	0	56	0	0	1	5	**934**	5	8.5	**21.98**	**Low-moderate Activity**
13°C - 20°C	Summer	CR1	30/07/2024 - 05/08/2024	5430	0	14	0	32	0	0	186	33	0	7	6	**5702**	5	8.5	**134.16**	**High Activity**
13°C - 20°C	Summer	CR2	30/07/2024 - 05/08/2024	2502	0	13	0	71	0	1	1484	0	0	7	6	**4078**	5	8.5	**95.95**	**Moderate-high Activity**
13°C - 20°C	Summer	CR3	30/07/2024 - 05/08/2024	1037	0	55	0	45	0	0	273	0	0	4	5	**1414**	5	8.5	**33.27**	**Low-moderate Activity**
13°C - 20°C	Summer	CR4	30/07/2024 - 05/08/2024	1286	1	508	0	75	0	0	849	0	0	6	6	**2725**	5	8.5	**64.12**	**Moderate-high Activity**
13°C - 20°C	Summer	CR5	30/07/2024 - 05/08/2024	3662	8	20	0	23	0	0	75	0	0	1	6	**3789**	5	8.5	**89.15**	**Moderate-high Activity**
6°C - 10°C	Autumn	T1	20/09/2023 - 28/09/2023	2503	0	487	3	38	3	0	386	0	0	6	7	**3426**	8	11.50	**37.24**	**Moderate Activity**

Night temp. range	Season	Location	Dates	PIPI	PINA	PIPY	PISP	NYNO	NYSP	NYLE	MYSP	MYDA	BABA	PLAU	Species no.	Total	Nights	hrs/nt	BAI per hr	Activity Level
6°C - 10°C	Autumn	T2	20/09/2023 - 28/09/2023	2742	0	654	11	83	0	0	80	0	0	13	6	**3583**	8	11.50	**38.95**	**Moderate Activity**
6°C - 10°C	Autumn	T3	21/09/2023 - 28/09/2023	1565	2	24	38	35	0	0	28	0	0	24	7	**1716**	7	11.50	**21.32**	**Low Activity**
4°C - 19°C	Autumn	24A	09/09/2024 - 16/09/2024	322	0	10	0	23	0	2	87	4	0	6	7	**454**	7	11.00	**5.90**	**Low Activity**
4°C - 19°C	Autumn	24B	09/09/2024 - 16/09/2024	2895	0	15	0	27	0	0	100	0	0	2	5	**3039**	7	11.00	**39.47**	**Moderate Activity**
4°C - 19°C	Autumn	24C	09/09/2024 - 16/09/2024	2037	0	4	0	36	1	0	29	2	0	7	7	**2116**	7	11.00	**27.48**	**Low-moderate Activity**
4°C - 19°C	Autumn	CR1	09/09/2024 - 16/09/2024	2849	0	9	3	20	0	0	181	17	0	15	7	**3094**	7	11.00	**40.18**	**Moderate Activity**
4°C - 19°C	Autumn	CR2	09/09/2024 - 16/09/2024	1447	0	87	0	40	0	2	873	14	0	4	7	**2467**	7	11.00	**32.04**	**Low-moderate Activity**
4°C - 19°C	Autumn	CR3	09/09/2024 - 16/09/2024	2185	1	19	0	7	0	0	99	2	2	8	8	**2323**	7	11.00	**30.17**	**Low-moderate Activity**
N/A	Autumn	CR4	09/09/2024 - 16/09/2024	Static not Deployed - H&S																
4°C - 19°C	Autumn	CR5	09/09/2024 - 16/09/2024	1309	0	0	0	1	0	0	10	0	0	0	2	**1320**	7	11.00	**17.14**	**Low Activity**
	TOTALS			**87292**	**65**	**3029**	**160**	**1338**	**29**	**9**	**9940**	**106**	**2**	**199**	**179**	**102169**	154	172.50		

Annex E Valuing Bat Roosts Foraging and Commuting Habitats in Ecological Impacts Assessment

The conservation importance of the roosting, foraging and commuting bats present on site is based on the rarity of individual bat species, importance of their roosts, commuting and foraging habitats and overall importance of the bat assemblages (see Tables below) based on the analysis framework in CIEEM Guidelines for Ecological Impact Assessment (Ref. 19), and in the CIEEM Bat Mitigation Guidelines (Ref. 15) and using professional judgement.

Rarity Category (Central England/Midlands)

Rarity category	Species
Widespread	a. Common pipistrelle b. Soprano Pipistrelle c. Brown Long-eared bat
Widespread in many geographies but not as abundant in all	a. Daubenton's bat b. Natterer's bat c. Noctule d. Brandt's bat e. Whiskered bat
Rarer or restricted distribution	a. Leisler's bat b. Nathusius' pipistrelle c. Serotine (*Eptesicus serotinus*)
Rarest Annex II species and very rare	a. Barbastelle

Note, this excludes other UK bat species that are unlikely to occur within the Order limits based on their current distribution.

Assessing Conservation Importance of Bat Roosts[1]

Rarity category (species in each category are determined by region)	Roost category						
	Feeding perches; night-roosts Individual or very small occasional/ transitional/ opportunistic roosts	**Non-breeding day roosts (small numbers of species)**	**Mating sites (excluding individual trees) Small numbers of hibernating bats**	**Larger transitional roosts**	**Hibernation sites[4]**	**Autumn Swarming sites**	**Maternity sites[3]**
Widespread	Site	Site	Site	Site/Local	District/County [larger hibernation sites rare in the UK]	District/County (very large pipistrelle swarming sites as yet unknown in the UK)	Unlikely to exceed District importance unless colonies are atypically large; importance increased for assemblages.
Widespread in many geographies but not as abundant in all	Site	Site	Site, dependent on local distribution [for Myotis, see swarming site column]	District	District/County importance dependent on size[2] and number of species	County/Regional importance dependent on size[2] importance increased for larger sites that serve larger numbers/species	County/Regional importance on size[2] and local distribution; increased value for assemblages.

Rarity category (species in each category are determined by region)	Roost category						
	Feeding perches; night-roosts Individual or very small occasional/ transitional/ opportunistic roosts	**Non-breeding day roosts (small numbers of species)**	**Mating sites (excluding individual trees) Small numbers of hibernating bats**	**Larger transitional roosts**	**Hibernation sites[4]**	**Autumn Swarming sites**	**Maternity sites[3]**
Rarer or restricted distribution	Site (very well-used night roosts may be of District importance for some species)	Site/Local/District, dependent on local distribution	Site/Local/District, dependent on local distribution	District	District/County importance on size[2] and local distribution; increased value for assemblages.	County/Regional importance on size[2] and local distribution; increased value for assemblages.	County/Regional importance on size[2] and local distribution; increased value for assemblages.
Rarest Annex II species and very rare	Site (very well-used night roosts may be of District importance for some species)	Site/Local/District, dependent on local distribution	Site/Local/District, dependent on local distribution	District	County/Regional importance on size[2] and local distribution; increased value for assemblages.	County/Regional importance on size[2] and local distribution; increased value for assemblages.	County/Regional importance on size[2] and local distribution; increased value for assemblages.

[1] Sites within or functionally-linked to SACs are of International importance for Qualifying Species. Sites that *could* be functionally-linked to SACs may or may not have that level of importance (e.g. a Barbastelle maternity roost from a multi-component 'bat' SAC may be too far away to be a direct satellite of a maternity roost within the SAC, but may be part of the same population through intermediate unidentified

roosts). Sites meeting SSSI guidelines are of National importance (though note that many SSSI citations do not reflect the 'bat' importance of the sites they describe).

[2] In all cases, 'size' needs to be interpreted as 'relative to typical sizes for the species'.

[3] Satellite roosts (i.e. alternative roosts found in close proximity to the main nursery colony) should be considered with the associated main colony.

[4] For tree-roosting bats that are likely to hibernate in small numbers (which means individual hibernation sites are difficult to detect and many may be missed), the importance of the roost resource (i.e. the extent of woodland which contains trees suitable for hibernation) rather than individual confirmed roosts, should be assessed.

Assessing the Importance of a Bat Assemblage

Sites of importance to bats often support several species, and it can be helpful to consider the importance of the assemblage as a whole after the individual bat species have been assessed. Assigning a level of importance to an assemblage provides contextual information only; it is not expected that the assemblage as a whole would be assessed as a single receptor.

Rarity category	Species and Score	
Widespread	a. Common pipistrelle b. Soprano Pipistrelle c. Brown Long-eared bat	1 point each
Widespread in many geographies but not as abundant in all	a. Daubenton's bat b. Natterer's bat c. Noctule d. Brandt's bat e. Whiskered bat	2 points each
Rarer or restricted distribution	a. Leisler's bat b. Nathusius' pipistrelle c. Serotine	3 points each
Rarest Annex II species and very rare	a. Barbastelle	4 points
Maximum score		26
45%	County	12
55%	Regional	14
70%	National	18

Importance of Ecological Features

Importance of Ecological Features	Typical descriptors and examples of criteria
International or European	An internationally designated site or candidate site including SAC, candidate or possible SACs (cSACs or pSACs[1]) where bats are cited as a qualifying feature. Resident or regularly occurring populations of species which may be considered at an international or European level[2] where: the loss of these populations would adversely affect the conservation status or distribution of the species at this geographic scale; the population forms a critical part[3] of a wider population at this scale; or the species is at a critical phase[4] of its life cycle at this scale.
UK or National	Sites designated at UK or national level e.g. SSSI, where bats are included as an interest feature. Resident or regularly occurring populations of species which may be considered at a UK or a national level[5] where: the loss of these populations would adversely affect the conservation status or distribution of the species at this geographic scale; the population forms a critical part of a wider population at this scale; or the species is at a critical phase of its life cycle at this scale.
Regional	Populations of species of value at a regional level (i.e. Yorkshire and the Humber). Resident or regularly occurring populations of species which may be considered at a regional level[6] where: the loss of these populations would adversely affect the conservation status or distribution of the species at this geographic scale; the population forms a critical part of a wider population at this scale; or the species is at a critical phase of its life cycle at this scale.
County or Unitary Authority or District	Populations of species of value at a County (South Yorkshire) level or District (Doncaster). Resident or regularly occurring populations of species which may be considered at a County (or District) level where: the loss of these populations would adversely affect the conservation status or distribution of the species at this geographic scale; the population forms a critical part of a wider population at this scale; or, the species is at a critical phase of its life cycle at this scale.

Importance of Ecological Features	Typical descriptors and examples of criteria
Local	Species populations of value in a local (i.e. within ~ 5 km of the site) context. Areas of habitat or populations and, or communities of species considered to appreciably enrich the habitat resource within the local context (such as veteran trees), including features of value for migration, dispersal or genetic exchange.
Site	Habitat that is of value in the context of the site only. Populations of common and widespread species.

1 pSACs are sites which have been formally advised by to UK Government but have not yet been submitted to the European Commission. These sites should be valued at an international (European) level on the basis that they meet the relevant selection criteria for a SAC but are not yet designated as such.

2 Such species include those listed within Council Directive 92/43/EEC on the Conservation of natural habitats and of wild flora and fauna (i.e. Habitats Directive).

3 Such populations include sub-populations that are essential to maintenance of metapopulation dynamics e.g. critical emigration/immigration links between otherwise discrete populations.

4 Seasonal activity or behaviour upon which survival or reproduction depends.

5 Species which may be considered at the UK or national level means; other animals which receive legal protection in the basis of their conservation interest (those listed within the Wildlife and Countryside Act 1981 (as amended) Schedule 5 and 8); species listed for their principal importance for biodiversity (in accordance with the NERC Act section 41 England); priority species listed within the UK Post 2010 Biodiversity Framework (i.e. UK BAP); or species listed within the Red Data Book.

6 Such species include those listed in the appropriate Natural Character Area and key/priority species listed on the 2002 HABAP.

As well as assigning importance there is also a need to identify all legally protected species that could be affected by the Scheme in order that measures can be taken to ensure that adherence to the relevant legislation is observed. This may include the adoption of mitigation and appropriate licensing which is acceptable to Natural England.

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