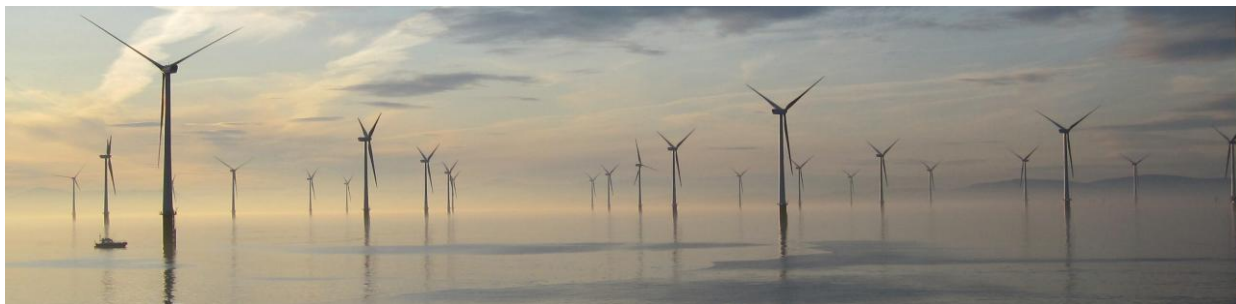




Rampion Offshore Wind Farm



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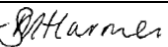
Rampion Offshore Wind Farm –
Onshore EIA

Bat Technical Report

Prepared For E.ON Climate and
Renewables

October 2012

INTERNAL PROJECT REPORT FOR EON**RSK General Notes****Project No:** 852425**Title:** Rampion Offshore Wind Farm – Onshore EIA – Bat Technical Report**Client:** E.ON Climate and Renewables**Issue Date:** October 2012**Revision:** Rev02**Issuing Office:** Hemel Hempstead

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1 INTRODUCTION

1.1 Purpose of this Report

This report presents the findings of the bat surveys carried out along the alignment of a proposed cable route through Sussex associated with a proposed off-shore windfarm development. The surveys comprised a roost survey for bats and bat activity surveys, carried out between February and September 2011.

1.2 Scheme Description

The proposed cable route is approximately 27 km long running south to north from a landfall site near East Worthing to a proposed substation site east of the existing Bolney substation near Twineham. Construction activities will be undertaken within a fenced strip of land, known as the working width. The working width is expected to be no wider than 40m, comprising 15m for the cable easement, and 25m for additional areas for storage of excavated material and access along the cable trench. The cable easement will not necessarily be central to the working width.

For the purposes of the ecological surveys, a survey corridor of 65m or 125m (depending on the survey-type) was used. For bats, a survey corridor of 125 m was assumed for the roost surveys to take into account the potential for disturbance.

The term ‘cable route’ has been used throughout this report and represents the area within the Development Boundary for the onshore cable.

As shown on *Figure 1*, the ecology survey corridor for the cable route extends further north than the Development Boundary. This is due to the fact that the cable route connection with the substation was not defined at the time of the surveys and therefore a wider survey area was covered.

Ecological surveys undertaken for the proposed substation are detailed elsewhere in the Substation Technical Report (*Appendix 24.11*), although the survey areas do overlap, as shown in *Figure 1*.

1.3 Ecological Context

The proposed cable route starts at the Sussex coast on the eastern outskirts of Worthing and proceeds in a general north-east direction, crossing the South Downs National Park and terminating east of Bolney Substation.

Between the coast and the A27 road, the route crosses semi-urban habitats, including a golf course, parkland and former allotments, and a section of mostly arable farmland. It then enters the South Downs NP, passing through a landscape of rolling chalk hills predominately converted to intensive arable farming. Beyond Tottington Mount the final half of the route comprises a mixture of arable and pastoral farmland enclosed by hedges.

The route generally avoids large areas of woodland and other semi-natural habitats, though it crosses a few discrete areas of unimproved grassland, most notably at Tottington Mount and Old Erringham Farm Valley and road cutting SNCI. Other noteworthy habitats crossed include coastal shingle, the tidal River Adur and a few narrow woodland corridors.

1.4 *Structure of this Report*

The remainder of the report is set out as follows:

- *Section 2* describes the survey and assessment methods;
- *Section 3* presents the results of the surveys;
- *Section 4* provides the evaluation of results, impacts and proposed mitigation methods;
- *Section 5* summarises the overall conclusions;
- *Section 6* is the reference section;
- *Section 7* provides the figures;
- *Appendix A* – Relevant Legislation
- *Appendix B* – Ground Level Tree Survey Data
- *Appendix C* – Tree Climbing Survey Data
- *Appendix D* – Automated Bat Activity Results from July and August
- *Appendix E* – Times After Sunset and Numbers of Bat Passes Recorded by Anabats in July and August
- *Appendix F* – Automated Bat Activity Results from September
- *Appendix G* – Manual Bat Activity Results

2 METHODS

2.1 Survey Constraints

Access was denied by landowners for a 1 km section of the route between Horn Lane and the A281 road, although it was included in the animal walkover in December 2010 so some information is available, although limited.

A minor route change occurred subsequent to the completion of the bat surveys to accommodate the 'Teville Stream Restoration Project'. As a result, bat activity survey locations 5, 6 and 8 were no longer situated in the centre of the survey corridor, although the same hedgerows will be affected. However, bats were most-likely using the entire length of the hedgerow, and therefore the results are applicable for the revised route and further surveys were not necessary.

2.2 Consultation with LPA

Numerous telephone calls and emails were exchanged with Mr Don Baker, Senior Ecologist for Environment and Heritage at West Sussex County Council, regarding the scope of the bat surveys to be carried out prior to submission of the Environmental Statement. These discussions are summarised in *Section 24.3* of the Environmental Statement.

2.3 Desk Study

2.3.1 Background Data Search

The Sussex Biodiversity Records Centre was contacted for all records of bats within 5 km of the proposed cable route in May 2011.

2.3.2 Annex II Species

The proposed cable route is within the known range of both the *Myotis bechsteinii* (Bechstein's Bat) and *Barbastella barbastellus* (Barbastelle) bat species. These species are rare in the UK and are consequently listed on Annex II of the Council Directive 92/43/EEC on the *Conservation of natural habitats of wild fauna and flora (The Habitats Directive)*. They are also both priority species on the UK Biodiversity Action Plan. Special consideration is therefore required in relation to the potential impact on these species.

Bechstein's Bat is primarily a tree-dwelling woodland species and research has shown that breeding colonies tend to have very specific habitat requirements. The Bat Conservation Trust (BCT) has been running the Bechstein's Bat Project since 2007, within which woodlands are selected according to a habitat model and surveyed using specialised methodologies suitable to the species.

Using the habitat model from the Bechstein's Bat Project as a guide (BCT 2009), we identified ancient woodlands at least 25 ha in size (made up of one woodland block or several well-connected woodland blocks) within 500 m of the working width, which could be inhabited by Bechstein's Bat. Ancient woodlands were identified from a GIS digital boundary dataset for Ancient Woodlands from Natural England and updated datasets from the local record centre.

Had there been any linear features that would be severed by cable construction and that linked any of these woodlands we would have carried out species-specific surveys (surveying for presence or likely absence of Bechstein's Bat by trapping bats using an acoustic lure) along these features.

Barbastelle Bat is also a tree-dwelling woodland species, although research suggests that its habitat requirements are less specialised than the Bechstein's. As Barbastelle bats are straightforward to detect on a bat detector and would be covered in the general bat activity surveys, no species-specific surveys were undertaken.

For both Bechstein's Bat and Barbastelle, the tree climbing surveys detailed below would pick up any actual roosts in close proximity to the proposed works.

2.4 *Roost Surveys for Bats*

2.4.1 *Scope of Surveys*

All potential roosts within the 125m survey corridor were assessed from ground level to identify features likely to support bats. No buildings or other structures were identified within the survey corridor.

This large survey corridor was chosen because the proposed cable route lies well within the known distribution range of two rare tree-dwelling bat species (see above), and so that direct effects upon roosts and indirect effects from disturbance or habitat gaps could be considered.

2.4.2 *Categorisation of Tree Features*

Features that might be used by roosting bats were described and categorised according to the standard RSK scheme as follows. Each feature was given a category during the

ground level surveys (see below) and then re-categorised during the tree climbing surveys (see below).

Category 3 - Features that appear to be suitable for large maternity colonies along with roosts of lower conservation status. Any features that appear to be physically large enough to support high numbers of bats (*i.e.* 20+ individuals); provide internal darkness; provide shelter from the wind and rain; are higher than 2 m above ground level; have an entrance point free from clutter and are possibly, though not exclusively, heated by the sun. Examples of this type of feature are those well known to support maternity colonies such as woodpecker holes (*e.g.* for *Nyctalus noctula*, Noctule), extensive horizontal or vertical splits, and large plates of flaking bark (*e.g.* for *Barbastellus barbastella*, Barbastelle), hollow limbs, hollow branches, hollow trunks and other extensive rot holes (*e.g.* for *Myotis bechsteinii*, Bechstein's Bat). The species named are tree specialists in the UK but these types of features could be used by many of our species for breeding.

Category 2 - Features that appear to be suitable for small maternity colonies along with roosts of lower conservation status. Any features that appear to be physically large enough to support smaller numbers of bats (*i.e.* 5-20 individuals); provide internal darkness; provide shelter from the wind and rain; are higher than 2 m above ground level; have an entrance point free from clutter and are possibly, though not exclusively, heated by the sun. Examples of this type of feature could include less extensive versions of the features listed above, cavities between overlapping branches, cavities behind callusing and lifted thick stemmed or mat ivy.

Category 1 - Features that appear to be unsuitable for maternity colonies, but that could be used for mating, occasional roosting, night roosting or hibernation. Any features that are only physically large enough to support individual bats or low numbers of bats (<5 individuals) OR are too low to the ground (<2 m) to provide protection for a maternity colony. Examples include any small features and all features below 2 m including hollow trunks with a low entrance, flaking bark, root balls *etc.*

Category 0 – Features with no potential to support roosting bats.

2.4.3

Ground Level Tree Surveys

Ground level tree surveys were carried out on between February and September 2011.

The surveys were all carried out in suitable weather conditions to survey trees (no fog or heavy rain).

The surveys were carried out by the following RSK personnel: David Cove, James Mepstead, Andrew Ross, Ruth Morton, Simon Parker, Jonathan Jackson and Paul Barnes.

David Cove, Andrew Ross, Ruth Morton, Simon Parker and James Mepstead all hold licences to disturb bats for the purpose of survey work (licence numbers 20113107, 20114296, 20122665, 20120633 and 20111672 respectively). All surveyors have been fully trained and have several seasons of experience in identifying trees with bat roosting potential.

Inspections of trees from ground-level involved viewing each tree from all angles using binoculars and a 500, 000 candle power torch to view higher areas.

Trees with any features that could have potential for roosting bats (*e.g.* woodpecker holes, rot cavities, splits, cracks, flaking bark and thick-stemmed or matted climbing plants) were identified and marked with a small, silver, uniquely numbered tag.

For each tree, the following information was recorded: tree tag number, grid reference, species and diameter at breast height.

For each feature, the following information was recorded onto a pre-designed survey sheet: feature description; height above ground level; distance from the trunk radially; orientation of the feature relative to the trunk; orientation of the entrance relative to the trunk; category of bat roost potential; and equipment required for closer access.

2.4.4 *Tree Climbing Surveys*

Any trees within the 125 m survey corridor identified as having *Category 3* bat roosting potential were inspected in tree climbing surveys. Trees identified as having *Category 2* bat roosting potential were also climbed if they were situated within the 65m survey corridor.

Tree climbing surveys were carried out between July and September 2011.

The surveys were all carried out in suitable weather conditions to survey trees (no heavy rain or strong winds).

The surveys were carried out by the following RSK personnel: James Pattenden; Beth Ludlow; Andrew Ross, Ruth Morton, Simon Parker and Stephanie Walker.

James Pattenden, Andrew Ross and Beth Ludlow all hold licences to disturb bats for the purpose of survey work (licence numbers 20114296, 20113945 and 20103223 respectively). Ruth Morton and Simon Parker are both training for similar bat survey

licences. All surveyors also hold certificates of competence in Tree Climbing and Aerial Rescue.

Access was gained to examine features in close detail (where possible) using ladders, ropes and harnesses by personnel qualified to climb trees and perform aerial rescue.

Once accessed, features were examined in detail using a bright torch, endoscope (fiberscope) or mirror to inspect (where possible) the full extent of the features and search for bats or evidence of bat activity (*e.g.* droppings, urine stains, odour, feeding remains, scratch marks, grease stains, wear marks).

For each feature, the following information was recorded onto a pre-designed survey sheet: internal dimensions, internal conditions, new category of bat roost potential, occupation by other species (*e.g.* birds, bees, hornets) and any evidence of bats (*e.g.* actual bats, bat droppings, staining, smell).

Bat droppings can prove beyond doubt that bats use a tree feature. Where droppings persist in the base of a dry hole or split, they can indicate the location of a bat roosting site. However, the absence of droppings does not indicate that a feature does not support a bat roost at another time of year. Droppings can decay rapidly in tree roosts.

The location, size, shape, texture and colour of droppings can be used to aid bat species identification, although this is not an exact science and is more difficult with tree roosts because droppings are often decayed or damp. Faeces or urine stains are sometimes found staining the wood or bark beneath roost holes in trees.

2.4.5 *Tree Emergence Surveys*

Where it was not possible to inspect tree features further (either due to safety or because the features were too extensive) features were subject to emergence surveys.

Emergence surveys commenced 15 minutes before sunset and continued until 1.5 hours after. Dates, times and weather conditions recorded are given in *Table 1* below.

Table 1. Dates, times and weather conditions recorded during tree emergence surveys

Date	Sunset Time	Start Time	End Time	Temp at start	Temp at end	Cloud cover at start	Cloud cover at end	Wind speed at start	Wind speed at end	Rain conditions
05/09/2011	19.38	19.25	21.08	15.4	16.4	0	0	5	5	Localised intermittent light showers
06/09/2011	19.38	19.28	21.08	14.6	14.1	6	4	2	2	None
07/09/2011	19.30	19.30	21.00	14.4	14.7	7	7	2	1	None

08/09/2011	19.30	19.20	21.00	17.1	16.4	4	4	2	1	None
12/09/2011	19.23	19.13	20.53	16.2	15.1	2	1	3	1	None
13/09/2011	19.23	19.13	20.53	12.0	11.8	0	0	1	1	None
14/09/2011	19.21	19.11	20.51	13.9	7.9	2	0	1	1	None

Emergence surveys were conducted by RSK personnel trained and experienced in carrying out such surveys, including Andrew Ross, Simon Parker and Victoria Gilbey.

Frequency division and time expansion bat detectors (Duet and Pettersson) enabled surveyors to accurately identify most bat species by their unique echolocation calls.

Identification was confirmed where necessary by recording bat calls onto minidisk or digital Edirol R-01 recorders and analysing the calls using BatSound software.

Further methods of identification included observation of bat flight pattern and behaviour.

2.5 *Bat Activity Surveys*

2.5.1 *Scope of Bat Activity Surveys*

All continuous (non-gappy) linear features crossed by the proposed cable route (and therefore likely to be severed) with trees and within 200 m of known maternity roosts or 200 m of likely roost sources such as woodlands or groups of trees were surveyed for bat activity.

The rationale behind this survey was that commuting and foraging bats could be impacted by the severance of linear features (for cable route construction) upon which they rely, particularly young bats learning to fly and forage for the first time. By surveying the best features for bats (those with trees) and close to potential roost sources we were also most likely to detect streams of commuting bats heading away from local roosts.

2.5.2 *Automated Bat Activity Surveys*

The features chosen for bat activity surveys were surveyed using automated Anabat II and SD1 bat detectors programmed to start recording half an hour before sunset and stop recording half an hour after sunrise.

The first surveys were carried out between 26th July and 14th August. These were then repeated between 5th and 18th September. Each feature was surveyed for up to four nights, although most were surveyed for three nights and some were surveyed for fewer.

The detectors were deployed by personnel trained and experienced in their usage, including Jan Collins, Victoria Gilbey and Clare Parker. Jan Collins holds a licence to disturb bats for the purpose of survey work (licence number 20113200).

Temperature was recorded using a data logger, but no other weather conditions were recorded. Recording over three or four consecutive nights means that each location was subject to at least one night of good weather conditions, generally more. Inclement weather was rare during the survey period, consisting of only a few nights with rain.

The bat echolocation calls recorded were analysed using Analook software.

2.5.3 *Manual Activity Surveys*

After the first automated bat activity surveys, those features with 30 or more *Myotis* or *Plecotus* passes (groups likely to be most vulnerable to habitat gaps) or more than 500 bat passes in total (the highest levels of activity recorded) on one night were surveyed by surveyors who could observe bat activity whilst light levels were still high enough. These surveyors also covered one location where the automated detector had failed and a further location where it was not safe to leave an automated detector due to public access.

The rationale was that these surveyors could observe whether lots of bats were all commuting from a roost early on in the evening or smaller numbers of bats were making repeat passes. All surveys commenced 15 minutes before sunset and continued until 1.5 hours after. Dates, times and weather conditions recorded are given in *Table 2* below.

Table 2. Dates, times and weather conditions recorded during manual activity surveys

Date	Sunset Time	Start Time	End Time	Temp at start	Temp at end	Cloud cover at start	Cloud cover at end	Wind speed at start	Wind speed at end	Rain conditions
18/08/2011	20.18	20.03	21.48	15.5	15.5	8	8	4	4	0%
22/08/2011	20.09	19.54	21.39	16.3	16.2	8	8	2	2	20% rain
23/08/2011	20.08	19.53	21.38	15.4	15.7	8	8	3	1	80% light, localised rain

Date	Sunset Time	Start Time	End Time	Temp at start	Temp at end	Cloud cover at start	Cloud cover at end	Wind speed at start	Wind speed at end	Rain conditions
24/08/2011	20.04	19.49	21.34	14.2	9.1	4	3	3	2	0

Emergence surveys were conducted by RSK personnel trained and experienced in carrying out such surveys, including Beth Ludlow, Andrew Ross, Jonathan Jackson and Clare Parker.

Frequency division and time expansion bat detectors (Duet and Pettersson) enabled surveyors to accurately identify most bat species by their unique echolocation calls.

Identification was confirmed where necessary by recording bat calls onto minidisk or digital Edirol R-01 recorders and analysing the calls using BatSound software.

Further methods of identification included observation of bat flight pattern and behaviour.

3 RESULTS

3.1 Desk Study

3.1.1 Background Data Search

Bat records within 5 km of the proposed cable route received from The Sussex Biodiversity Records Centre are presented in *Figures 1* (roosts) and *2* (non-roosts), *Section F*.

Different colours are used to indicate different species or species groups. Different shapes are used to indicate different types of records, *e.g.* maternity roost, feeding roost, hibernacula *etc.*

Records exist for the following species: *Pipistrellus pipistrellus* (Common Pipistrelle), *Pipistrellus pygmaeus* (Soprano Pipistrelle), *Plecotus auritus* (Brown Long-eared Bat), *Nyctalus noctula* (Noctule), *Eptesicus serotinus* (Serotine), *Myotis nattereri* (Natterer's Bat), *Myotis mystacinus* (Whiskered Bat), *Myotis bechsteinii* (Bechstein's Bat), *Myotis daubentonii* (Daubenton's Bat) *Pipistrellus nathusii* (Nathusius' Pipistrelle), *Plecotus austriacus* (Grey Long-eared Bat) and Barbastelle.

3.1.2 Annex II Species

Ancient woodland within 500 m of the working width, along with their size in hectares, are shown in *Figure 3*, *Section F*. Only one was more than 25 ha in size and there were no similar woods on the opposite side of the cable route and ecologically connected across the cable route. No further specialist survey work was therefore carried out in respect of Bechstein's Bat.

3.2 Roost Surveys for Bats

3.2.1 Ground Level Tree Surveys

Trees identified as having bat roosting potential within the working width or the 30 m buffer either side of the working width are mapped using a unique number in *Figure 4*, *Section F*. The trees are mapped according to the highest category of bat roosting potential awarded during the ground level tree surveys. Associated data is presented in *Appendix C*.

3.2.2 Tree Climbing Surveys

In many cases the trees were re-categorised as a result of the tree climbing surveys. These are mapped using a unique number in *Figure 5*. The trees are mapped according to the highest category of bat roosting potential awarded during the tree

climbing surveys. Associated data is presented in *Appendix C*. No evidence of roosting bats was found in any of the trees which were climbed.

3.2.3

Tree Emergence Surveys

Where it was not possible to fully inspect tree features (either due to safety or because the features were too extensive) features were subject to emergence surveys, see *Table 6* below.

Table 6. Trees subject to emergence surveys

Tree number	Date surveyed	Emergence information	General bat activity
518	18/082011	None	Common Pipistrelle and Myotis bats foraging and commuting.
573	05/09/2011	None	Common Pipistrelle and Myotis bats foraging and commuting.
577	05/09/2011	None	Common Pipistrelle and Myotis bats foraging and commuting.
582	05/09/2011	None	None
620	08/09/2011	None	Myotis / Brown-Long eared bat recorded
629	06/09/2011	None	Common Pipistrelle, Soprano Pipistrelle and Myotis bats recorded.
652	06/09/2011	None	Common Pipistrelle bats recorded foraging and commuting.
662	07/09/2011	None	Common Pipistrelle bats recorded foraging and commuting.
877	08/09/2011	None	Common Pipistrelle, Soprano Pipistrelle and Myotis / Brown Long-eared Bat recorded
1851	13/09/2011	None	Common Pipistrelle, Soprano Pipistrelle, Myotis and Brown-Long eared bat foraging passes and social calling
1837	13/09/2011	None	Common Pipistrelle/Soprano Pipistrelle and Noctule passes
1898	14/09/2011	None	Common Pipistrelle, Soprano Pipistrelle, Myotis and Brown-Long eared bat passes
498	14/09/2011	None	Common Pipistrelle/Soprano Pipistrelle foraging and commuting passes

3.3 *Bat Activity Surveys*

3.3.1 *Automated Bat Activity Surveys*

All continuous (non-gappy) linear features crossed by the proposed cable route (and therefore likely to be severed) with trees and within 200 m of known maternity roosts or 200 m of likely roost sources such as woodlands or groups of trees were subject to bat activity surveys. The features chosen for bat activity surveys according to this protocol are mapped using a unique number in *Figure 6*. Data was collected in July / August (first session) and September (second session). This is presented in *Appendix D* (first session), *Appendix E* (graphs representing data from first session) and *Appendix F* (second session).

Large numbers of bat passes (over 200 passes over a single night) were recorded at the following locations: 6, 9, 11, 13, 14, 15, 17, 20, 24, 29, 42, 43, 48, 49 and 50. The largest number of bat passes was recorded at Location 17 on 5th September 2011 (1290 passes).

Common and Soprano Pipistrelle were the two most common species recorded and were recorded at all linear features where Anabats were deployed. The largest number of Pipistrellus passes in a single night was recorded at Location 17 on 5th September 2011 (1161 passes).

Myotis / Plecotus species were also recorded at all linear features except for Location 16. The data shows that higher numbers of *Myotis / Plecotus* passes (greater than 30) were recorded at Locations 6, 14, 15, 17, 20, 24, 49 and 50. The largest number of *Myotis / Plecotus* passes was recorded at Location 14 on 26th July 2011 (239 passes).

Small numbers of Nathusius or Nathusius / Common Pipistrelle (5 passes or under) were recorded at Locations 5, 9, 14, 27, 29 and 40. The largest number of passes during a single night was recorded at Location 13 on 8th September 2011 (23 passes).

Nyctalus species were also recorded at all linear features where Anabats were deployed. The largest number of Nyctalus passes in a single night was recorded at Location 14 on 7th September 2011 (109 passes).

No Barbastelle bats were recorded throughout the survey period.

3.3.2 *Manual Activity Surveys*

After the first automated bat activity surveys, those features with 30 or more *Myotis* or *Plecotus* passes (groups likely to be most vulnerable to habitat gaps) or more than 500 bat passes in total (the highest levels of activity recorded) on one night were surveyed by surveyors who could observe bat activity whilst light levels were still high enough.

Data collected during these surveys is presented in *Appendix G* and the dates and locations of the survey are provided below.

Table 7. Manual activity survey locations and dates of survey

Location	Date surveyed
2a	18/08/11
6	22/08/2011
14	23/08/2011
15	23/08/2011
17	23/08/2011
18	23/08/2011
24	24/08/2011

The manual bat activity surveys recorded the following species: Common Pipistrelle; Soprano Pipistrelle; *Myotis* / *Plecotus* species; *Nyctalus* species; and Serotine.

The manual bat activity surveys were undertaken from 15 minutes before sunset to 1.5 hours after sunset. Compared to the automated bat surveys, which recorded bat activity throughout the whole night, the volume of bat passes from the manual activity surveys is much less.

The largest number of calls was recorded from Location 14. On 23rd August 2011 at this location 133 bat passes were recorded. All other locations recorded less than 100 bat passes during the survey period.

Common and Soprano Pipistrelle were the two most common species recorded and were recorded at all locations surveyed. The largest number of Pipistrellus passes in a single night was recorded at Location 14 on 23rd August 2011 (114 passes).

Myotis species were recorded at Locations 2, 3, 6, 14, 17, 18 and 24 and *Plecotus* species were only recorded at Location 24. The largest number of *Myotis* species passes was recorded at Location 24 on 24th August 2011 (32 passes).

Small numbers (less than 10 passes) of *Nyctalus* and *Eptesicus* species were recorded at Locations 14, 15 and 17.

No Nathusius pipistrelle or Barbastelle bats were recorded throughout the survey period.

4 EVALUATION AND CONCLUSIONS

4.1 Roosting Bats

A small number of trees (number not confirmed yet) which have been classified as having potential to support roosting bats will have to be removed to facilitate the construction of the cable. However, no tree roosts were recorded within the 125m survey corridor.

However, bats are known to move roost frequently, and can switch roosts every three days. Therefore prior to any removal of trees which have been highlighted as having potential for roosting bats the features will be inspected using ladders or tree climbing equipment (or subject to an emergence survey if features cannot be accessed safely). If any roosts are identified, and destruction cannot be avoided, further surveys may be necessary to inform the EPS licensing process.

The BCT Guidelines (BCT 2007) recommends that when a tree with high potential to support roosting bats is felled, a bat box should be erected on a nearby tree. It should be assumed that a tree with high potential to support roosting bats may be used by bats at some point even if no bats have been recorded using it during the surveys. Before any trees which are classified as Category 1, 2 or 3 in terms of their bat roost potential are felled, a Schwegler 1FF should be erected on a nearby tree. This will help to compensate for the potential roost lost and help to ensure the potential roost 'stock' of an area is not decreased as a result of the works. Schwegler 1FF bat boxes are known to be used by a variety of bat species and are also unlikely to be used by nesting birds which can out-compete bats for bat boxes during the nesting bird season.

4.2 Commuting and Foraging Bats

To facilitate the construction of the cable, sections of hedgerow will have to be removed and areas of grassland will have to be stripped.

Locations 6, 9, 11, 13, 14, 15, 17, 20, 24, 29, 42, 43, 48, 49 and 50 all recorded over 200 bat passes.

Bats are known to use hedgerows to commute along in order to navigate around the landscape and some species are potentially sensitive to gaps in hedgerows such as species for the genus *Myotis/Plecotus* due to the nature of their flight pattern. Species from the genus *Nyctalus* and *Eptesicus* and Nathusius Pipistrelle Bats are known to fly high and in open habitats and therefore are unlikely to be impacted by hedgerow severance. Common Pipistrelle and Soprano Pipistrelle Bat are generalist species and will tolerate gaps in hedgerows. There is very limited research regarding whether gaps present a significant problem for *Myotis/Plecotus* species. The gaps in hedgerows also

have the potential to increase the risk of predation of bats. Bats will be more visible to potential predators while they fly across the gaps as they will have no cover.

In order to avoid significant impacts to bats as a result of the hedgerow severance the proposed cable will have a reduced working width at hedgerow crossing points

In order to compensate for the removal of sections of hedgerows, once the ground works have finished, all gaps should be planted up using native shrubs and trees of local provenance. It will take approximately three years before a hedgerow becomes fully established. Therefore there will be a potential decrease in insect biomass for three years following the severance. The 15 locations along hedgerows with more than 200 bat passes are important hedgerows for foraging and commuting bats [NB: a number of these hedgerows are no longer crossed by the route]. Therefore the gaps within these hedgerows will be planted up with more mature stock of shrubs and young trees. This will help reduce the length of time that insect biomass is reduced along a hedgerow.

The hedgerows that are important for foraging and commuting bats, which will be directly crossed by the proposed cable route, should be left to become over grown for a length of at least 15 m either side of a created gap. The hedgerows should be left uncut for a period of at least 1 year prior to the hedgerow severance. The overgrown hedgerow would increase the insect biomass of the hedgerow and help to compensate for the loss of hedgerow section when the hedgerow is severed.

To temporarily compensate for the loss in connectivity along a gap in a hedgerow and also to provide cover and protection from predation, gaps will be ‘plugged’ along the length and width of the gap using bales of dead hedging material (or similar). These will be removed during the day and be installed across the length of the gaps at night whilst work is ongoing.

4.3 *Lighting*

If the proposed works are undertaken during the night, lighting would be required which has the potential to impact on bats. Different bat species vary in their sensitivity to lighting. *Myotis/Plecotus* species are the most light-sensitive species which have been recorded in the survey area. The impact of the lighting has the potential to reduce the available foraging and roosting habitat for bats as the lighting may deter bat from using a hedgerow or reaching a favour roosting site.

To prevent the potential reduction in available foraging opportunities and access to roosting sites for bats, as a result of lighting impacts, no working at night should be undertaken, except in cases of emergency or at specified locations where it cannot be avoided (i.e. for 24 hour drilling operations).

REFERENCES

Bat Conservation Trust., 2007. *Bat Surveys Good Practice Guidelines*. London: Bat Conservation Trust.

Bat Conservation Trust., 2009. *Bechstein's Bat Survey Project Second Year Report*. London: Bat Conservation Trust.

Entwistle, A.C., Racey, P.A and Speakman, J.R., 1996. Habitat exploitation by a gleaner bat, *Plecotus auritus*. *Philosophical Transactions of the Royal Society* 351: 921-931.

6***FIGURES***

Figure 1 – Bat Roost Records – 5km

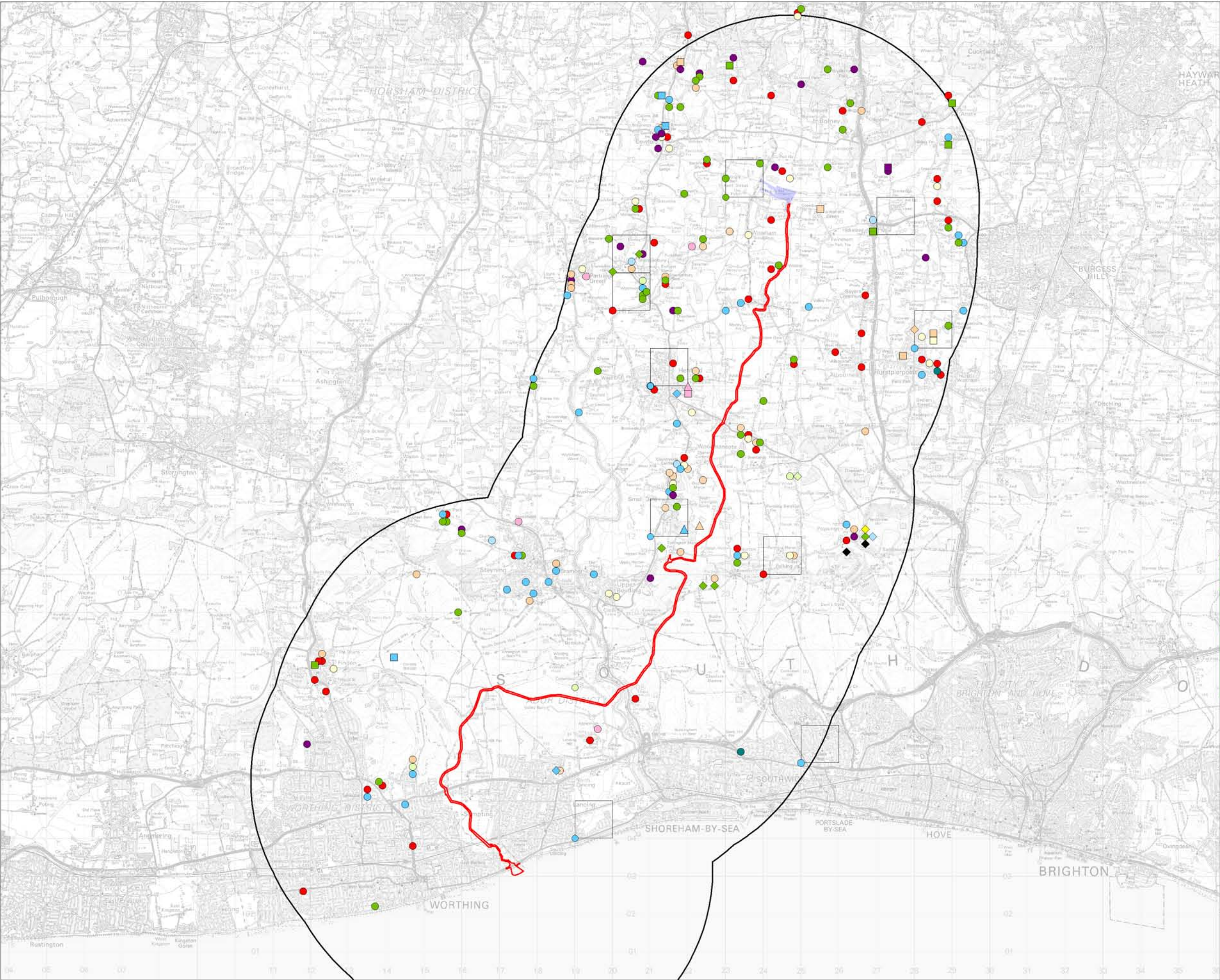
Figure 2 – Other Bat Records – 5 km

Figure 3 – Bechstein's Bat Analysis

Figure 4 – GLTA (maps 1-17)

Figure 5 – Tree Climbing Assessment (maps 1-17)

Figure 6 – Bat Activity Points (maps 1-8)



- Legend :**
- Development Boundary
 - Substation Development Boundary
 - 5 km buffer of Development Boundary
 - Extent of 4 figure grid reference
 - Unspecified roost
 - Feeding roost
 - Hibernacula roost
 - Maternity roost
 - Chiroptera
 - Brown Long-eared Bat (*Plecotus auritus*)
 - Common Pipistrelle (*Pipistrellus pipistrellus*)
 - Daubenton's Bat (*Myotis daubentonii*)
 - Long-Eared Bat (*Plecotus sp.*)
 - Nathusius Pipistrelle (*Pipistrellus nathusii*)
 - Natterer's Bat (*Myotis nattereri*)
 - Noctule Bat (*Nyctalus noctula*)
 - Pipistrelle Bat (*Pipistrellus sp.*)
 - Serotine (*Eptesicus serotinus*)
 - Soprano Pipistrelle (*Pipistrellus pygmaeus*)
 - Whiskered Bat (*Myotis mystacinus*)
 - Whiskered / Brandt's Bat (*Myotis mystacinus / brandtii*)

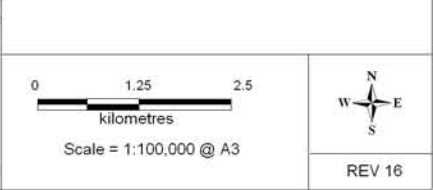


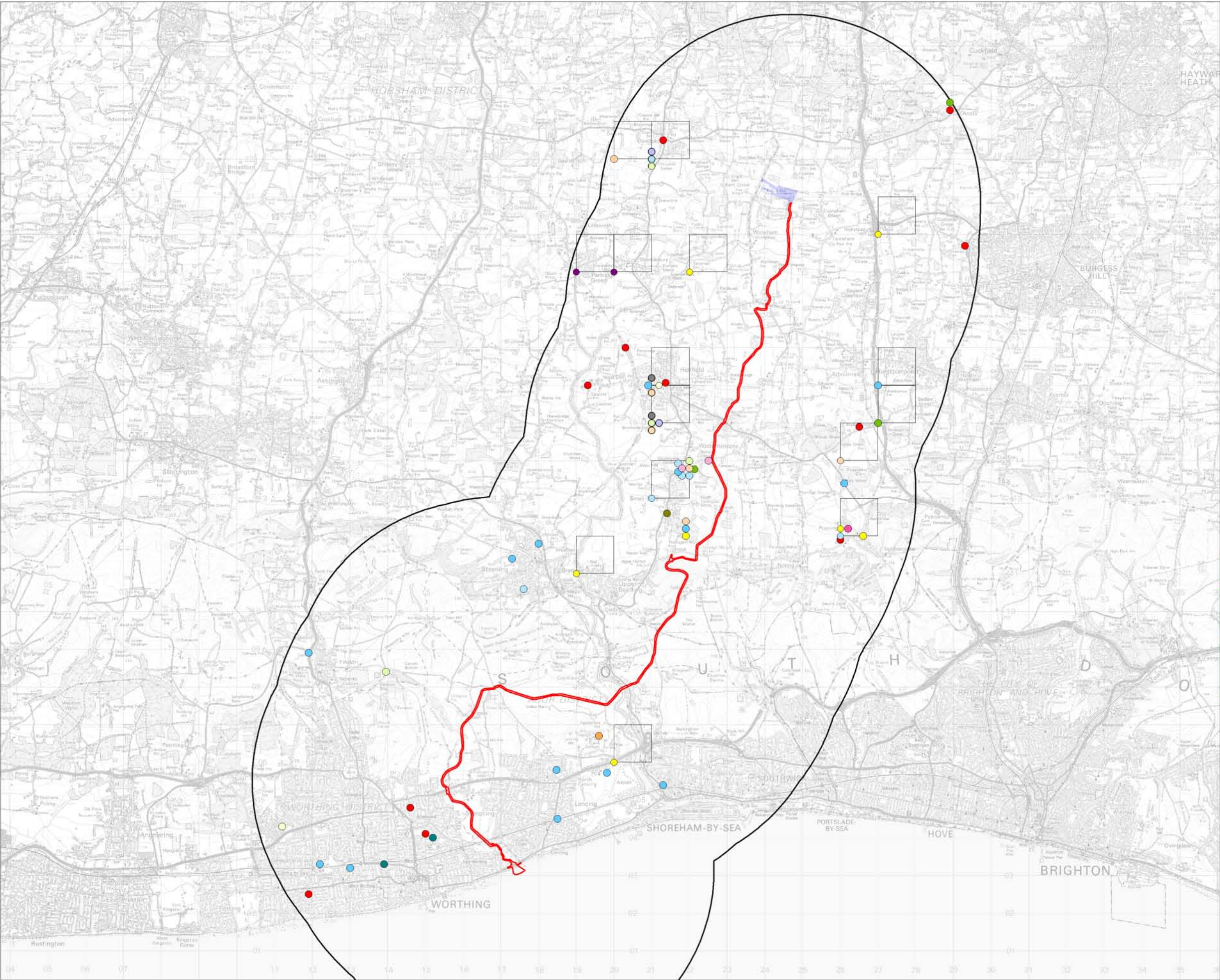
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Rampion Wind Farm



Title :
Figure 1 -
Bat Roost Records within 5 km





- Legend :**
- Development Boundary
 - Substation Development Boundary
 - 5 km buffer of Development Boundary
 - Extent of 4 figure grid reference
 - Chiroptera
 - Bechstein's Bat (*Myotis bechsteinii*)
 - Brown Long-eared Bat (*Plecotus auritus*)
 - Common Pipistrelle (*Pipistrellus pipistrellus*)
 - Daubenton's Bat (*Myotis daubentonii*)
 - Grey Long-eared Bat (*Plecotus austriacus*)
 - Long-Eared Bat (*Plecotus sp.*)
 - Myotis Bat (*Myotis sp.*)
 - Nathusius Pipistrelle (*Pipistrellus nathusii*)
 - Natterer's Bat (*Myotis nattereri*)
 - Noctule Bat (*Nyctalus noctula*)
 - Pipistrelle Bat (*Pipistrellus sp.*)
 - Serotine (*Eptesicus serotinus*)
 - Soprano Pipistrelle (*Pipistrellus pygmaeus*)
 - Western Barbastelle (*Barbastella barbastellus*)
 - Whiskered Bat (*Myotis mystacinus*)

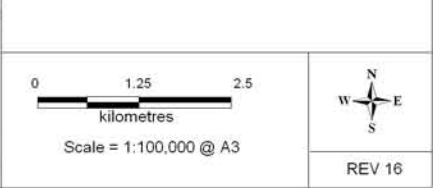


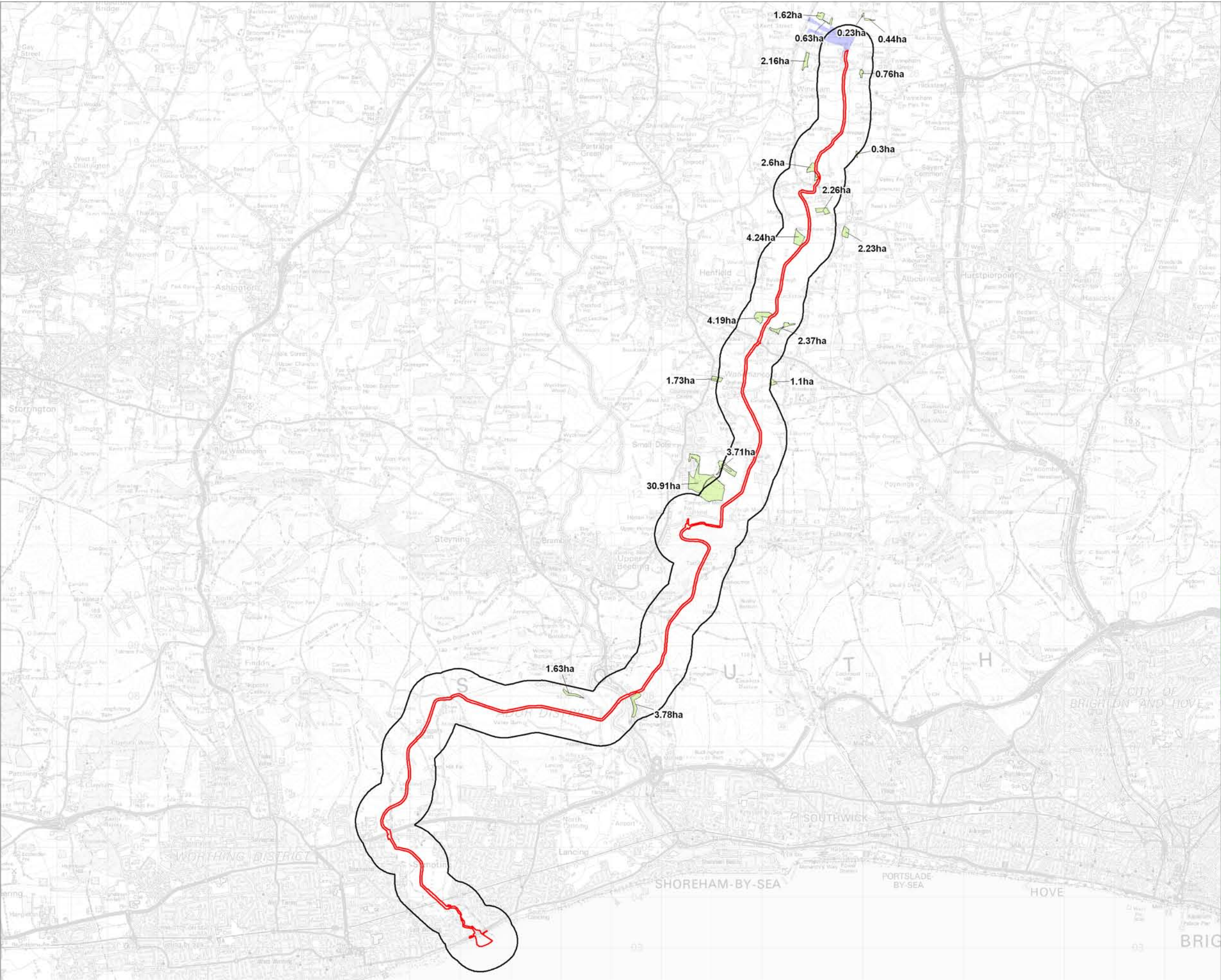
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Rev	Date	Description	Drn	Chk	App

Rampion Wind Farm



Title :
Figure 2 -
Bat Non-Roost Records within 5 km





- Legend :
- Development Boundary
 - Substation Development Boundary
 - 500 m buffer of Development Boundary
 - Ancient woodland
 - XX Area of if woodland in hectares

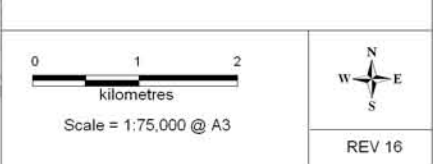


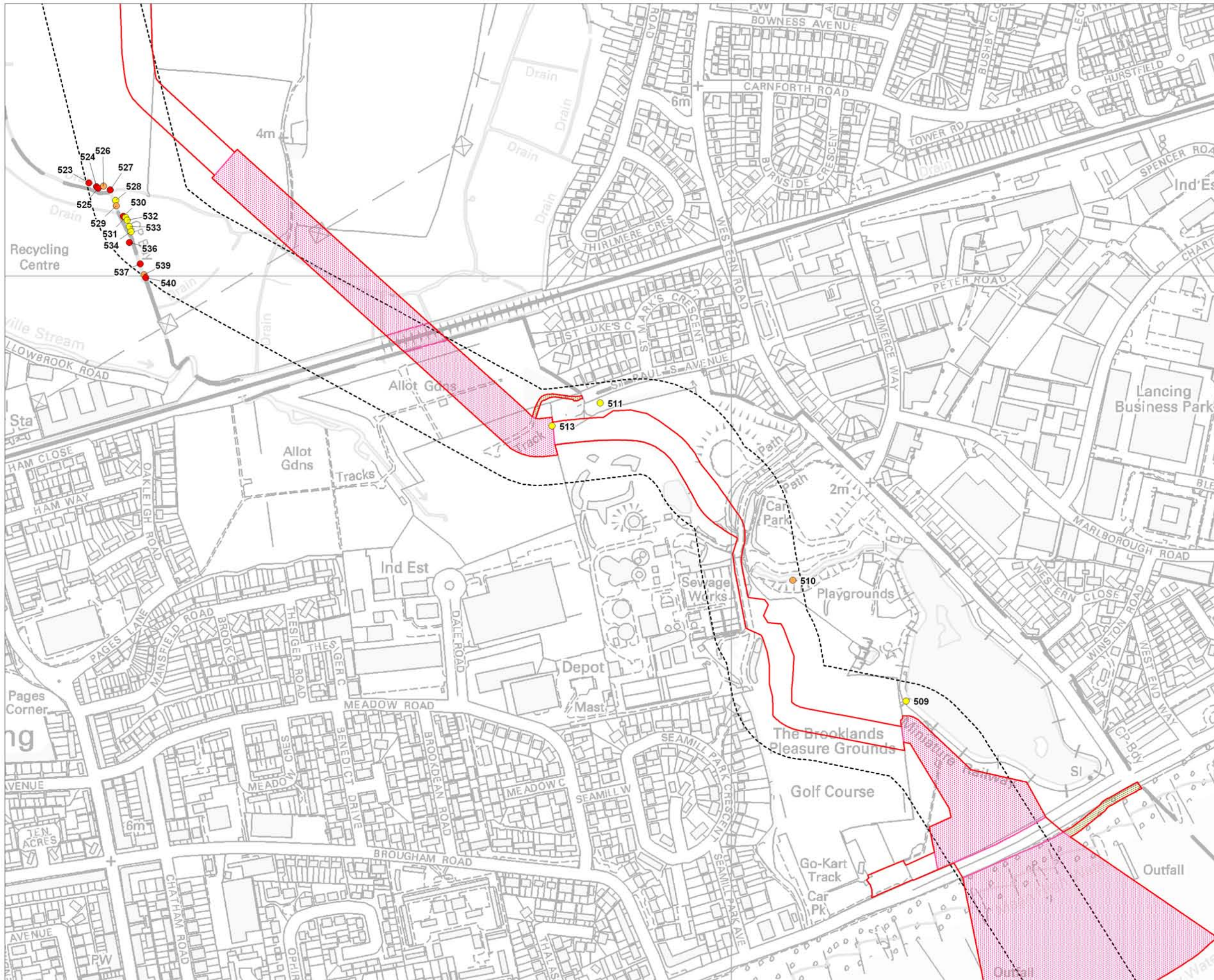
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Rev	Date	Description	Drn	Chk	App

Rampion Wind Farm



Title :
Figure 3 -
Analysis of Route for Potential
Impact on Bechstein's





Legend:

- Ecology survey corridor (125m)
- Development Boundary
- Side Access
- Potential Mitigation Area
- HDD Section
- Temporary Construction Compound
- Substation Development Boundary
- Bat roost potential - category 1
- Bat roost potential - category 2
- Bat roost potential - category 3
- Unable to survey



Rev	Date	Description	Drn	Chk	App
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Rampion Wind Farm

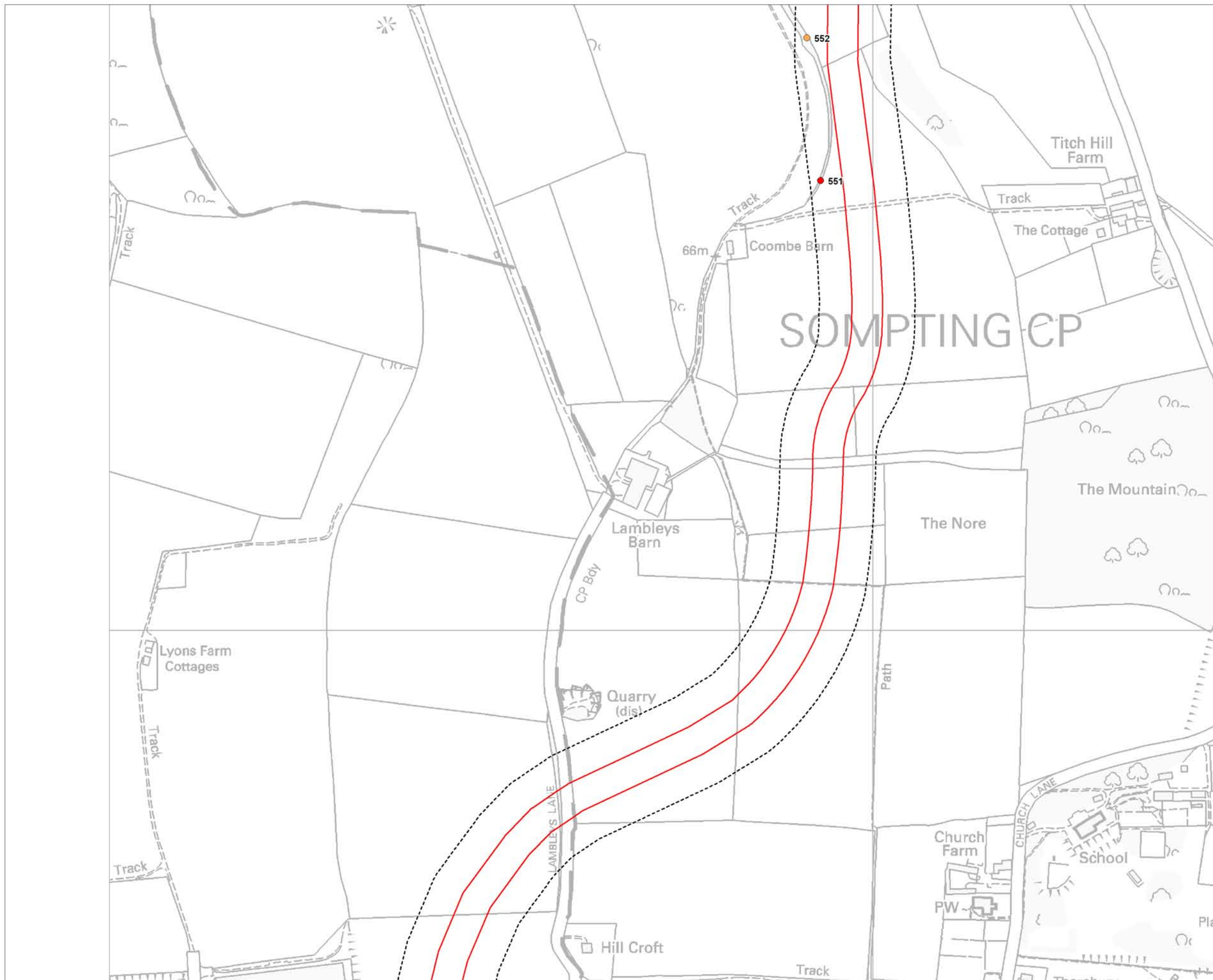
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Title:
Figure 4 -
Ground Level Bat Tree Assessment
Map 1 of 17

0 50 100
metres
Scale = 1:5,000 @ A3

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- Legend:
- Ecology survey corridor (125m)
 - Development Boundary
 - Side Access
 - Potential Mitigation Area
 - HDD Section
 - Temporary Construction Compound
 - Substation Development Boundary
 - Bat roost potential - category 1
 - Bat roost potential - category 2
 - Bat roost potential - category 3
 - Unable to survey



00	23.11.12	P2	RG	NH	VG
Rev	Date	Description	Drn	Chk	App

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Title:
Figure 4 -
Ground Level Bat Tree Assessment
Map 3 of 17

0 50 100
metres
Scale = 1:5,000 @ A3



REV 16





- Legend :
- Ecology survey corridor (125m)
 - Development Boundary
 - Side Access
 - Potential Mitigation Area
 - HDD Section
 - Temporary Construction Compound
 - Substation Development Boundary
 - Bat roost potential - category 1
 - Bat roost potential - category 2
 - Bat roost potential - category 3
 - Unable to survey

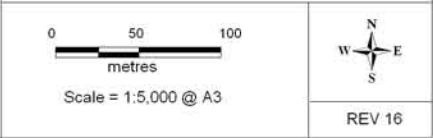


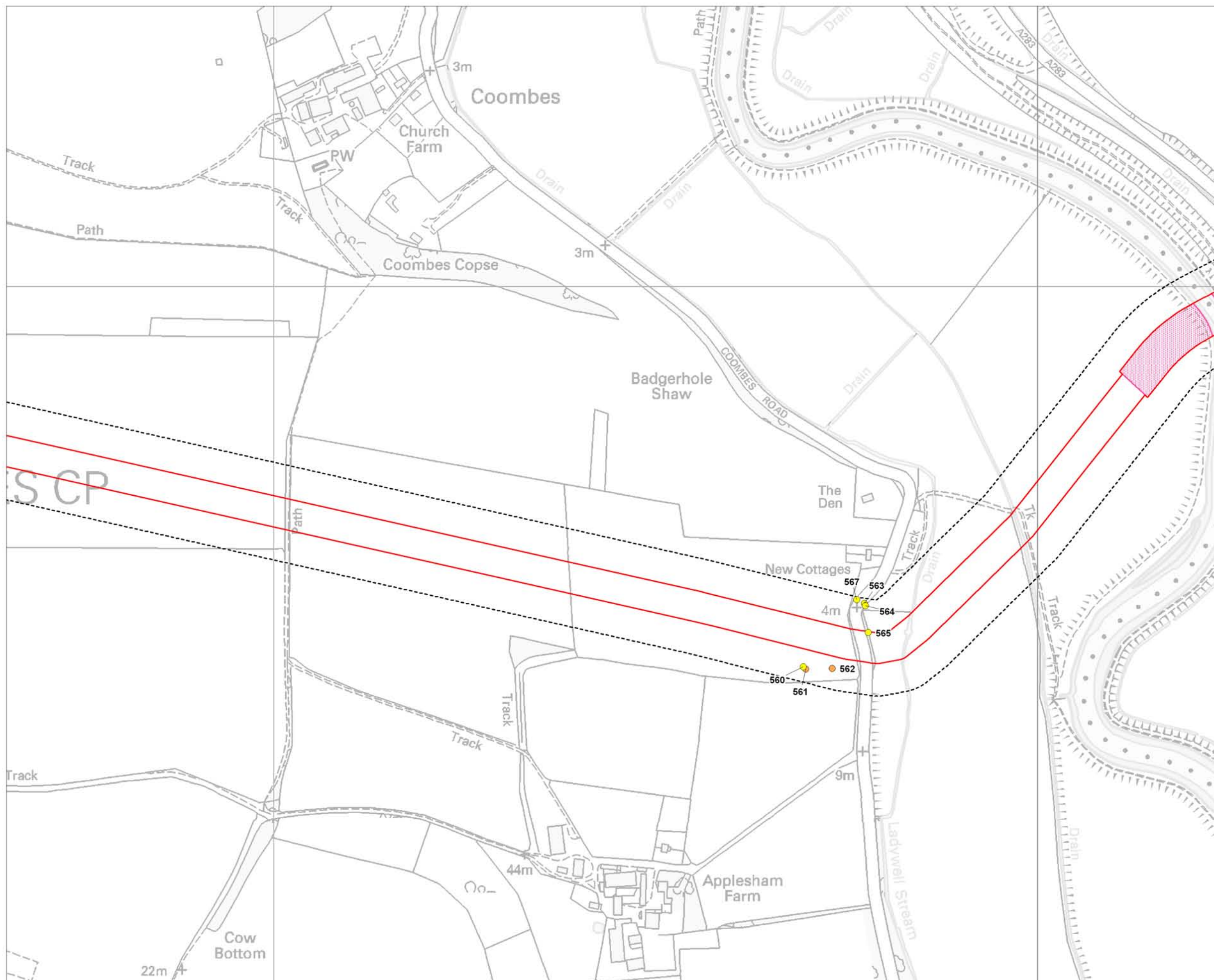
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Rev	Date	Description	Drn	Chk	App

Rampion Wind Farm



Title :
Figure 4 -
Ground Level Bat Tree Assessment
Map 5 of 17





- Legend:
- Ecology survey corridor (125m)
 - Development Boundary
 - Side Access
 - Potential Mitigation Area
 - HDD Section
 - Temporary Construction Compound
 - Substation Development Boundary
 - Bat roost potential - category 1
 - Bat roost potential - category 2
 - Bat roost potential - category 3
 - Unable to survey



00	23.11.12	P2	RG	NH	VG
Rev	Date	Description	Drn	Chk	App

Rampion Wind Farm



Title:

Figure 4 -
Ground Level Bat Tree Assessment
Map 6 of 17

0 50 100
metres
Scale = 1:5,000 @ A3



REV 16



Legend :

- Ecology survey corridor (125m)
- Development Boundary
- Side Access
- Potential Mitigation Area
- HDD Section
- Temporary Construction Compound
- Substation Development Boundary
- Bat roost potential - category 1
- Bat roost potential - category 2
- Bat roost potential - category 3
- Unable to survey

Rev	Date	Description	Drn	Chk	App
00	23.11.12	P2	RG	NH	VG

Rampion Wind Farm

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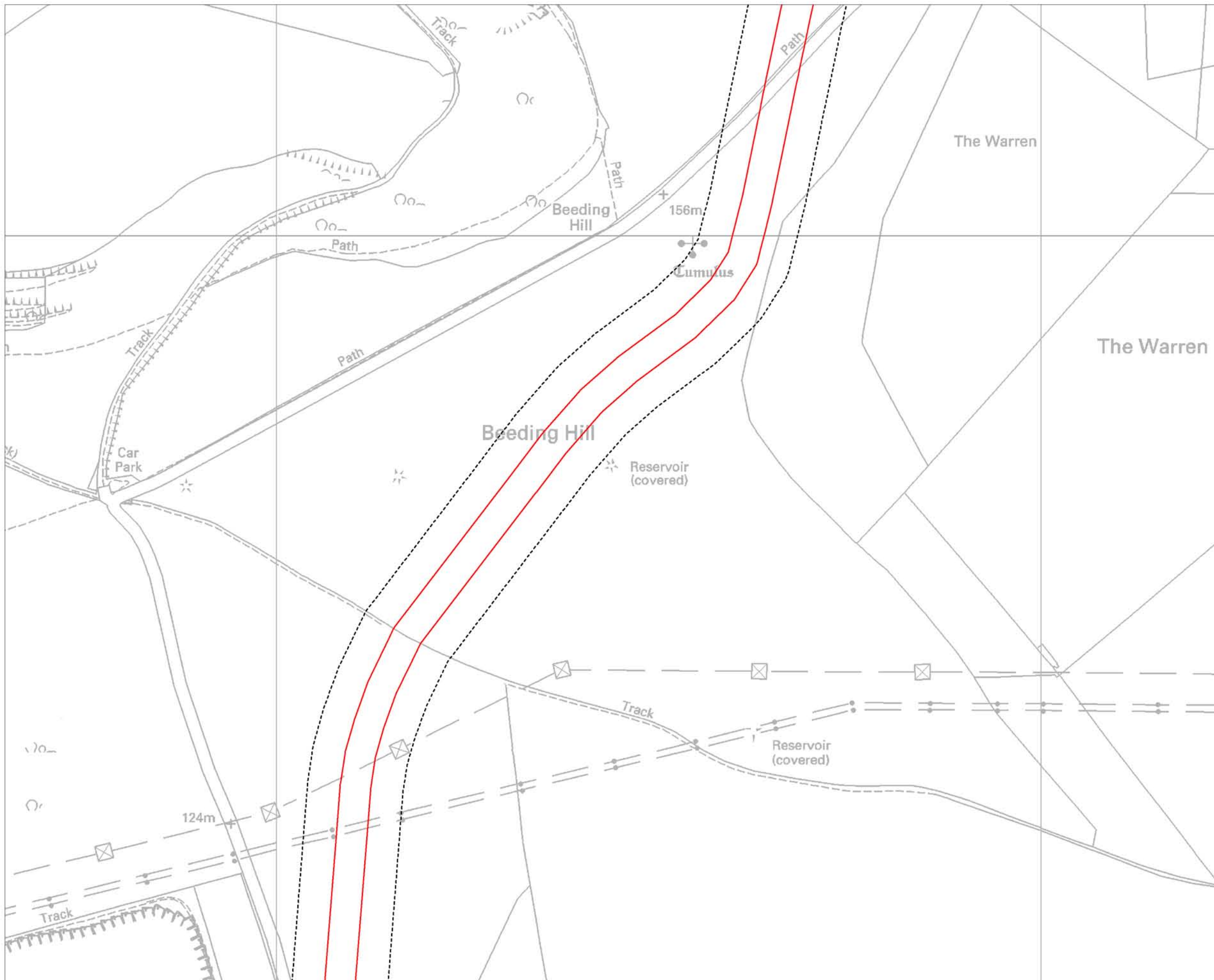
Title :

Figure 4 -
Ground Level Bat Tree Assessment
Map 7 of 17

0 50 100
metres
Scale = 1:5,000 @ A3

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Legend :

- Ecology survey corridor (125m)
- Development Boundary
- Side Access
- Potential Mitigation Area
- HDD Section
- Temporary Construction Compound
- Substation Development Boundary
- Bat roost potential - category 1
- Bat roost potential - category 2
- Bat roost potential - category 3
- Unable to survey

00	23.11.12	P2	RG	NH	VG
Rev	Date	Description	Drn	Chk	App

Rampion Wind Farm

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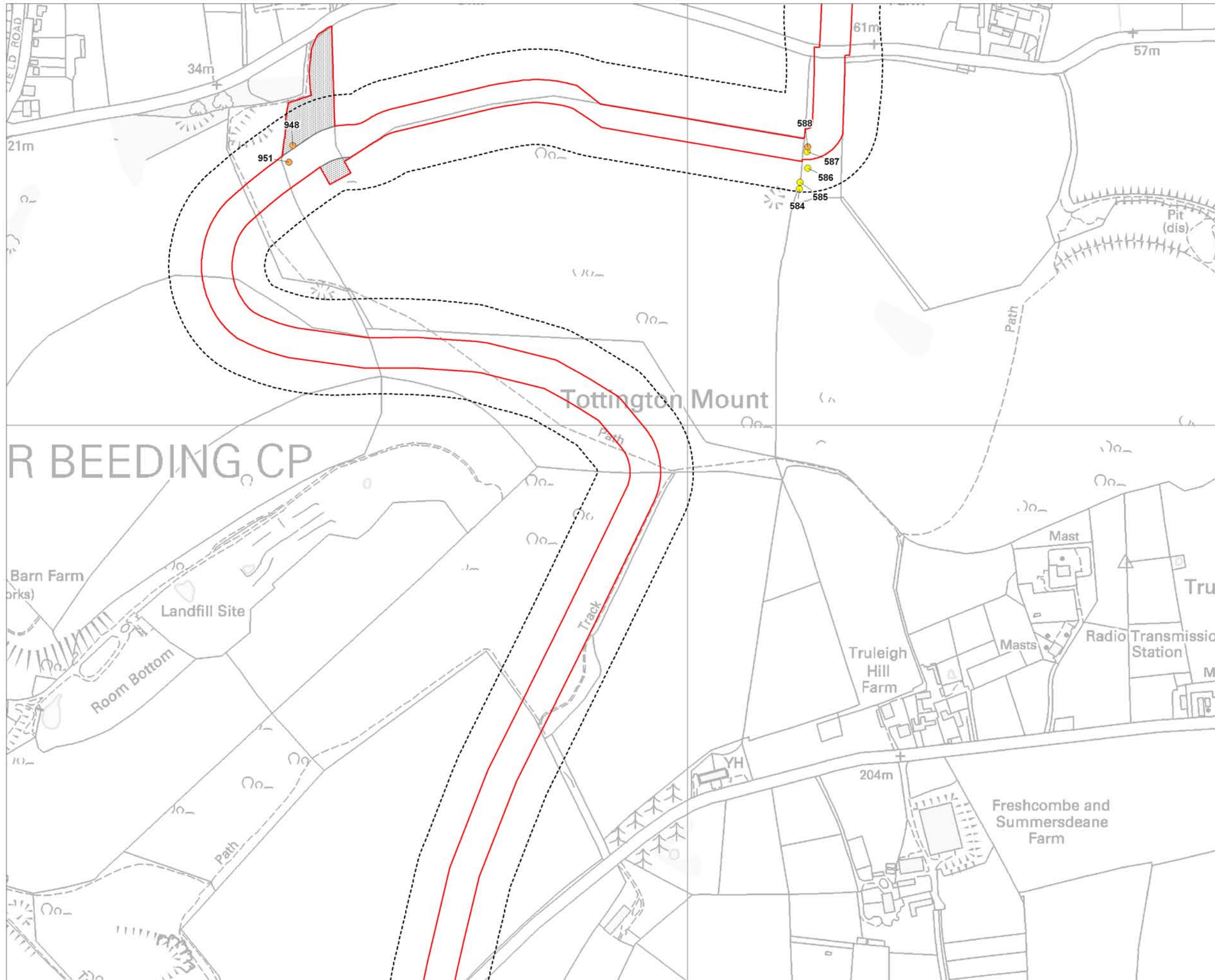
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Figure 4 -
Ground Level Bat Tree Assessment
Map 8 of 17

0 50 100
metres
Scale = 1:5,000 @ A3

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- Legend:
- Ecology survey corridor (125m)
 - Development Boundary
 - Side Access
 - Potential Mitigation Area
 - HDD Section
 - Temporary Construction Compound
 - Substation Development Boundary
 - Bat roost potential - category 1
 - Bat roost potential - category 2
 - Bat roost potential - category 3
 - Unable to survey

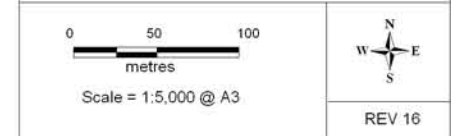


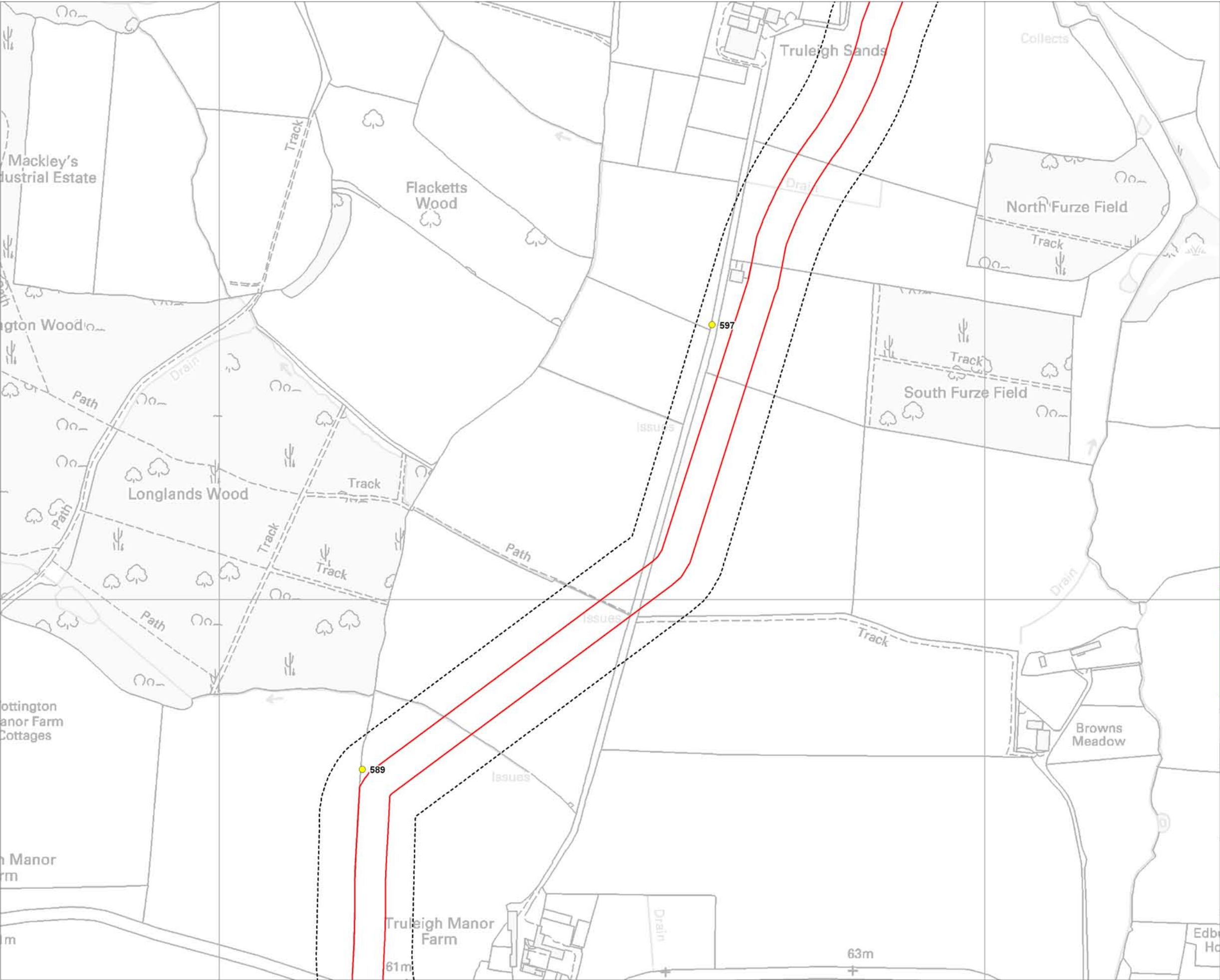
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Rev	Date	Description	Drn	Chk	App

Rampion Wind Farm



Title:
Figure 4 -
Ground Level Bat Tree Assessment
Map 9 of 17





- Legend :**
- Ecology survey corridor (125m)
 - Development Boundary
 - Side Access
 - Potential Mitigation Area
 - HDD Section
 - Temporary Construction Compound
 - Substation Development Boundary
 - Bat roost potential - category 1
 - Bat roost potential - category 2
 - Bat roost potential - category 3
 - Unable to survey

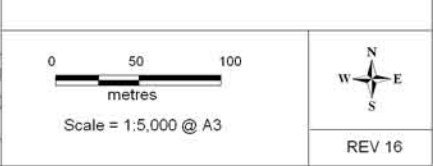


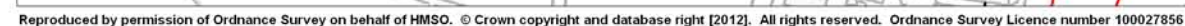
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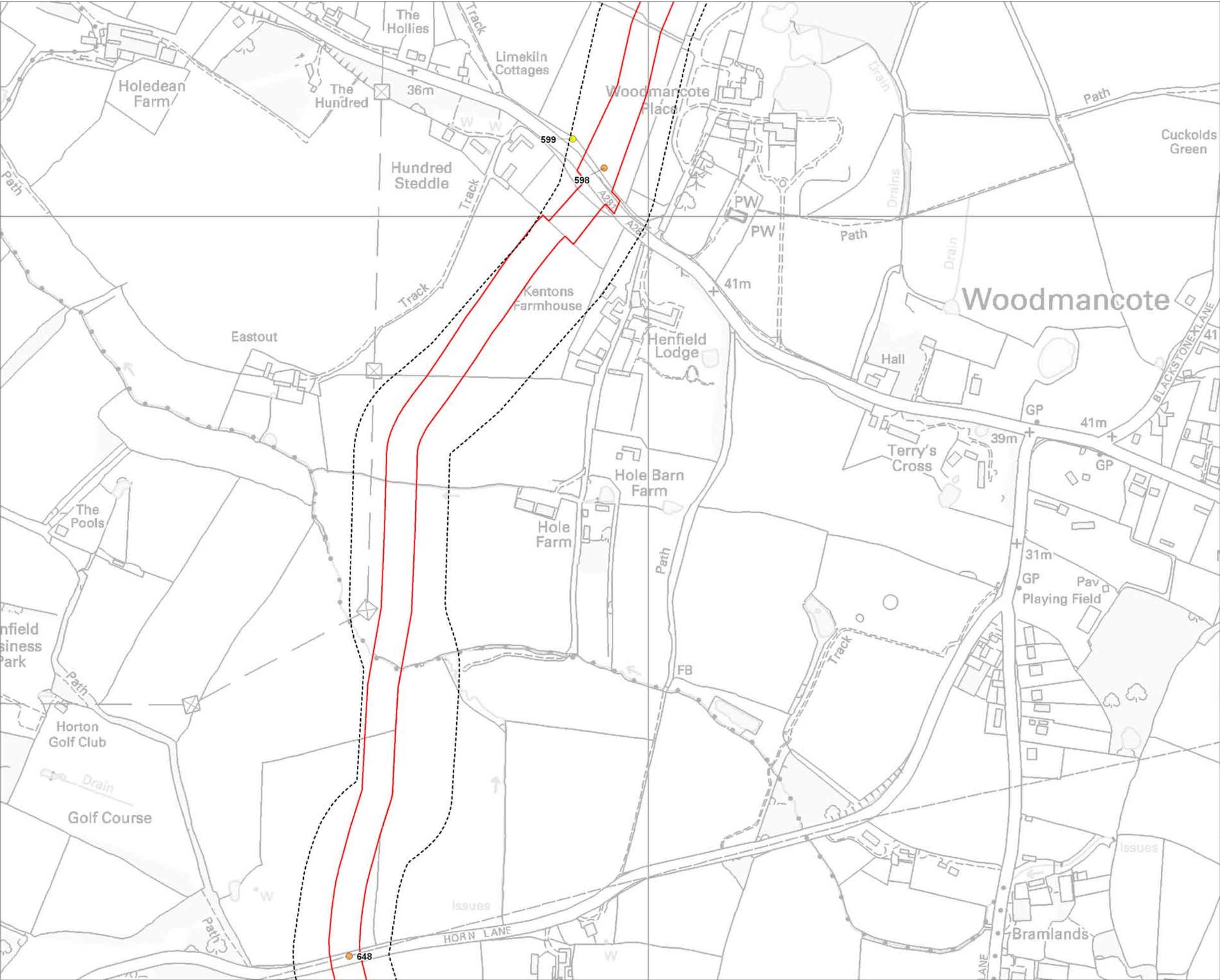
Rampion Wind Farm



Title :
Figure 4 -
Ground Level Bat Tree Assessment
Map 10 of 17







- Legend:
- Ecology survey corridor (125m)
 - Development Boundary
 - Side Access
 - Potential Mitigation Area
 - HDD Section
 - Temporary Construction Compound
 - Substation Development Boundary
 - Bat roost potential - category 1
 - Bat roost potential - category 2
 - Bat roost potential - category 3
 - Unable to survey

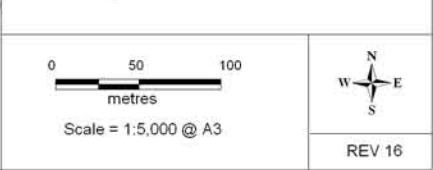


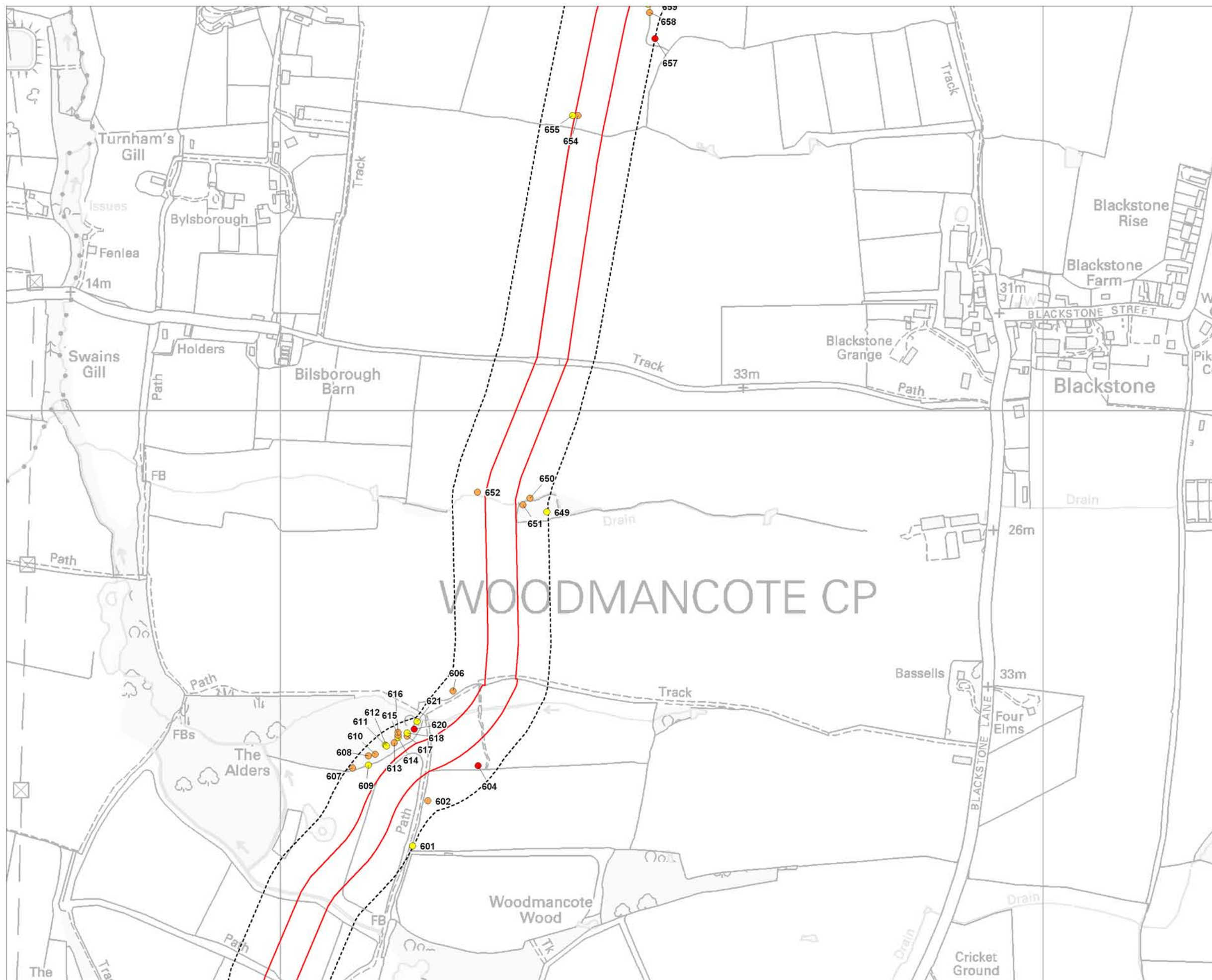
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Rev	Date	Description	Drn	Chk	App

Rampion Wind Farm



Title:
Figure 4 -
Ground Level Bat Tree Assessment
Map 12 of 17





Legend:

- Ecology survey corridor (125m)
- Development Boundary
- Side Access
- Potential Mitigation Area
- HDD Section
- Temporary Construction Compound
- Substation Development Boundary
- Bat roost potential - category 1
- Bat roost potential - category 2
- Bat roost potential - category 3
- Unable to survey

00	23.11.12	P2	RG	NH	VG
Rev	Date	Description	Drn	Chk	App

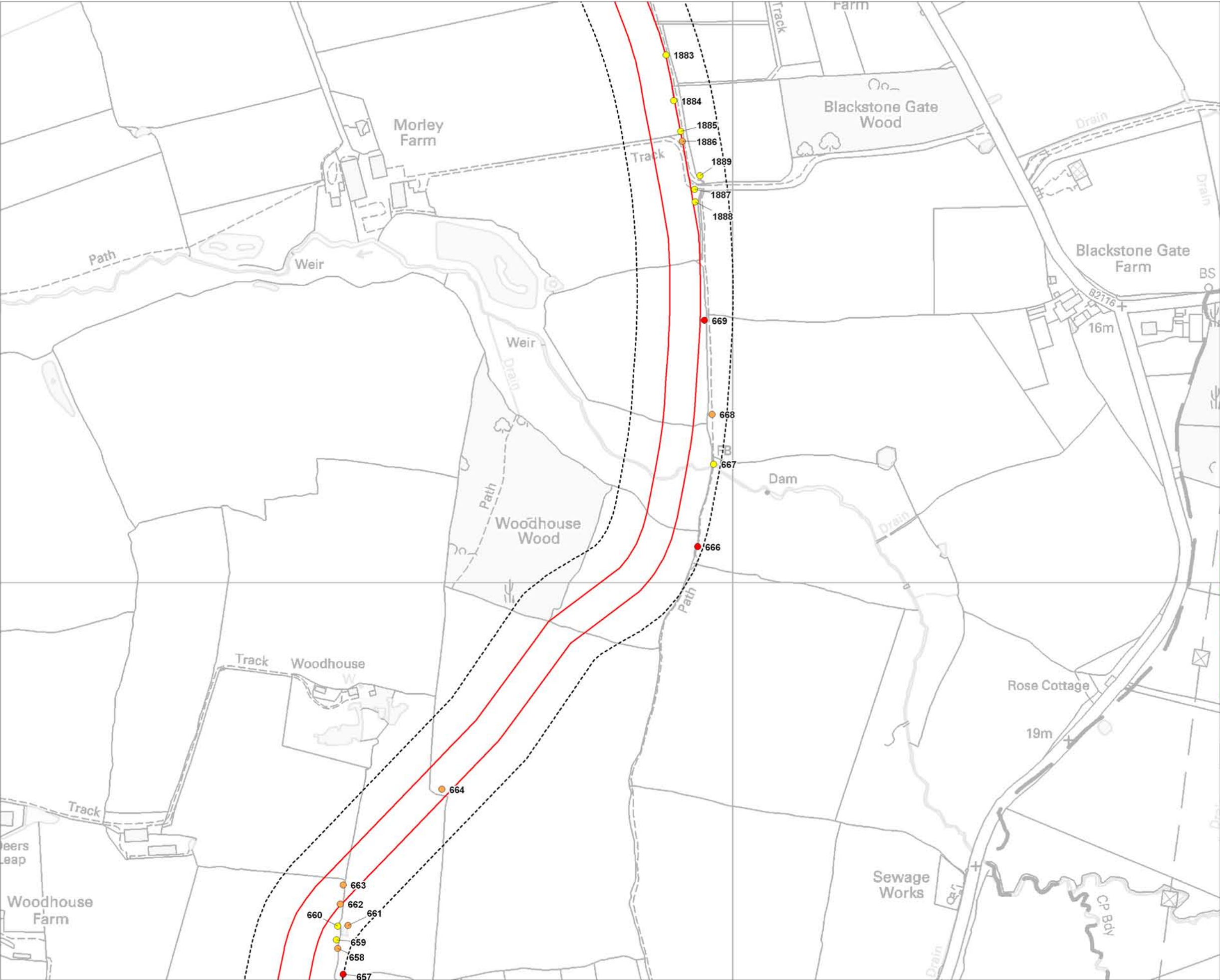
Rampion Wind Farm

Title:

Figure 4 -
Ground Level Bat Tree Assessment
Map 13 of 17

Scale = 1:5,000 @ A3

REV 16



Legend :

- Ecology survey corridor (125m)
- Development Boundary
- Side Access
- Potential Mitigation Area
- HDD Section
- Temporary Construction Compound
- Substation Development Boundary
- Bat roost potential - category 1
- Bat roost potential - category 2
- Bat roost potential - category 3
- Unable to survey



00	23.11.12	P2	RG	NH	VG
Rev	Date	Description	Drn	Chk	App

Rampion Wind Farm

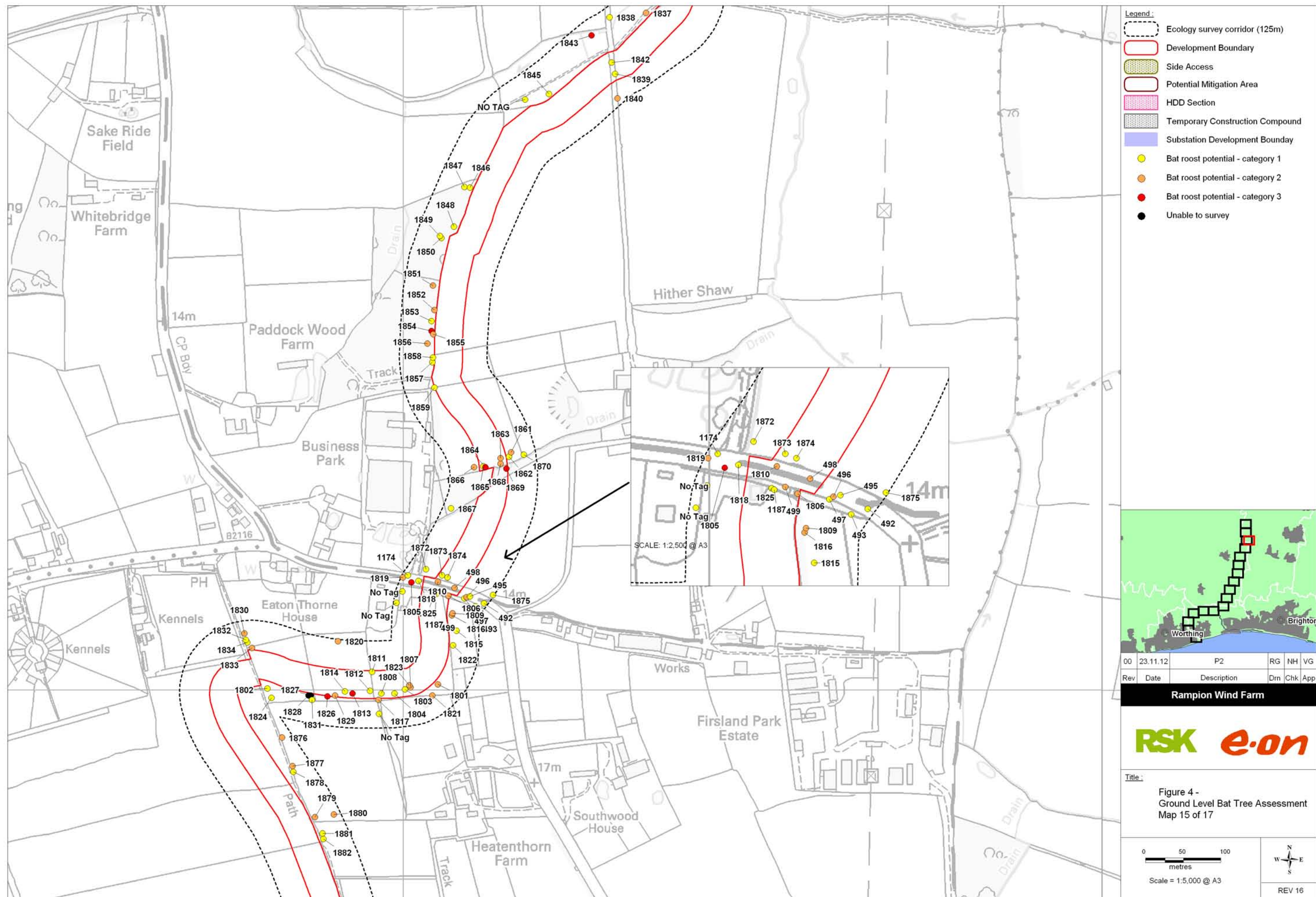


Title :
Figure 4 -
Ground Level Bat Tree Assessment
Map 14 of 17

0 50 100
metres
Scale = 1:5,000 @ A3

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- Legend:
- Ecology survey corridor (125m)
 - Development Boundary
 - Side Access
 - Potential Mitigation Area
 - HDD Section
 - Temporary Construction Compound
 - Substation Development Boundary
 - Bat roost potential - category 1
 - Bat roost potential - category 2
 - Bat roost potential - category 3
 - Unable to survey

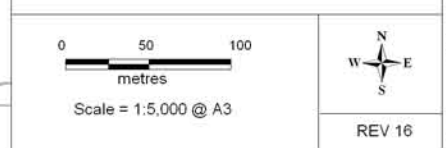


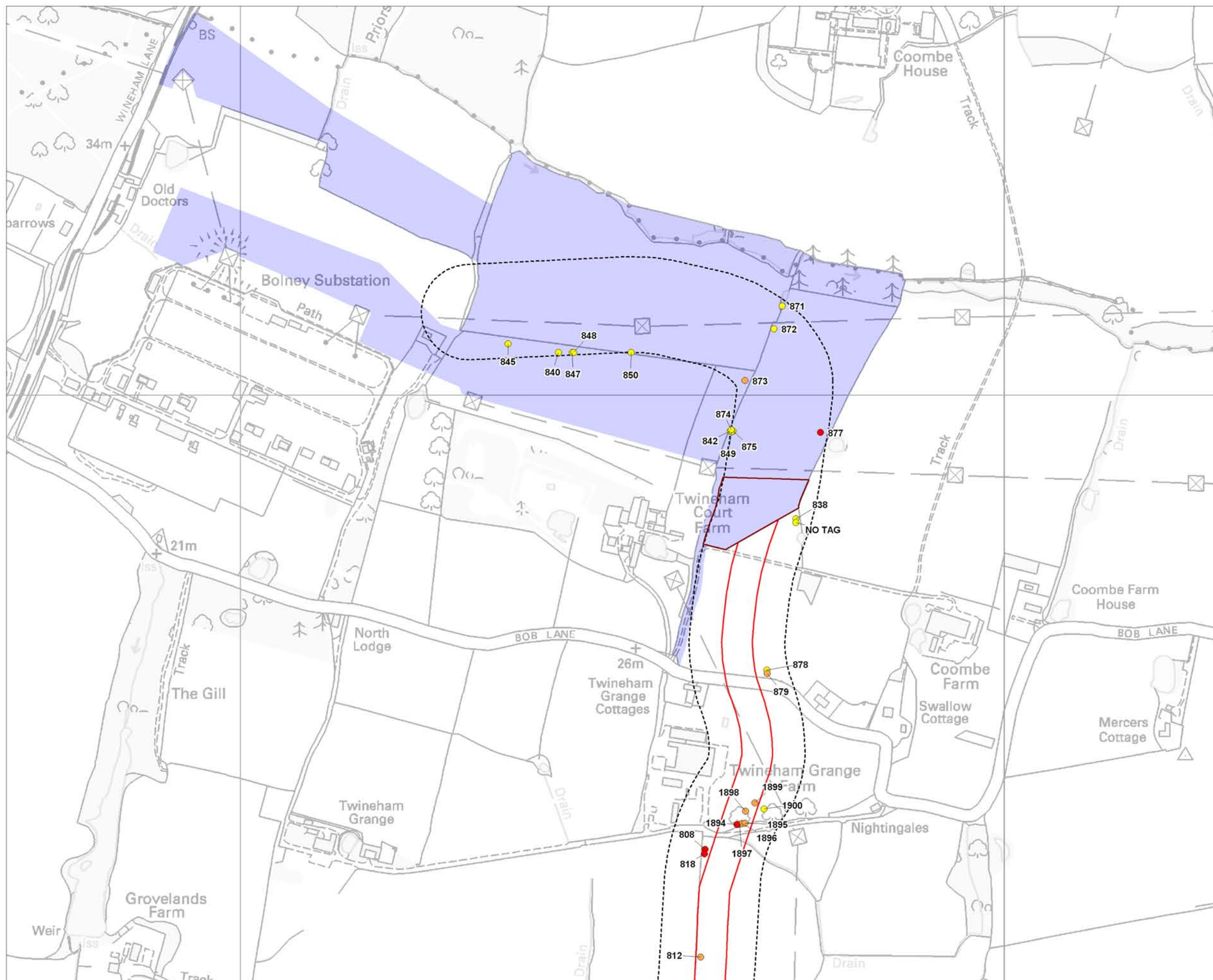
00	23.11.12	P2	RG	NH	VG
Rev	Date	Description	Drn	Chk	App

Rampion Wind Farm



Title:
Figure 4 -
Ground Level Bat Tree Assessment
Map 16 of 17





- Legend:
- Ecology survey corridor (125m)
 - Development Boundary
 - Side Access
 - Potential Mitigation Area
 - HDD Section
 - Temporary Construction Compound
 - Substation Development Boundary
 - Bat roost potential - category 1
 - Bat roost potential - category 2
 - Bat roost potential - category 3
 - Unable to survey



00	23.11.12	P2	RG	NH	VG
Rev	Date	Description	Drn	Chk	App

Rampion Wind Farm

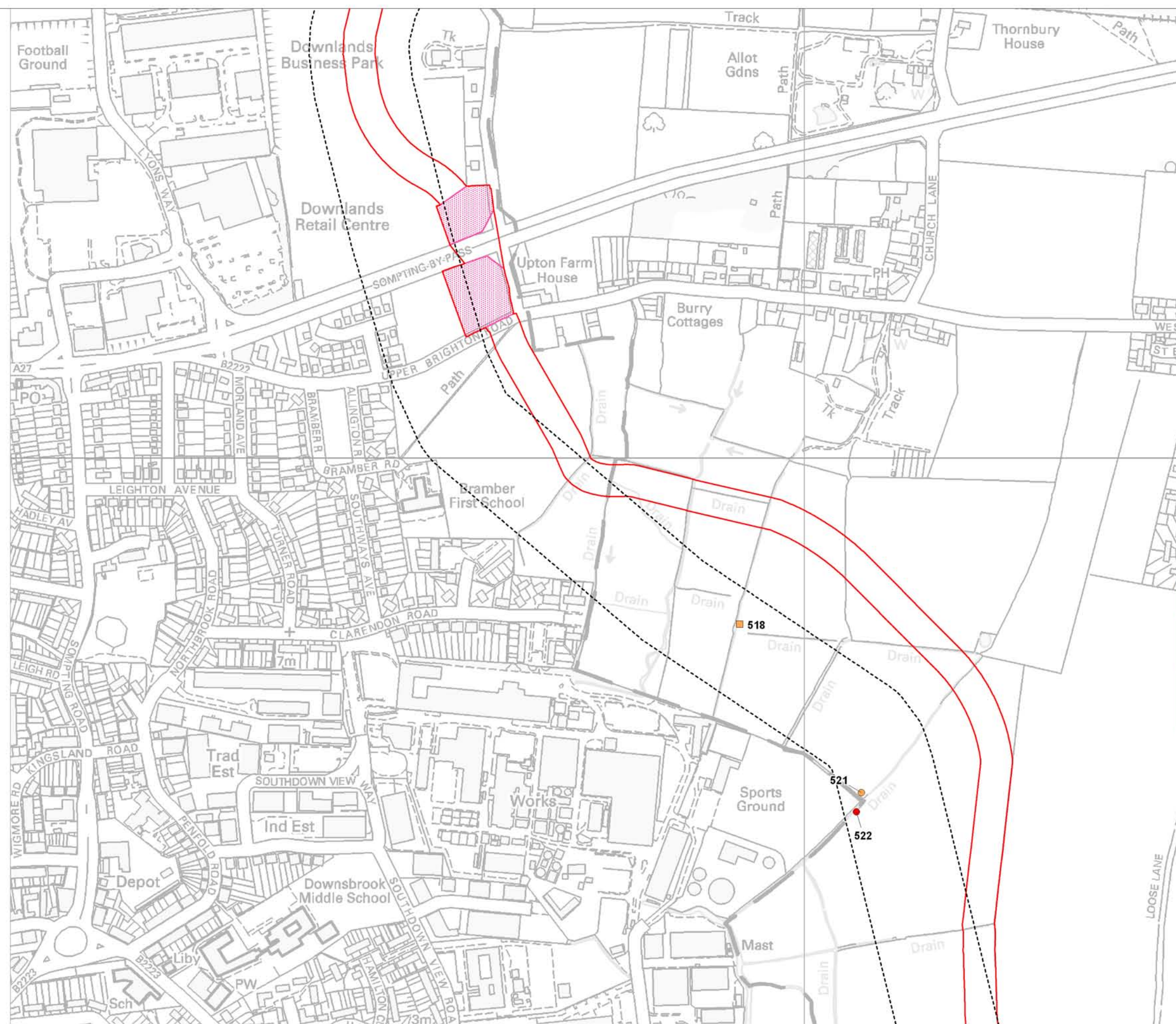
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Title:
Figure 4 -
Ground Level Bat Tree Assessment
Map 17 of 17

0 50 100
metres
Scale = 1:5,000 @ A3



REV 16



- Legend:
- Ecology survey corridor (125m)
 - Development Boundary
 - Side Access
 - Potential Mitigation Area
 - HDD Section
 - Temporary Construction Compound
 - Substation Development Boundary
 - Tree climbed
 - Emergence survey conducted
 - Bat roost potential - category 0
 - Bat roost potential - category 1
 - Bat roost potential - category 2
 - Bat roost potential - category 3

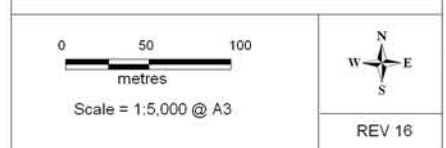


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Rev	Date	Description	Drn	Chk	App

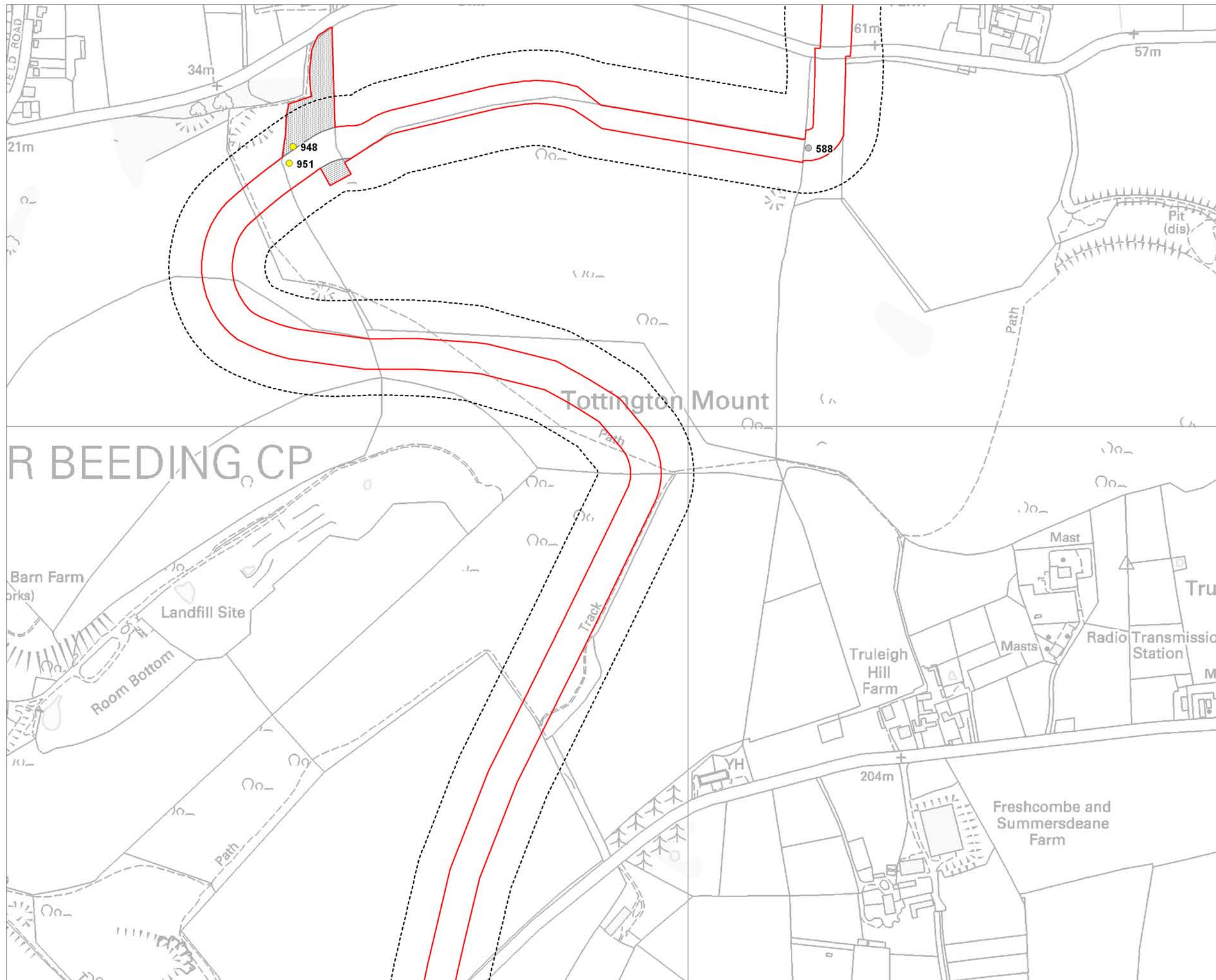
Rampion Wind Farm



Title:
Figure 5 -
Tree Climbing Bat Tree Assessment
Map 2 of 17







- Legend:
- Ecology survey corridor (125m)
 - Development Boundary
 - Side Access
 - Potential Mitigation Area
 - HDD Section
 - Temporary Construction Compound
 - Substation Development Boundary
 - Tree climbed
 - Emergence survey conducted
 - Bat roost potential - category 0
 - Bat roost potential - category 1
 - Bat roost potential - category 2
 - Bat roost potential - category 3

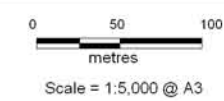


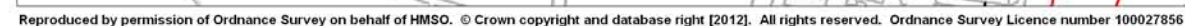
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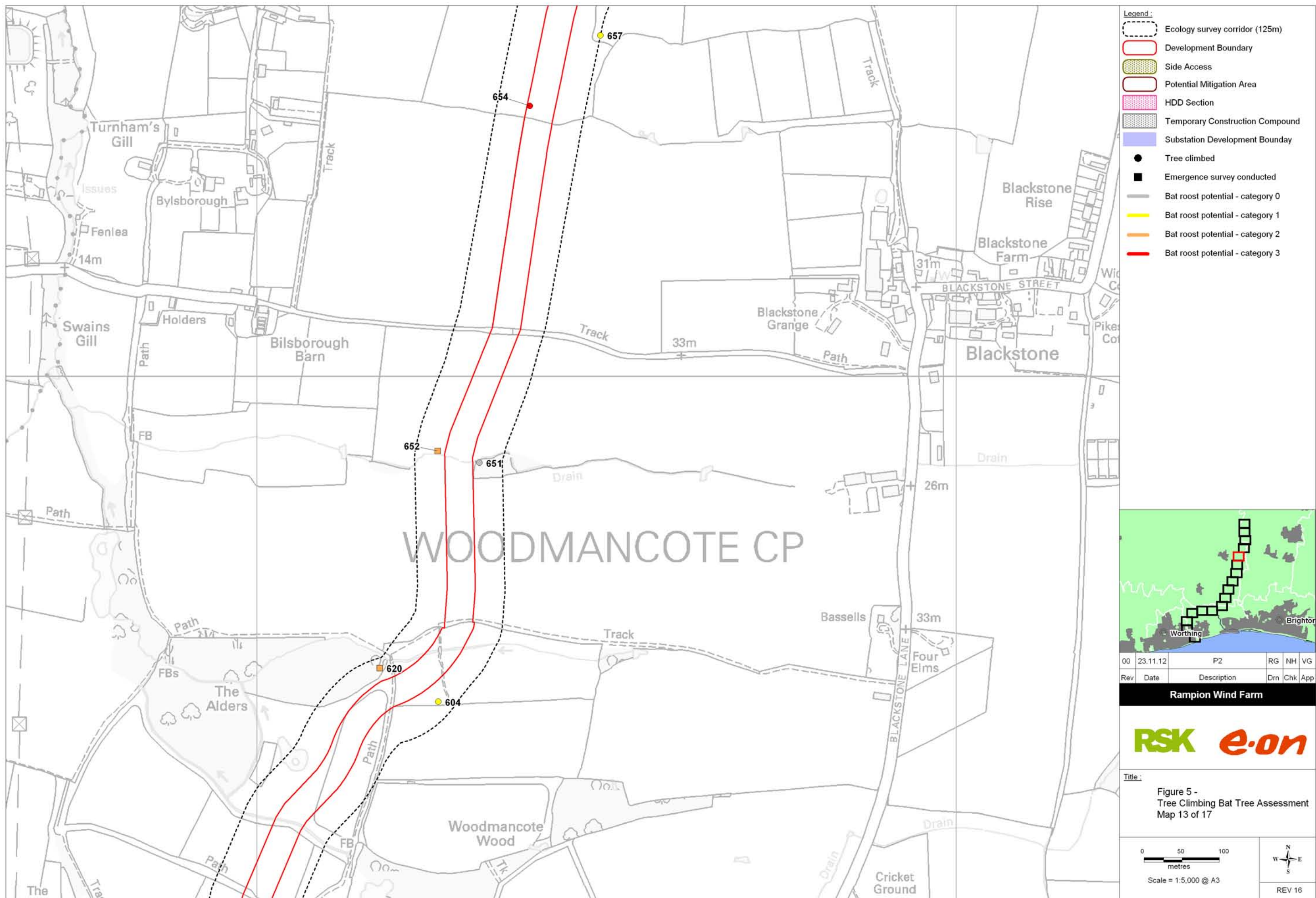
Rampion Wind Farm



Title:
Figure 5 -
Tree Climbing Bat Tree Assessment
Map 9 of 17







Rev **Date** **Description** **Drn** **Chk** **App**

00	23.11.12	P2	RG	NH	VG
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Rampion Wind Farm

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Title:

Figure 5 -
Tree Climbing Bat Tree Assessment
Map 13 of 17

0 50 100
metres
Scale = 1:5,000 @ A3

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Legend :

- Ecology survey corridor (125m)
- Development Boundary
- Side Access
- Potential Mitigation Area
- HDD Section
- Temporary Construction Compound
- Substation Development Boundary
- Tree climbed
- Emergence survey conducted
- Bat roost potential - category 0
- Bat roost potential - category 1
- Bat roost potential - category 2
- Bat roost potential - category 3

00	23.11.12	P2	RG	NH	VG
Rev	Date	Description	Drn	Chk	App

Rampion Wind Farm

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Title :

Figure 5 -
Tree Climbing Bat Tree Assessment
Map 14 of 17

0 50 100
metres

Scale = 1:5,000 @ A3

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REV 16



- Legend:
- Ecology survey corridor (125m)
 - Development Boundary
 - Side Access
 - Potential Mitigation Area
 - HDD Section
 - Temporary Construction Compound
 - Substation Development Boundary
 - Tree climbed
 - Emergence survey conducted
 - Bat roost potential - category 0
 - Bat roost potential - category 1
 - Bat roost potential - category 2
 - Bat roost potential - category 3

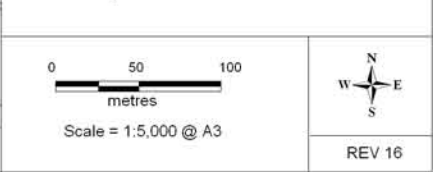


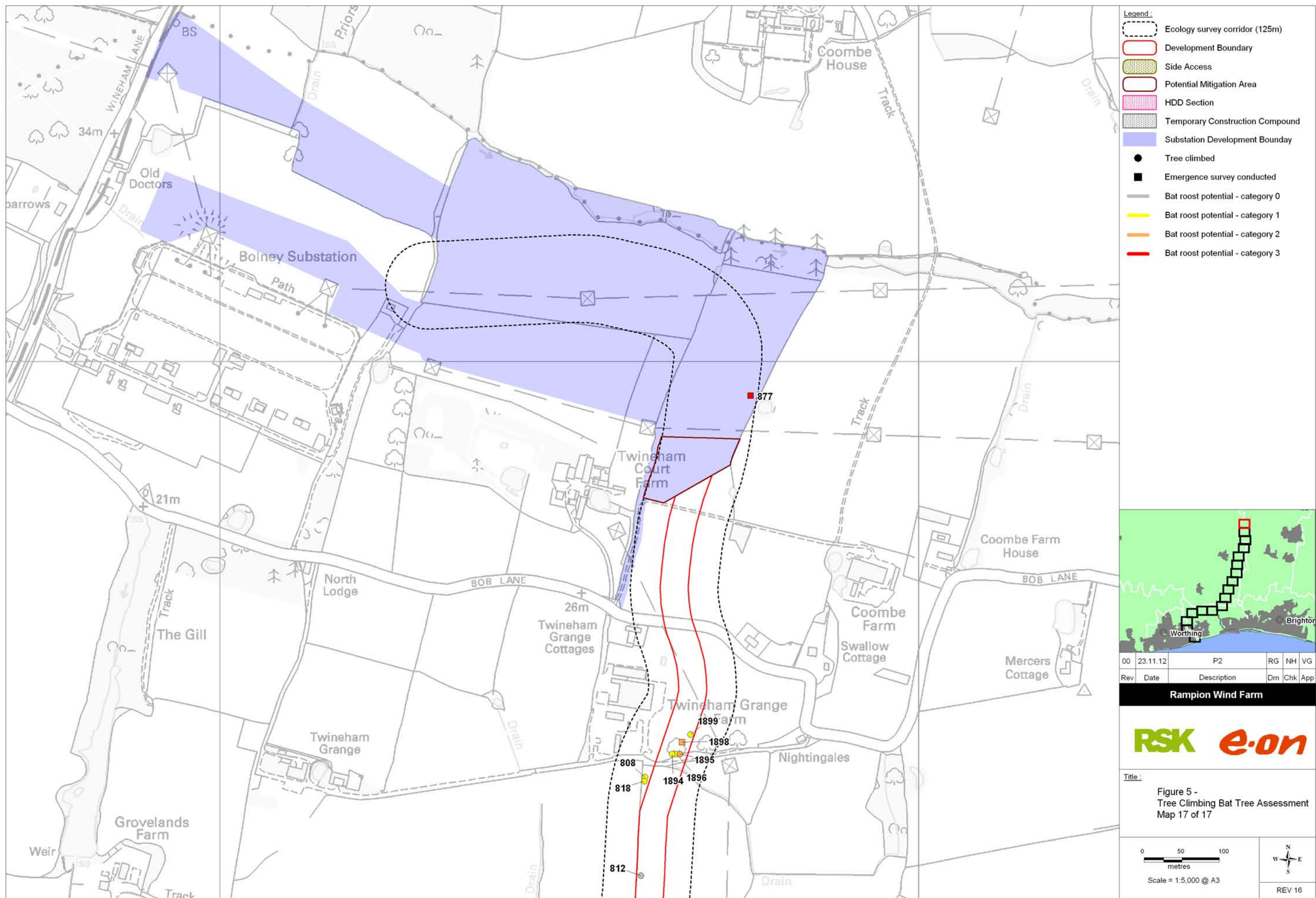
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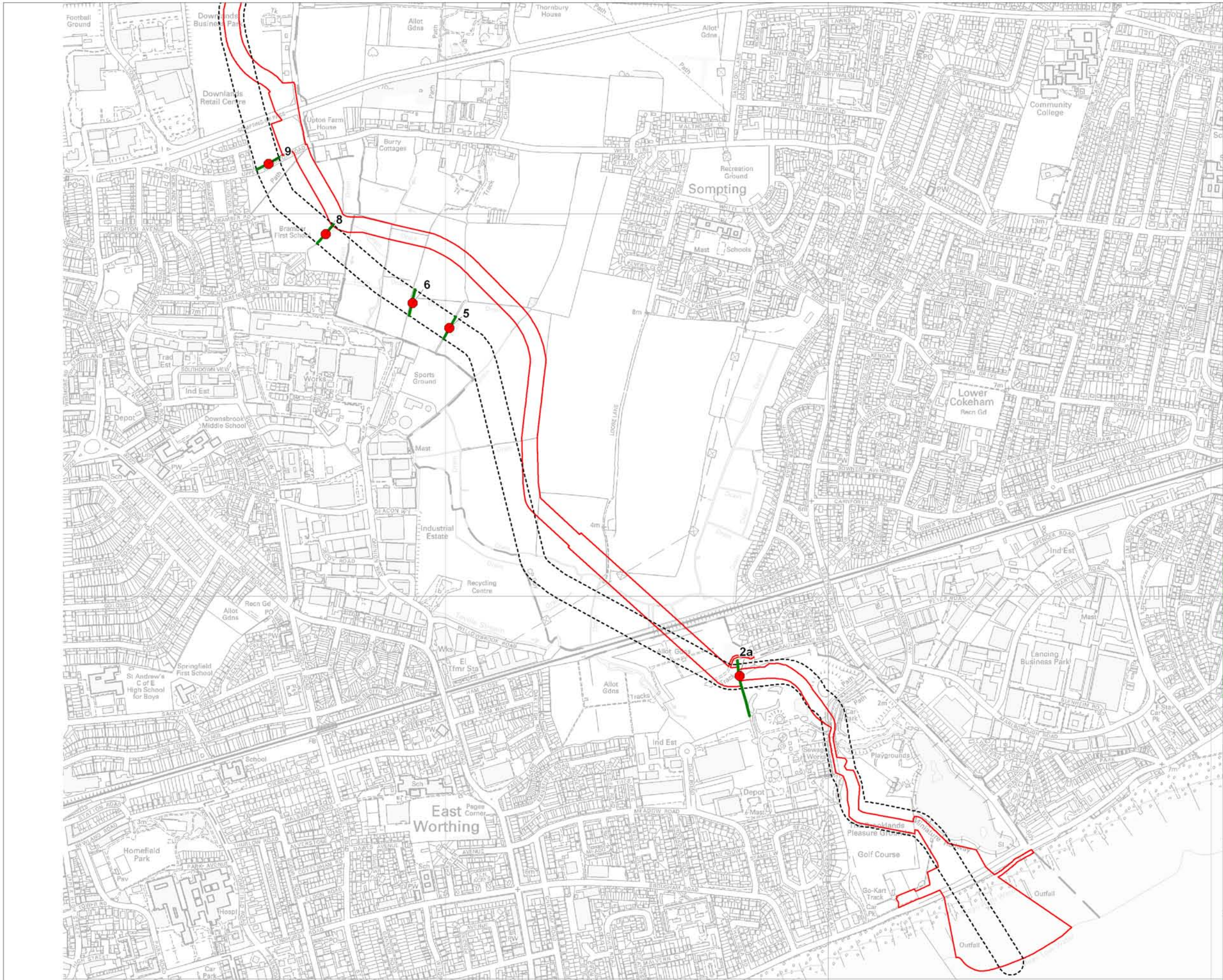
Rampion Wind Farm



Title:
Figure 5 -
Tree Climbing Bat Tree Assessment
Map 16 of 17







- Legend:
- Ecology survey corridor (65m)
 - Development Boundary
 - Substation Development Boundary
 - No access
 - Hedgerows / fences subject to bat activity surveys
 - Bat activity survey point



00	23.11.12	P2	RG	NH	VG
Rev	Date	Description	Drn	Chk	App

Rampion Wind Farm



Title:
Figure 6 -
Locations Subject to Bat Activity
Surveys
Map 1 of 8

0125250

metres

Scale = 1:10,000 @ A3

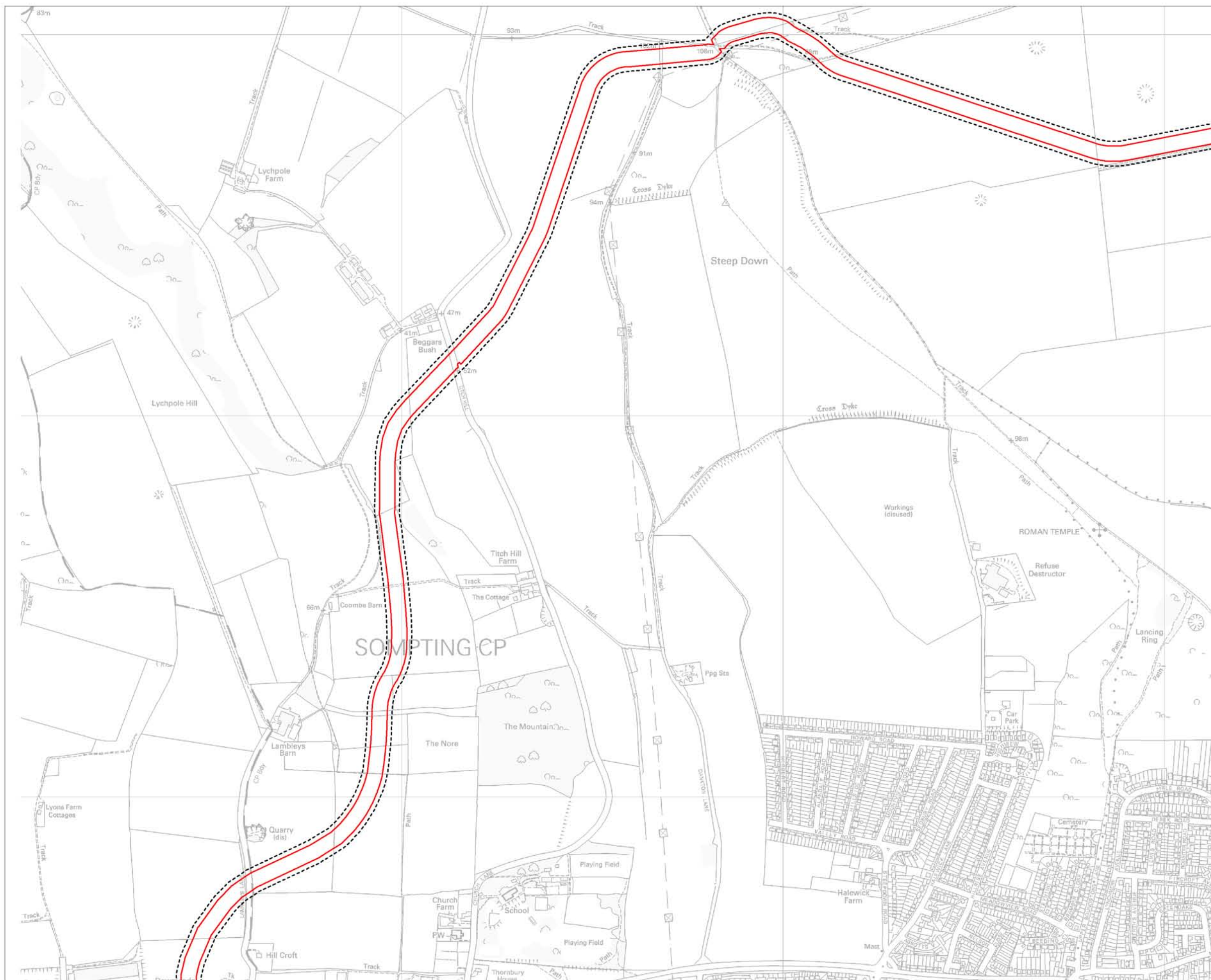
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REV 16



Legend :

- Ecology survey corridor (65m)
- Development Boundary
- Substation Development Boundary
- No access
- Hedgerows / fences subject to bat activity surveys
- Bat activity survey point

Rev **Date** **Description** **Drn** **Chk** **App**

00	23.11.12	P2	RG	NH	VG
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Rampion Wind Farm

RSK e-on

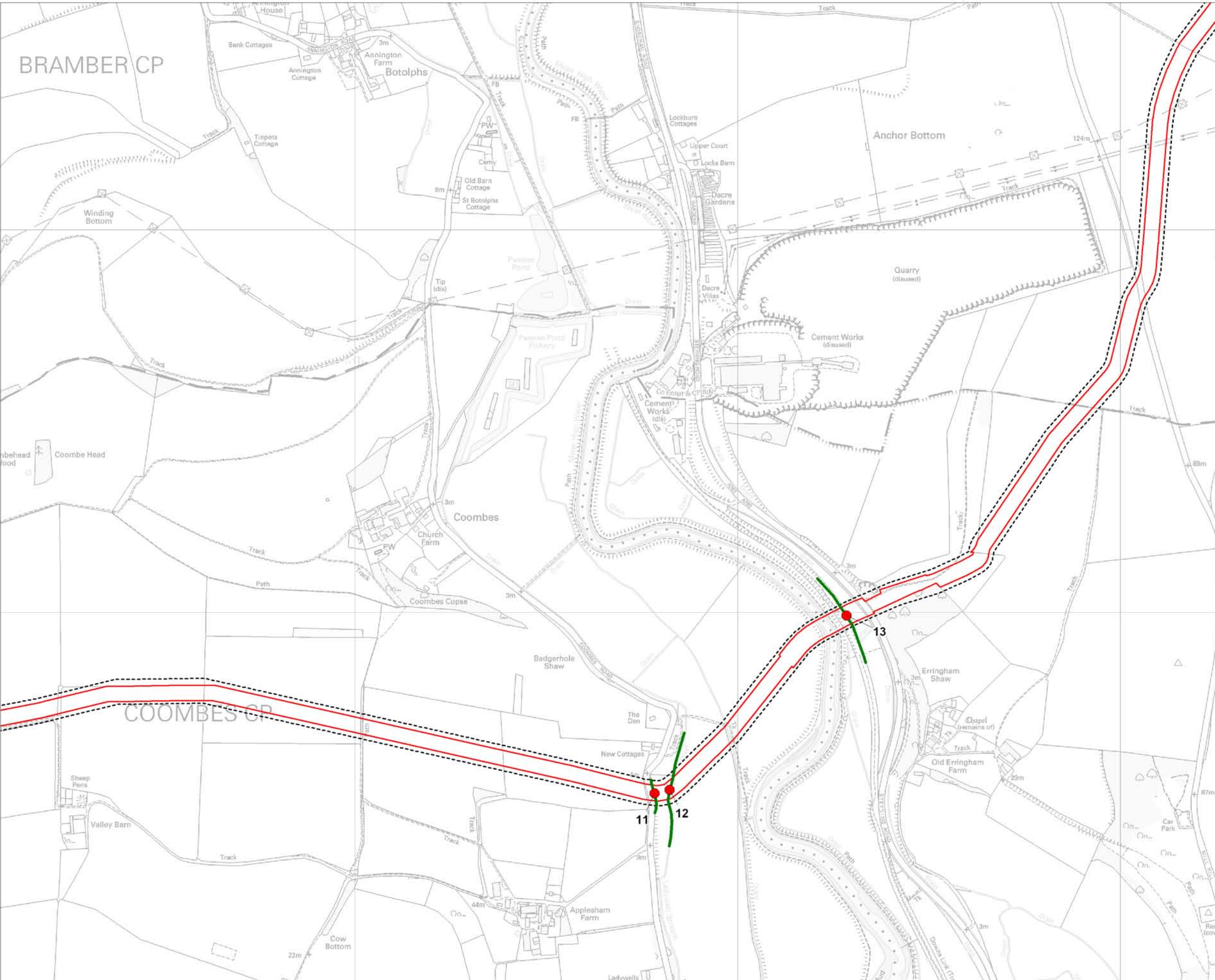
Title :

Figure 6 -
Locations Subject to Bat Activity
Surveys
Map 2 of 8

0 125 250
metres
Scale = 1:10,000 @ A3

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REV 16



Legend :

- Ecology survey corridor (65m)
- Development Boundary
- Substation Development Boundary
- No access
- Hedgerows / fences subject to bat activity surveys
- Bat activity survey point

Rev	Date	Description	Drn	Chk	App
00	23.11.12	P2	RG	NH	VG

Rampion Wind Farm

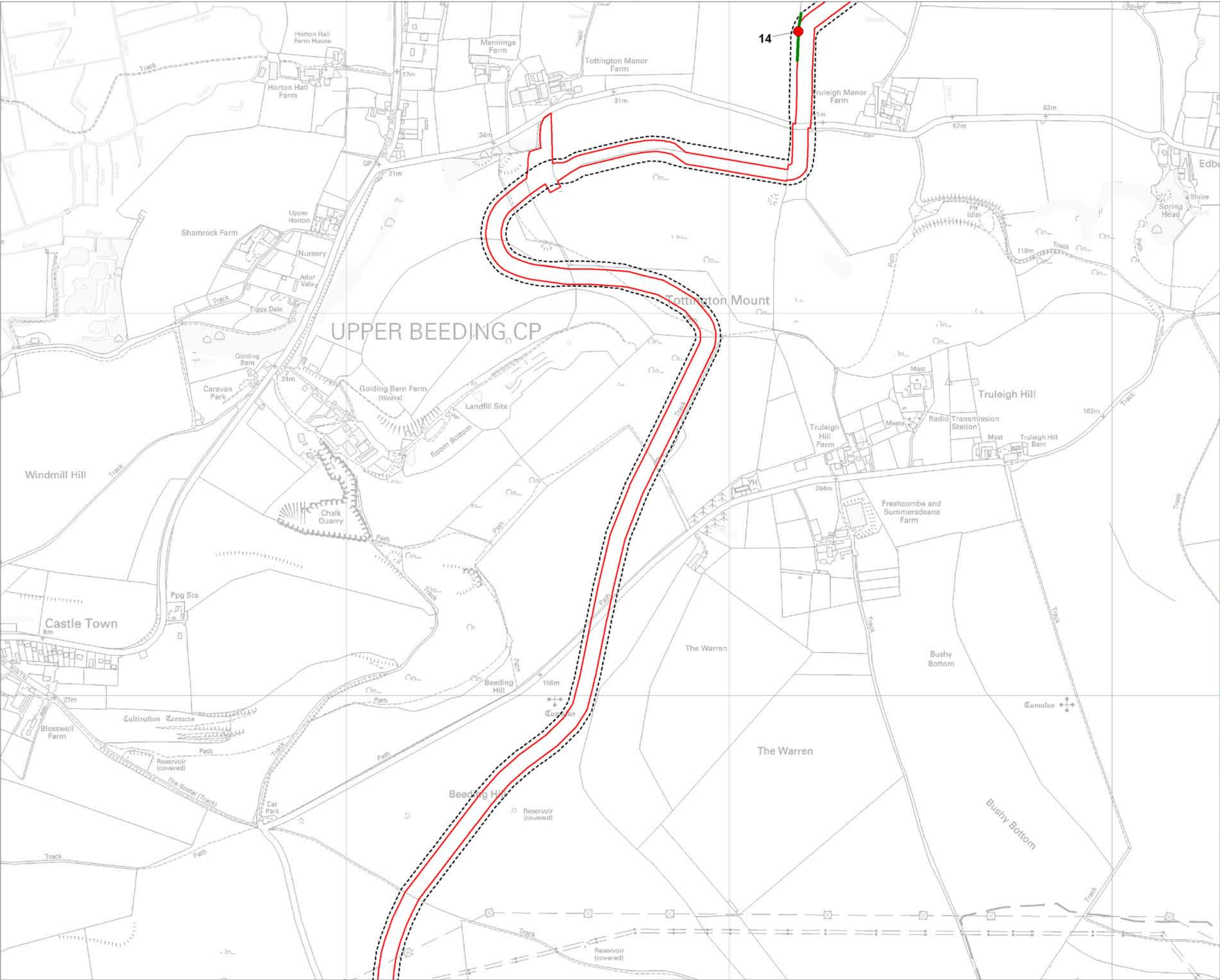
RSK e-on

Title :

Figure 6 -
Locations Subject to Bat Activity
Surveys
Map 3 of 8

0 125 250
metres
Scale = 1:10,000 @ A3

REV 16



Legend:

- Ecology survey corridor (65m)
- Development Boundary
- Substation Development Boundary
- No access
- Hedgerows / fences subject to bat activity surveys
- Bat activity survey point



00	23.11.12	P2	RG	NH	VG
Rev	Date	Description	Dn	Chk	App

Rampion Wind Farm

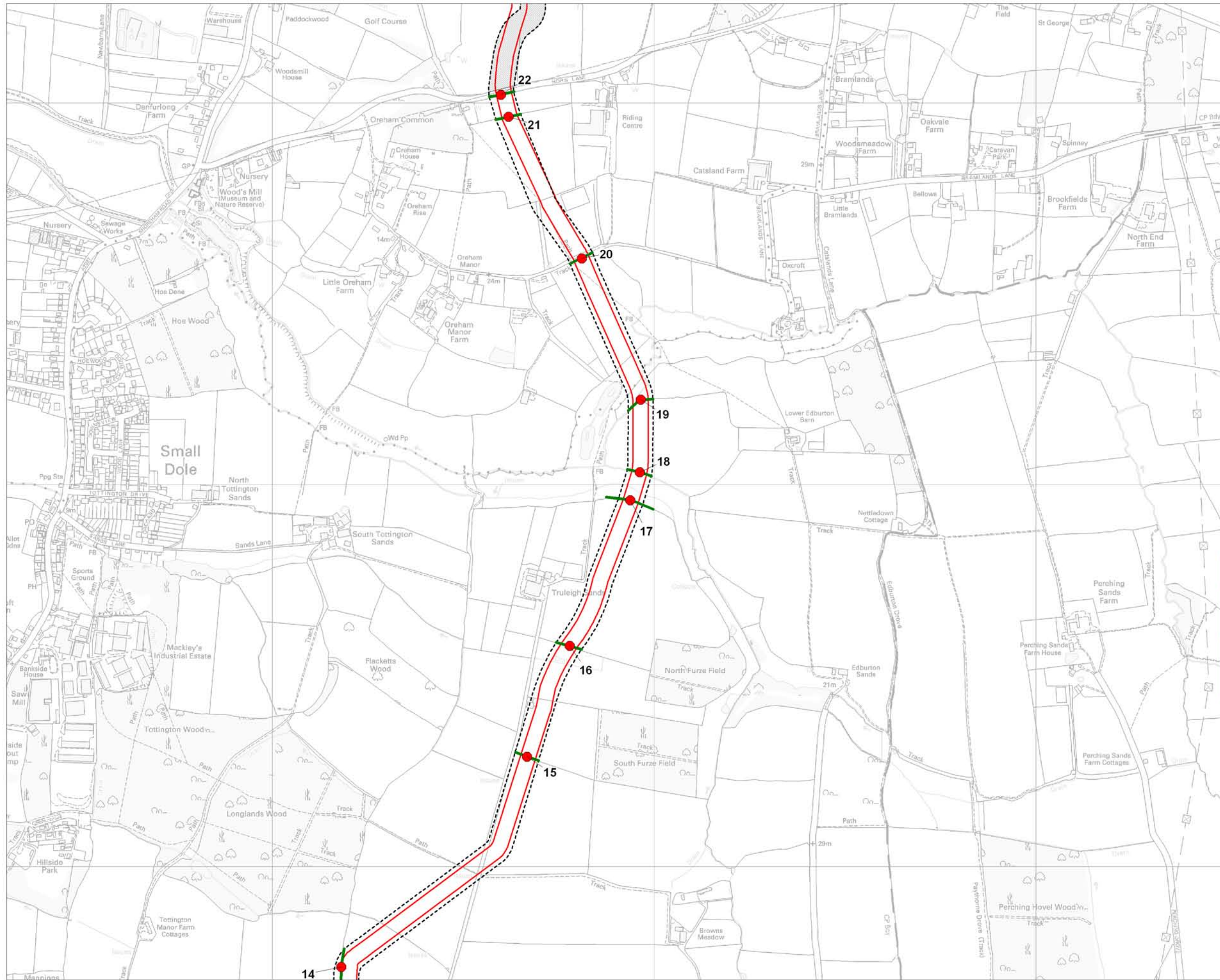


Title:
Figure 6 -
Locations Subject to Bat Activity
Surveys
Map 4 of 8

0 125 250
metres
Scale = 1:10,000 @ A3

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REV 16



Legend:

- Ecology survey corridor (65m)
- Development Boundary
- Substation Development Boundary
- No access
- Hedgerows / fences subject to bat activity surveys
- Bat activity survey point

00	23.11.12	P2	RG	NH	VG
Rev	Date	Description	Drn	Chk	App

Rampion Wind Farm

RSK e-on

Title:

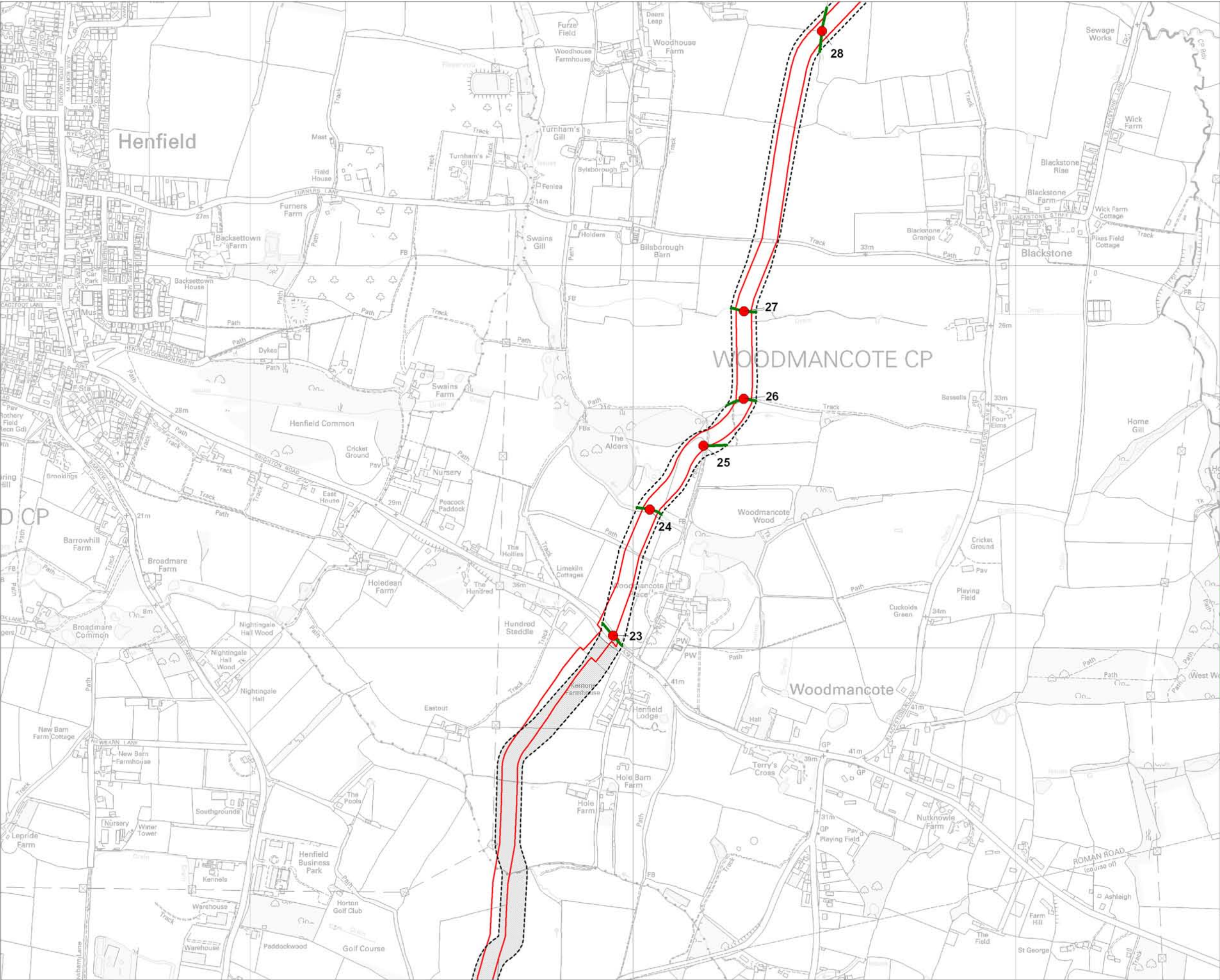
Figure 6 -
Locations Subject to Bat Activity
Surveys
Map 5 of 8

0 125 250
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Scale = 1:10,000 @ A3

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REV 16



Legend:

- Ecology survey corridor (65m)
- Development Boundary
- Substation Development Boundary
- No access
- Hedgerows / fences subject to bat activity surveys
- Bat activity survey point

00	23.11.12	P2	RG	NH	VG
Rev	Date	Description	Drn	Chk	App

Rampion Wind Farm

RSK e-on

Title:

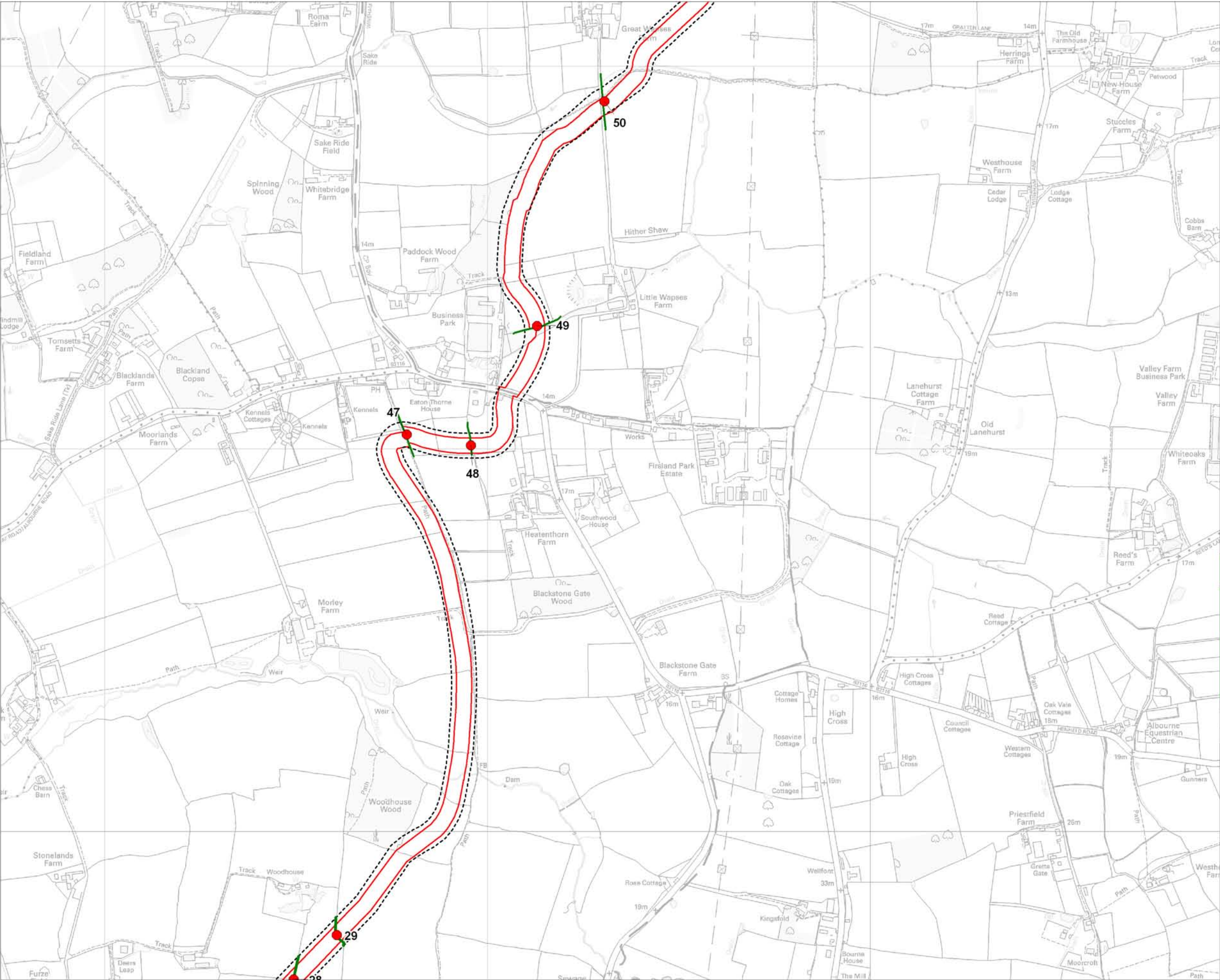
Figure 6 -
Locations Subject to Bat Activity
Surveys
Map 6 of 8

0 125 250
metres

Scale = 1:10,000 @ A3

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REV 16



Legend :

- Ecology survey corridor (65m)
- Development Boundary
- Substation Development Boundary
- No access
- Hedgerows / fences subject to bat activity surveys
- Bat activity survey point

00	23.11.12	P2	RG	NH	VG
Rev	Date	Description	Drn	Chk	App

Rampion Wind Farm

RSK e-on

Title :

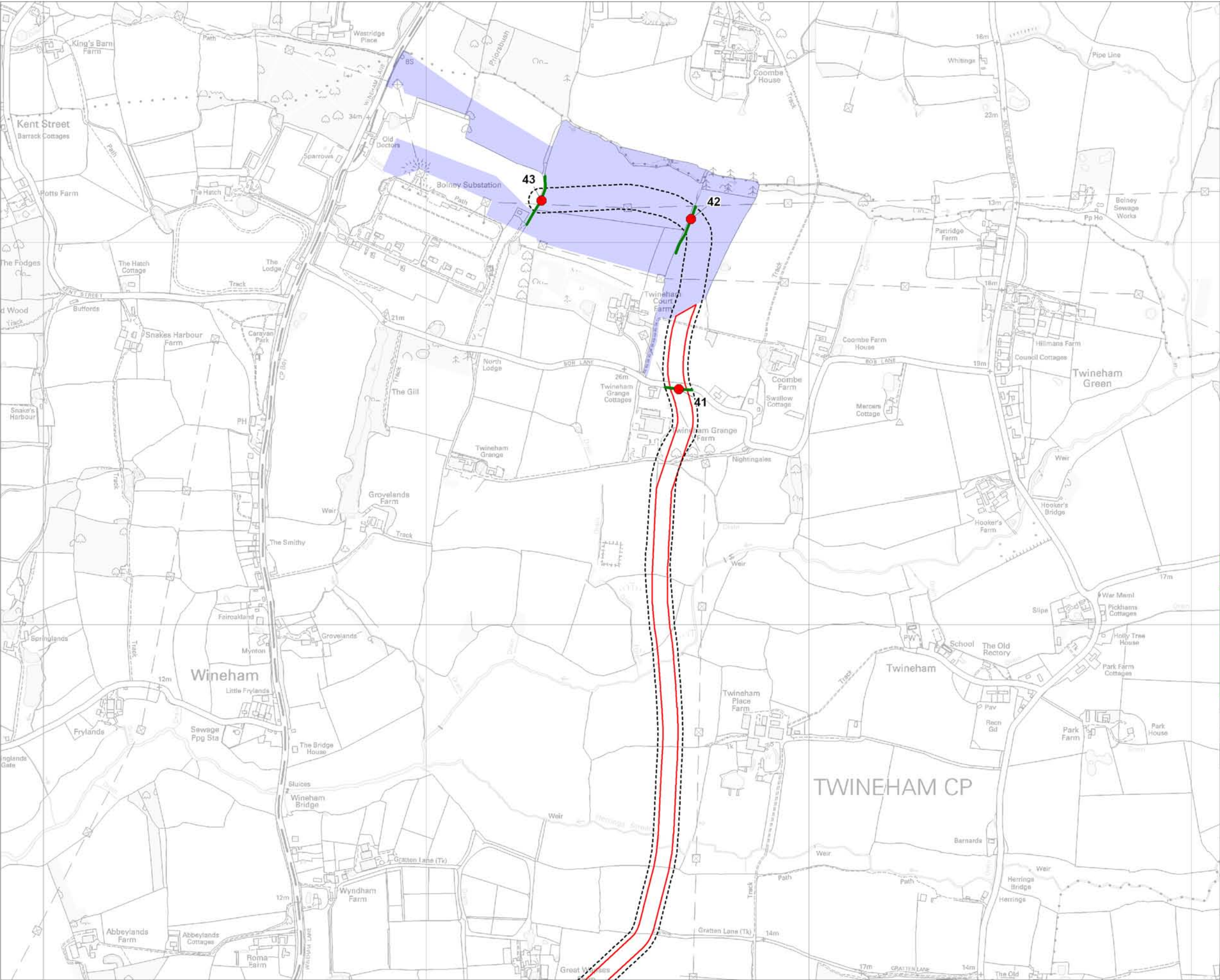
Figure 6 -
Locations Subject to Bat Activity
Surveys
Map 7 of 8

0 125 250
metres

Scale = 1:10,000 @ A3

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REV 16



- Legend:
- Ecology survey corridor (65m)
 - Development Boundary
 - Substation Development Boundary
 - No access
 - Hedgerows / fences subject to bat activity surveys
 - Bat activity survey point

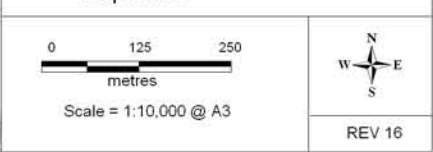


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Rev	Date	Description	Dwn	Chk	App

Rampion Wind Farm



Title:
Figure 6 -
Locations Subject to Bat Activity
Surveys
Map 8 of 8



APPENDIX A – RELEVANT LEGISLATION

All species of British bat are protected by The Wildlife and Countryside Act 1981 (as amended) extended by the Countryside and Rights of Way Act 2000. This legislation makes it an offence to:

- intentionally kill, injure or take a bat;
- possess or control a bat;
- intentionally or recklessly damage, destroy or obstruct access to a bat roost; and
- intentionally or recklessly disturb a bat whilst it occupies a bat roost.

Bats are also European Protected Species listed on The Conservation of Habitats and Species Regulations 2010. This legislation makes it an offence to:

- deliberately capture, injure or kill a bat;
- deliberately disturb bats, including in particular any disturbance which is likely (a) to impair their ability - (i) to survive, to breed or reproduce, or to rear or nurture their young; or (ii) hibernate or migrate, where relevant; or (b) to affect significantly the local distribution or abundance of the species to which they belong.
- damage or destroy a breeding site or resting place of a bat; and
- possess, control, transport, sell, exchange a bat, or offer a bat for sale or exchange.

All bat roosting sites receive legal protection even when bats are not present.

APPENDIX B – GROUND LEVEL TREE SURVEY DATA

APPENDIX B – GROUND LEVEL TREE SURVEY DATA

Tree number	Grid Reference	Highest category of bat roosting potential	Species	Surveyor(s)	Date	Features with potential to support roosting bats	Category of bat roosting potential
509	TQ1722803444	1	Poplar	AR + PB	21.02.11	Split limb on east side extending 1m	1
510	TQ1708003602	2	Poplar	AR + PB	21.02.11	Bark scar on north side - two small holes with potential cavity	1
						Limb scar hole	2
						Sawn limb hole - scar may be wet	1
						Dead limb (approx 1m long) sawn off with cracks and splits	1
						Small hole at stem joint with nesting blue tits	2
511	TQ1682803834	1	Evergreen	AR + PB	21.02.11	Cracked limb and side of flaked bark	1
513	TQ1676503804	1	Willow	AR + PB	21.02.11	Woodpecker holethat extends upwards	1
514	TQ1574404887	1	Thorn	AR + PB	22.02.11	Thick ivy cover - mature ivy stems - 2 trees - some root ball	1
516	TQ1582104812	1	Alder	AR + PB	22.02.11	Hole beneath dead limb	1
						Dead limb with holes	1
						Dying limb rotting back - holes extending upward	1

Tree number	Grid Reference	Highest category of bat roosting potential	Species	Surveyor(s)	Date	Features with potential to support roosting bats	Category of bat roosting potential
						Broken limb with splits upwards	1
517	TQ1585704879	1	Willow	AR + PB	22.02.11	Leaning limb horizontally split	1
518	TQ1591804791	3	Willow	AR + PB	22.02.11	Small hole / broken bark	1
						Large rot hole leading to hollow trunk	3
						Large rot hole leading to hollow trunk - HORNETS!	3
						Woodpecker hole	2
						Woodpecker hole	2
						Fallen limb scar	1
519	TQ1602504624	2	Poplar	AR + PB	22.02.11	Large cavity that extends upwards	2
						Ivy - semi mature stems	1
520	TQ1603104624	2	Holm Oak	AR + PB	22.02.11	Large split / cavity extending upwards - entrance obstructed	2
521	TQ1607104579	3	Poplar	AR + PB	22.02.11	Large split / cavity extending upward	3
522	TQ1606504555	3	Poplar	AR + PB	22.02.11	Large cavity extends upwards	3
523	TQ1615904122	3	Poplar	AR + PB	22.02.11	Large cavity in main trunk	3
524	TQ1616904117	3	Poplar	AR + PB	22.02.11	Large cavity in main trunk	3

Tree number	Grid Reference	Highest category of bat roosting potential	Species	Surveyor(s)	Date	Features with potential to support roosting bats	Category of bat roosting potential
						Woodpecker hole (middle) -(new feature identified during climbing)	N/A
						Woodpecker hole (top)	3
						Woodpecker hole (bottom)	2
525	TQ1617104115	3	Poplar	AR + PB	22.02.11	Large cavity in main trunk	3
526	TQ1617804118	2	Poplar	AR + PB	22.02.11	Woodpecker hole	2
						Woodpecker hole	2
527	TQ1618704113	3	Poplar	AR + PB	22.02.11	Large cavity in main stem - low entrance	3
528	TQ1619404099	1	Willow	AR + PB	22.02.11	Woodpecker hole in main stem	1
529	TQ1619504092	2	Willow	AR + PB	22.02.11	Woodpecker hole in main stem	2
						Three woodpecker holes / rot holes in main stem	2
530	TQ1620404078	3	Willow	AR + PB	22.02.11	Woodpecker hole	3
531	TQ1620704077	1	Willow	AR + PB	22.02.11	Woodpecker hole	1
532	TQ1620904073	1	Willow	AR + PB	22.02.11	Woodpecker hole - hollow cavity - low hole	1
533	TQ1621204065	1	Willow	AR + PB	22.02.11	Woodpecker hole	1
						Woodpecker hole	1

Tree number	Grid Reference	Highest category of bat roosting potential	Species	Surveyor(s)	Date	Features with potential to support roosting bats	Category of bat roosting potential
534	TQ1621404058	1	Willow	AR + PB	22.02.11	Woodpecker hole	1
						Woodpecker hole	1
535	TQ1621764050	2	Willow	AR + PB	22.02.11	Woodpecker hole - woodpecker flew out	2
						Woodpecker hole	1
536	TQ1621204044	3	Willow	AR + PB	22.02.11	Woodpecker hole	3
						Woodpecker hole	3
						Woodpecker hole	3
537	TQ1622604016	3	Willow	AR + PB	22.02.11	Woodpecker hole	3
						Woodpecker hole	3
						Woodpecker hole	3
						Large vertical split in main stem	2
539	TQ1623104002	2	Willow	AR + PB	22.02.11	Large vertical split in main stem which leans at angle - some exposed but may be extending upwards	2
						Split in main stem extending upwards	2

Tree number	Grid Reference	Highest category of bat roosting potential	Species	Surveyor(s)	Date	Features with potential to support roosting bats	Category of bat roosting potential
540	TQ1623303998	3	Willow	AR + PB	22.02.11	Six woodpecker holes - may all enter same cavity	3
551	TQ1593106589	3	Ash	AR + PB	23.02.11	Large 2m fallen limb scar that extends into hollow stem upward	3
						Woodpecker hole	3
						Woodpecker hole	3
552	TQ1591306776	2	Ash	AR + PB	23.02.11	Rot hole - unable to see extent of cavity but looks small	2
557	TQ2029707959	1	Ash	JM + PB	28.02.11	Ivy covering trunk and limbs from base to top	1
558	TQ2029307969	1	Ash	JM + PB	28.02.11	Ivy covering trunk and limbs from base to top	1
560	TQ1969307502	1	Ash	JM + PB	28.02.11	Ivy covering trunk and limbs from base to top	1
561	TQ1969607499	2	Ash	JM + PB	28.02.11	Woodpecker hole	2
						Rot hole at base of dead limb stump	1
562	TQ1973107500	2	Ash	JM + PB	28.02.11	Woodpecker hole	1
						Woodpecker hole	2
						Woodpecker hole	2
						Rot hole from broken limb	2

Tree number	Grid Reference	Highest category of bat roosting potential	Species	Surveyor(s)	Date	Features with potential to support roosting bats	Category of bat roosting potential
						Flaking bark	1
563	TQ1977307585	1	Ash	JM + PB	28.02.11	Ivy covering	1
564	TQ1977407582	1	Ash	JM + PB	28.02.11	Ivy covering	1
565	TQ1977807547	1	Ash	JM + PB	28.02.11	Flaking bark extending entire main stem and some limbs. Dead ivy stems present as well	1
567	TQ1976307590	1	Ash	JM + PB	01.03.11	Ivy covering main stem	1
568	TQ2040608030	3	Willow	JM + PB	01.03.11	West limb	
						<i>Dead limb hanging down</i>	2
						<i>Split in main limb</i>	2
						North West limb	
						<i>Rams horn with internal decay and rot hole at top</i>	1
						Main stem	
						<i>Rot hole (top)</i>	1
						<i>2 Rot holes (bottom)</i>	1
						<i>Woodpecker hole (west split)</i>	3
						<i>Woodpecker hole</i>	3
						<i>Woodpecker hole</i>	3
						<i>5 woodpecker holes possibly connected to rot hole (top) by internal cavity</i>	3

Tree number	Grid Reference	Highest category of bat roosting potential	Species	Surveyor(s)	Date	Features with potential to support roosting bats	Category of bat roosting potential
						<i>South limb</i>	
						<i>Rot hole</i>	2
						<i>Rot hole</i>	2
						<i>Woodpecker hole at broken limb at base that extends west</i>	1
569	TQ2041808040	1	Willow	JM + PB	01.03.11	Broken main stem	1
		1		JM + PB	01.03.11	50+ ivy clad trees all offering low bat potential	1
570	TQ2048408074	2	Willow	JM + PB	01.03.11	<i>Cracked main stem with horizontal split - needs further inspection</i>	2
571	TQ2045508119	1	Ash	JM + PB	01.03.11	Ivy cover	1
572	TQ2060908162	2	<i>Horse Chestnut</i>	<i>JM + PB</i>	<i>01.03.11</i>	<i>South side</i>	
						<i>Broken dead limb with woodpecker holes</i>	2
						<i>Three woodpecker holes on main stem</i>	2
						<i>Rot hole from broken limb</i>	2
						<i>West side</i>	
						<i>Ram horn split running length of main stem and up limb</i>	1
						<i>Rot hole from broken limb</i>	2

Tree number	Grid Reference	Highest category of bat roosting potential	Species	Surveyor(s)	Date	Features with potential to support roosting bats	Category of bat roosting potential
						<i>Dying back limb with rot holes</i>	1
						North side	
						<i>Main stem cavity extending upwards</i>	1
573	TQ2060808164	2	<i>Horse Chestnut</i>	JM + PB	01.03.11	North side	
						<i>Borken main stem may have cavities extending into south facing limb</i>	2
						<i>Broken limb with rot cavity</i>	2
						West side	
						<i>Broken limb with large cavity exposed at entrance</i>	2
						<i>Rot hole in main stem that extends into central cavity</i>	1
						<i>Extra feature: Rot hole on top side of western extending branch, close to above feature.</i>	1
						East side	
						<i>Small rot hole on main stem</i>	1
574	TQ2061108166	2	<i>Horse Chestnut</i>	JM + PB	01.03.11	East side	
						<i>Rot hole</i>	3
						<i>Hollowed out branch</i>	
						<i>Woodpecker hole</i>	2

Tree number	Grid Reference	Highest category of bat roosting potential	Species	Surveyor(s)	Date	Features with potential to support roosting bats	Category of bat roosting potential
						<i>Woodpecker hole</i>	2
						<i>Woodpecker hole</i>	2
						<i>North side</i>	
						<i>Rot cavity</i>	2
						<i>6 woodpecker holes including top fork and N limb</i>	2
						<i>Rot hole from broken limb - large</i>	1
						<i>Rot hole from broken limb - small at end of branch</i>	1
576	TQ2062008170	2	<i>Horse Chestnut</i>	JM + PB	01.03.11	<i>Woodpecker hole - possibly unsheltered</i>	1
						<i>6 woodpecker holes</i>	2
						<i>Broken limb with rot cavity</i>	1
						<i>2 woodpecker holes on main stem</i>	2
						<i>Rot hole on southern dead limb</i>	1
						<i>Rot hole at end of broken southern limb</i>	2
						<i>Rot hole at end of broken southern limb</i>	2
577	TQ2062208176	3	<i>Horse Chestnut</i>	JM + PB	01.03.11	<i>Dead Vertical Stem</i>	
						<i>Large rot hole at top of rams horn</i>	2

Tree number	Grid Reference	Highest category of bat roosting potential	Species	Surveyor(s)	Date	Features with potential to support roosting bats	Category of bat roosting potential
						<i>Rot hole and cavity from fallen limb</i>	3
						<i>Small Northern side stem</i>	
						<i>Rot hole and cavity from fallen limb</i>	2
						<i>Largest stem</i>	
						<i>Broken limb</i>	2
						<i>Fallen limb resting on above feature</i>	2
						<i>Rot hole on elbow of limb</i>	1
						<i>Rot hole from fallen limb - may lead to feature below</i>	2
						<i>Rot hole in limb</i>	2
						<i>Rot hole on main stem</i>	1
578	TQ2062308181	3	Beech	JM + PB	01.03.11	<i>Ivy cover</i>	1
						<i>Woodpecker hole on main stem</i>	2
						<i>Rot hole - possibly too exposed</i>	1
						<i>Rot hole - possibly too exposed</i>	1

Tree number	Grid Reference	Highest category of bat roosting potential	Species	Surveyor(s)	Date	Features with potential to support roosting bats	Category of bat roosting potential
						<i>Woodpecker hole in main stem next to rot hole - probably exposed</i>	3
579	TQ2064708161	1	Ash	JM + PB	01.03.11	Rot hole in main stem	1
						Rot hole in main stem	1
580	TQ2065508156	1	Ash	JM + PB	01.03.11	Ivy cover	1
584	TQ2214611309	1	Ash	JM + PB	03.03.11	Rot hole	1
586	TQ2215711336	1	Thorn	JM + PB	03.03.11	Ivy covering main stem	1
587	TQ2215611358	1	Ash	JM + PB	03.03.11	Scar and rot hole from fallen limb with cavity extending up	1
						Rot hole	1
588	<i>TQ2215711364</i>	2	<i>Ash</i>	<i>JM + PB</i>	<i>03.03.11</i>	<i>Woodpecker hole</i>	2
						<i>Dead limb - possibly exposed</i>	1
						<i>Large rot hole on W side of S limb. Cavity extends up inside of trunk and beyond length of endoscope. Cavity full of clutter and not currently being used by bats.</i>	2
						<i>Rot hole with included cavity</i>	1
589	TQ2218611778	1	Oak	DC + JM	07.03.11	Ivy cover	1

Tree number	Grid Reference	Highest category of bat roosting potential	Species	Surveyor(s)	Date	Features with potential to support roosting bats	Category of bat roosting potential
590	TQ2283512847	1	Oak	DC + JM	07.03.11	Rot hole on limb	1
						Rot hole from fallen limb	1
						Broken limb	1
						Small rot hole	1
						Rot hole on elbow of limb	1
						Small rot hole on thin branch	1
593	TQ2295612960	1	Oak	DC + JM	07.03.11	Ivy covering main stem and limbs	1
594	TQ2295812952	1	Oak	DC + JM	07.03.11	Dead limb with flaking bark	1
						Rot hole on branch elbow	1
596	TQ2300213026	1	Oak	DC + JM	07.03.11	Scar from fallen limb rams horn on included cavity	1
						Hole where broken limb meets main stem	1
597	TQ2264312359	1	Willow	DC + JM	07.03.11	Woodpecker hole	1
						Woodpecker hole	1
598	TQ2294215063	2	Oak	DC + JM	07.03.11	Two dead limbs with vertical cracks extending length of limb	1
						Rot hole connected to above feature	1
						Dead limb with cracks and flaking bark	1
						Dead limb with cracks and flaking bark below above feature	1

Tree number	Grid Reference	Highest category of bat roosting potential	Species	Surveyor(s)	Date	Features with potential to support roosting bats	Category of bat roosting potential
						Rot hole on southern dead limb	2 (1)
						Rot hole on branch extending east from southern dead limb	1
						Two rot holes on southern dead limb	1
						Flaking bark on west extending branch	1
599	TQ2290115101	1	Scots Pine	DC + JM	07.03.11	Rot holes and cavities extending length of dead stem	1
						8 woodpecker holes on southern limb at dead top	1
601	TQ2317315429	1	Oak	DC + JM	07.03.11	Large portion of tree dead with 6m vertical split offering limited gaps - possibly exposed	1
602	TQ2319315488	2	Oak	DC + JM	07.03.11	Woodpecker hole on main stem with staining	2
						Dead limb with large 2m horizontal split	2
						Large amount of dead wood with splits and flaking bark	1
604	TQ2325915534	3	Oak	DC + JM	07.03.11	Small dead branch on main limb with flaking bark and rot hole	1
						Rot hole into central cavity	2
						Large cavity extending up entire eastern limb - multiple features within cavity	2
						Large 2m split in main stem	3

Tree number	Grid Reference	Highest category of bat roosting potential	Species	Surveyor(s)	Date	Features with potential to support roosting bats	Category of bat roosting potential
						<i>Three dead limbs extending west all with horizontal splits</i>	<i>1</i>
						<i>Rot hole</i>	<i>2</i>
						<i>Three rot holes on eastern stem</i>	<i>2</i>
606	TQ2322615632	2	Unknown	DC + JM	07.03.11	Scar from fallen limb	2
607	TQ2309415531	2	Alder	DC + JM	07.03.11	Five woodpecker holes	2
608	TQ2311515547	2	Oak	DC + JM	07.03.11	Hole formed from broken limb	1
						Woodpecker hole at base of rot hole	2
						Broken limb	2
609	TQ2311515535	1	Willow	DC + JM	07.03.11	Cavity at base of tree extending up trunk	1
610	TQ2312415549	2	Oak	DC + JM	07.03.11	Woodpecker hole	2
611	TQ2313715561	1	Oak	DC + JM	07.03.11	Hole formed from rot hole	1
612	TQ2313915560	1	Oak	DC + JM	07.03.11	Rot hole	1
613	TQ2314915564	2	Oak	DC + JM	07.03.11	Five woodpecker holes	2
						Fallen limb scar	1
614	TQ2315415571	1	Oak	DC + JM	07.03.11	Ivey covering main stem	1
						Rot hole on western stem where branches part	1

Tree number	Grid Reference	Highest category of bat roosting potential	Species	Surveyor(s)	Date	Features with potential to support roosting bats	Category of bat roosting potential
615	TQ2315415574	2	Oak	DC + JM	07.03.11	Four woodpecker holes	2
616	TQ2315415578	2	Oak	DC + JM	07.03.11	Woodpecker hole	2
617	TQ2316615573	2	Oak	DC + JM	07.03.11	Small hole in large rot hole	2
						Break in branch	1
						Hole formed by split in branch	1
618	TQ2316615577	1	Oak	DC + JM	07.03.11	Rot hole	1
						Rot hole	1
620	TQ2317515582	3	Oak	DC + JM	07.03.11	Three woodpecker holes	3
						Woodpecker hole	3
						Woodpecker hole	3
621	TQ2317915592	1	Ash	DC + JM	07.03.11	Numerous holes on all sides caused by disease	1
622	TQ2298713236	1	Oak	DC + JM	07.03.11	Ivy covering	1
627	TQ2290213178	1	Willow	DC + JM	07.03.11	Split in trunk	1
628	TQ2292713184	2	Oak	DC + JM	07.03.11	Split and fold on underside of limb	2
629	TQ2294613212	3	Oak	DC + JM	07.03.11	Rot hole	2
						Rot hole leading to possible cavity	3
						Rot hole	1

Tree number	Grid Reference	Highest category of bat roosting potential	Species	Surveyor(s)	Date	Features with potential to support roosting bats	Category of bat roosting potential
						<i>Hole from broken branch</i>	2
						<i>Broken branch with possible hole</i>	1
630	TQ2295813226	2	Oak	DC + JM	07.03.11	<i>Gap where broken limb meets south eastern stem</i>	1
						<i>Hole formed from broken branch</i>	1
						<i>Hole at the elbow formed from broken branch</i>	1
						<i>Split in dead limb</i>	2
631	TQ2299313300	1	Oak	DC + JM	07.03.11	Flaking bark all over tree	1
						Two cavities	1
633	TQ2298013308	3	Willow	DC + JM	07.03.11	<i>Cavity in trunk</i>	1
						<i>Cavity in trunk</i>	3
						<i>Two woodpecker holes</i>	3
634	TQ2298213308	1	Willow	DC + JM	08.03.11	Rot hole on thin branch	1
635	TQ2297913320	3	Willow	DC + JM	08.03.11	<i>Three rot holes on trunk and thin branch</i>	2
						<i>Cavity into trunk where limb has snapped - 2.5m above stream surface</i>	3
						<i>Rot hole in main limb leading to cavity</i>	2

Tree number	Grid Reference	Highest category of bat roosting potential	Species	Surveyor(s)	Date	Features with potential to support roosting bats	Category of bat roosting potential
						<i>Woodpecker hole</i>	2
						<i>Woodpecker hole on broken branch</i>	3
						<i>Woodpecker hole leading to activity with staining</i>	3
						<i>Extra feature identified during climbing assessments. Rot hole on SW stem (1.5m above 2nd feature)</i>	N/A
640	TQ2288913387	3	Oak	DC + JM	08.03.11	<i>Large rot hole leading to cavity in trunk</i>	3
						<i>Extra feature: Small hole in trunk.</i>	1
						<i>Rot hole in trunk - HONEY BEE NEST!</i>	3
						<i>Flaking bark, splits and cavities on two dead limbs extending east</i>	1
						<i>Two cavities on dead branch</i>	1
						<i>Cavity formed from fallen stress limb</i>	3
642	TQ2284713622	1	Oak	DC + JM	08.03.11	<i>Splits at end of dead limb</i>	1
643	TQ2278013593	2	Oak	DC + JM	08.03.11	<i>Large rot hole from broken limb</i>	2
						<i>Rot hole on stump</i>	2
						<i>Small rot hole on elbow branch</i>	1

Tree number	Grid Reference	Highest category of bat roosting potential	Species	Surveyor(s)	Date	Features with potential to support roosting bats	Category of bat roosting potential
						<i>Extra feature identified during climbing - Rot cavity on W side of main limb, 4m above "V" (view from N side)</i>	
644	TQ2272813770	3	Oak	DC + JM	08.03.11	Two rot holes on dead branch	2
						Woodpecker hole at base of dead limb. Dead limb also has numerous splits in it	3
						Rot hole	2
						Rot hole	2
645	TQ2272413765	2	Oak	DC + JM	08.03.11	Splits along dead limb that curls upwards and to east	1
						Rot hole	2
						Extra feature: Crack	
646	TQ2271913762	1	Oak	DC + JM	08.03.11	Crack on underside of dead limb	1
						Split in dead limb	1
						Possible cavity at rot hole - rot hole has short dead limb extending upwards of east	1
647	TQ2262713979	1	Oak	DC + JM	08.03.11	Split from fallen limb	1
648	TQ2260914033	2	Oak	DC + JM	08.03.11	Rot hole close to where limb meets trunk	2

Tree number	Grid Reference	Highest category of bat roosting potential	Species	Surveyor(s)	Date	Features with potential to support roosting bats	Category of bat roosting potential
649	TQ2334915867	1	Oak	DC + JM	08.03.11	Splits in dead limbs	1
650	TQ2332715885	2	Ash	DC + JM	08.03.11	Cavity on trunk formed from rot hole	2
651	TQ2331815876	2	Ash	DC + JM	08.03.11	Cavity on trunk formed from rot hole	1
						Rot hole on branch elbow	1
						Rot hole on trunk	2
652	TQ2325815893	2	Oak	DC + JM	08.03.11	Snapped off limb with two gaps leading to cavity in dead wood	2
						Crack where vertical broken branch meets limb	2
654	TQ2339016387	2	Oak	DC + JM	08.03.11	Cavity on underside of limb	2
						Extra feature: N side of above branch - rot hole leading into cavity where dead branch comes out.	
655	TQ2338316387	1	Ash	DC + JM	08.03.11	Rot hole forming cavity	1
657	TQ2349116488	3	Oak	DC + JM	08.03.11	Hole in trunk leading to cavity	3
658	TQ2348416522	2	Oak	DC + JM	08.03.11	Rot hole on branch elbow	2
						Rot hole at end of branch	2

Tree number	Grid Reference	Highest category of bat roosting potential	Species	Surveyor(s)	Date	Features with potential to support roosting bats	Category of bat roosting potential
659	TQ2348216533	1	Oak	DC + JM	08.03.11	Cavity in dead broken limb on largest southern stem	1
						Cavity in dead broken limb on largest southern stem	1
660	TQ2348416551	1	Oak	DC + JM	08.03.11	Numerous crevices in limb at junction with trunk	1
661	TQ2349716552	2	Oak	DC + JM	08.03.11	Rot hole	2
						Cavity formed from split dead limb (branch is fallen, resting on other branches)	2
						Crack at end of limb	2
						Crack on dead limb stump	1
						Rot hole in trunk	2
						Cracks in dead limb	1
662	TQ2348716580	2	<i>Oak (rotten and dead)</i>	<i>DC + JM</i>	<i>08.03.11</i>	<i>Flaking bark - large bark plates</i>	2
663	TQ2349116605	2	<i>Oak (two stemmed)</i>	<i>DC + JM</i>	<i>08.03.11</i>	<i>Rot hole</i>	2
						<i>Split in limb on eastern stem</i>	2
						<i>Split in dead limb on western stem</i>	1

Tree number	Grid Reference	Highest category of bat roosting potential	Species	Surveyor(s)	Date	Features with potential to support roosting bats	Category of bat roosting potential
664	TQ2362016730	2	Oak	DC + JM	08.03.11	Cracks where dead limb meets trunk	2
666	TQ2395417047	3	Oak	DC + JM	08.03.11	Hole and split leading to cavity in side of limb	3
						Rot hole on underside of branch	1
667	TQ2397517155	1	Ash	DC + JM	08.03.11	Three rot holes on east extending limb	1
668	TQ2397317220	2	Oak	DC + JM	08.03.11	Lifted bark on trunk creating cavity	2
						Scar from broken branch	2
						Cracks in dead limb	1
669	TQ2396317343	3	Oak	DC + JM	08.03.11	Rot hole	2
						Scar from broken branch	1
						Rot hole leading to cavity	3
						Rot hole into cavity	3
						Rot hole	1
						Rot hole at elbow	1
						Cavity from broken branch at elbow	1
727	TQ2462619195	1	Oak	RM + JJ	10.03.11	Ivy covered - not dense	1
728	TQ2457719689	1	Oak	RM + JJ	10.03.11	Broken limb with cracks	1

Tree number	Grid Reference	Highest category of bat roosting potential	Species	Surveyor(s)	Date	Features with potential to support roosting bats	Category of bat roosting potential
808	TQ2460820405	3	Oak	RM + JJ	10.03.11	Large rot hole	3
						Small holes at the end of broken branch (constraint - Ivy and leaves)	1
						Loose bark on dead branch	1
812	TQ2460220264	2	Oak	RM + JJ	10.03.11	Hole in topside of dead limb	1
						Splits in base of branch where it meets trunk	1
						Possible holes in elbow of branch	1
						Branch with flaking bark	2
						Ivy - view obscured	1
818	TQ2460720399	3	Oak	RM + JJ	10.03.11	Hole / split under dead branch	3
						Rot hole	3
						Woodpecker hole	3
						Holes in dead branch	3
						Gappy branch around dead branch	1
						Split in underside of branch	1
838	TQ24727 20838	1	Oak	RM + JJ	10.03.11	Flaking bark with gap	1
NO TAG - next to 838	TQ24727 20838	1	Oak	RM + JJ	10.03.11	Rot hole where branch has broken off	1

Tree number	Grid Reference	Highest category of bat roosting potential	Species	Surveyor(s)	Date	Features with potential to support roosting bats	Category of bat roosting potential
840	TQ2441621056	1	Oak	RM + JJ	10.03.11	Mature ivy. Position of tree in hedgerow and leaves on tree obscuring full view	1
842	TQ2464120953	1	Oak	RM + JJ	10.03.11	Broken branch with hole	1
845	TQ2435021067	1	Oak	RM + JJ	10.03.11	Rot hole	1
847	TQ2443421056	1	Oak	RM + JJ	10.03.11	Hole in flaking bark	1
						Rot hole	1
848	TQ2443621056	1	Oak	RM + JJ	10.03.11	Mature ivy. Leaves on tree obscuring full view	1
849	TQ2464120953	1	Oak	RM + JJ	10.03.11	Split along dead branch	1
850	TQ2451121056	1	Oak	RM + JJ	10.03.11	Gap around rot hole	1
871	TQ2470921117	1	Oak (Double stemmed)	RM + JJ	11.03.11	Flaking bark around dead limb where it meets trunk	1
						Hole formed from broken branch	1
						Flaking bark around dead limb where it meets trunk	1
872	TQ2469821087	1	Oak	RM + JJ	11.03.11	Mature ivy	1
873	TQ2466021019	2	Oak	RM + JJ	11.03.11	Numerous splits in dead broken branch	1
						Rot hole	2
874	TQ2464120953	1	Oak	RM + JJ	11.03.11	Hole at the elbow of a dead branch	1
875	TQ2464120953	1	Oak	RM + JJ	11.03.11	Mature ivy. Position of tree in hedgerow and leaves on tree obscuring full view	1

Tree number	Grid Reference	Highest category of bat roosting potential	Species	Surveyor(s)	Date	Features with potential to support roosting bats	Category of bat roosting potential
877	TQ2475920951	3	Oak	RM + JJ	11.03.11	Dead limb attached to trunk with numerous splits in branch and trunk.	3
						Loose bark around cut branch	1
878	TQ2468920640	1	Oak	RM + JJ	11.03.11	Mature ivy	1
						Dead bark around dead limb	1
						Hole in dead branch	1
						Hole in dead branch	1
						Hole and split in dead branch	1
879	TQ2468920640	2	Oak	RM + JJ	11.03.11	Hole at the base of an upwards facing branch	1
						Gapping dead bark around branch	2
						2 holes in broken dead limb	1
1889	TQ32395717532	1	Eng. Oak	PB + JM	08.08.11	Flaking bark on dead limb	1
1888	TQ32395117498	1	Eng. Oak	PB + JM	08.08.11	Dead wood and flaking bark	1
1887	TQ32395017514	1	Eng. Oak	PB + JM	08.08.11	Dead wood and flaking bark	1
1886	TQ32393417577	2	Eng. Oak	PB + JM	08.08.11	Rot hole	1
						Two woodpecker holes - BEWARE HORNET NEST!	2
1885	TQ32393217577	1	Eng. Oak	PB + JM	08.08.11	Rot hole from fallen branch	1
1884	TQ32392317630	1	Eng. Oak	PB + JM	08.08.11	Rot hole from broken limb	1
1883	TQ32391317690	1	Eng. Oak	PB + JM	08.08.11	Flaking bark on dying limb	1
						*Restricted view of east side of the tree	
1882	TQ32388517787	1	Eng. Oak	PB + JM	08.08.11	Flaking bark of numerous dying limbs	1

Tree number	Grid Reference	Highest category of bat roosting potential	Species	Surveyor(s)	Date	Features with potential to support roosting bats	Category of bat roosting potential
1881	TQ42388417795	1	Eng. Oak	PB + JM	08.08.11	Split in broken limb	1
						Hole in limb formed from broken limb	1
						Gaps and holes in dead limb	1
1880	TQ52390017822	2	Eng. Oak	PB + JM	08.08.11	Hole in back or underside of limb	1
						Rot hole	2
						Flaking bark	1
1879	TQ323873175618	2	Eng. Oak	PB + JM	08.08.11	Rot hole from falling limb	2
			Tag is down low on west side.	PB + JM	08.08.11	Ivy obscuring view of large areas of tree	
1878	TQ42384217883	1	Eng. Oak	PB + JM	08.08.11	Hole from fallen limb	1
1877	TQ32384117891	2	Eng. Oak	PB + JM	08.08.11	Hole from fallen limb	2
1876	TQ42382617932	2	Eng. Oak	PB + JM	08.08.11	Hole from snapped limb	2
1875	TQ32412818136	1	Eng. Oak	PB + JM	08.08.11	Fallen limb	1
1874	TQ32406318161	1	Eng. Oak	PB + JM	08.08.11	Holes and split on underside of dead limb	1
1873	TQ52405518164	1	Eng. Oak	PB + JM	08.08.11	Rot hole	1
						3x Rot hole	1
1872	TQ32403218173	1	Eng. Oak	PB + JM	08.08.11	Split in branch	1
						Flaking bark	1
						Dense ivy in parts	1
						Lifted bark	1
1870	TQ42417218337	1	Eng. Oak	PB + JM	09.08.11	3x Split limbs	1

Tree number	Grid Reference	Highest category of bat roosting potential	Species	Surveyor(s)	Date	Features with potential to support roosting bats	Category of bat roosting potential
1869	TQ62414718317	3	Eng. Oak	PB + JM	09.08.11	Large split on underside of branch	3
						Woodpecker hole	3
						Hole at base of broken branch	1
1868	TQ6241398324	2	Eng. Oak	PB + JM	09.08.11	Split along the length of branch formed from broken branch	2
1867	TQ42406818260	1	Double stemmed english oak	PB + JM	09.08.11	Split formed from broken branch	1
1866	TQ32410118319	2	Oak	PB + JM	09.08.11	Split formed from broken branch	1
						Rot hole	2
1865	TQ2411418320	1	Oak	PB + JM	09.08.11	Split formed from snapped limb	1
1864	TQ2411718319	3	Ash (multi-stemmed)	PB + JM	09.08.11	3 Woodpecker holes on underside of branch	3
						Splits formed from broken branch	1
						Crack in fallen limb - limb being held up by stem	1
1863	TQ2413918332	2	Unknown	PB + JM	09.08.11	Fallen tree resting on hazel has hollow stem	2
1862	TQ2415118334	1	Unknown	PB + JM	09.08.11	Fallen tree resting on hazel has hollow stem	1
1861	TQ2415418340	2	Willow	PB + JM	09.08.11	Rot hole	2

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1859	TQ2404418433	1	Oak	PB + JM	09.08.11	Large cavity rot in main stem	1
1857	TQ2404118469	1	Oak	PB + JM	09.08.11	Flaking bark on limb	1
1858	TQ2404218476	1	Oak	PB + JM	09.08.11	Small hole in limb	1
1856	TQ2403418496	2	Oak	PB + JM	09.08.11	Hole where dead limb meets trunk	2
						Splits and flaking bark on dead end of trunk	1
						Extra feature: Lifted bark on dead vertical limb with cavities.	2
1855	TQ32404018514	2	Eng. Oak	PB + JM	09.08.11	2x Woodpecker hole on underside of branch	2
						Knot hole above woodpecker holes has small cavity around collar	1
1854	TQ32404018514	3	Eng. Oak	PB + JM	09.08.11	Rot hole on trunk	2
1853	TQ32404418428	1	Eng. Oak	PB + JM	09.08.11	Dead stump at top of trunk	2
1852	TQ32404418544	2	Eng. Oak	PB + JM	09.08.11	Rot hole on trunk	1
1851	TQ42404218579	2	Eng. Oak	PB + JM	09.08.11	Woodpecker hole and Rot cavities on dead limb near the top of the trunk	2
1850	TQ42405418647	1	Eng. Oak	PB + JM	09.08.11	Rot hole on trunk	2
1849	TQ62405218650	1	Eng. Oak	PB + JM	09.08.11	Ramshorn over rot hole	1
1848	TQ5240818853	1	Eng. Oak	PB + JM	09.08.11		1
1847	TQ32408718720	1	Eng. Oak	PB + JM	09.08.11	Hole formed from fallen branch	1

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1846	TQ32409518719	1	Eng. Oak	PB + JM	09.08.11	Two holes on broken and dead limb	1
NO TAG - COULD NOT ACCESS	TQ32417418845	1	Eng. Oak	PB + JM	09.08.11	Broken limbs with holes	1
1845	TQ32420818853	1	Eng. Oak	PB + JM	09.08.11	Hole formed from fallen branch	1
						Rot hole on branch	1
1843	TQ32426918937	3	Willow	PB + JM	10.08.11	Woodpecker hole	2
						Woodpecker hole	2
						Woodpecker hole	2
						Loose flaking bark over main stem up to 3m	1
						Large broken limb with cavity	2
						Rot hole	2
1842	TQ2429818898	1	Oak	PB + JM	10.08.11	Vertical splits - hardwood	1
						Gaps and holes under loose, lifted and decaying bark.	1
1840	TQ2430618847	2	Oak	PB + JM	10.08.11	Split in limb	1
						Ramshorn from fallen limb	1
						Rot hole from fallen branch	1
						Large rot hole from fallen limb	2
1839	TQ2430318882	1	Oak (stems)	PB + JM	10.08.11	Rot hole on middle trunk.	1
						Rot hole from fallen limb on S trunk	1

Tree number	Grid Reference	Highest category of bat roosting potential	Species	Surveyor(s)	Date	Features with potential to support roosting bats	Category of bat roosting potential
						Holes in limb underside of N trunk	1
1838	TQ2429518963	1	Oak	PB + JM	10.08.11	Two broken limbs	1
1837	TQ2434718969	2	Oak	PB + JM	10.08.11	Barn Owl in tree - flew off when approached; pellets under tree.	
						Rot hole from fallen limb	2
						Rot hole from cut limb	2
						Holes in bark of limb	1
1835	TQ2453219202	1	Unknown (dead)	PB + JM	10.08.11	Numerous splits in tree	1
1830	TQ2377218081	2	Oak	PB + JM	10.08.11	Splits in dead limbs	1
						Ramshorn from fallen limb	2
1834	TQ2377618068	1	Oak	PB + JM	10.08.11	Gaps formed from fallen limb	1
1832	TQ2377418072	1	Oak	PB + JM	10.08.11	Rot hole	1
1833	TQ2378318060	2	<i>Oak (multi-stemmed)</i>	<i>PB + JM</i>	<i>10.08.11</i>	<i>Rot hole</i>	2
						<i>Woodpecker hole</i>	2
						<i>Splits in dead limbs</i>	1
						<i>Rot hole</i>	1
						<i>Rot hole</i>	1
						<i>Rot hole</i>	1
1802	TQ2380518002	1	Oak	PB + JM	10.08.11	Rot hole	1
						Rot hole on branch underside	1
						Splits in dead limbs	1
						Splits at end of limb	1
1824	TQ2381117989	1	Oak	PB + JM	10.08.11	Split on dead limb	1
1831	TQ2386917986	1	Oak	PB + JM	10.08.11	Rot hole	1

Tree number	Grid Reference	Highest category of bat roosting potential	Species	Surveyor(s)	Date	Features with potential to support roosting bats	Category of bat roosting potential
1828	TQ2386417992	?	Oak	PB + JM	10.08.11	View of tree obscured by ivy	
1827	TQ2386717992	?	Oak	PB + JM	10.08.11	View of tree obscured by ivy	
1826	TQ2389117991	3	Oak	PB + JM	10.08.11	Holes on broken branch	1
						Rot hole on trunk	3
1829	TQ2390217992	2	Oak	PB + JM	10.08.11	Rot hole	2
						Broken limb	1
1814	TQ2391617998	1	Oak	PB + JM	10.08.11	Flaking bark	1
						Rot hole	1
						Rot hole from fallen limb	1
1813	TQ2392717995	3	Oak	PB + JM	10.08.11	Large split on underside of branch	3
						Crack from fallen limb	1
1812	TQ2395217999	1	Oak (multi-stemmed)	PB + JM	10.08.11	Small rot hole	1
1811	TQ2395518026	1	Oak	PB + JM	10.08.11	Ramshorn from fallen limb	1
1820	TQ2390618070	2	Oak	PB + JM	10.08.11	Barn Owl box in tree	
						2 Woodpecker holes ; 1 rot hole	2
						Rot hole	2
No Tag	TQ2396517966	1	Unknown (dead)	PB + JM	10.08.11	Flaking bark and holes from decay.	1
1817	TQ2396417986	2	Oak	PB + JM	10.08.11	Woodpecker hole	2
						Rot hole	2

Tree number	Grid Reference	Highest category of bat roosting potential	Species	Surveyor(s)	Date	Features with potential to support roosting bats	Category of bat roosting potential
						<i>Rot hole</i>	2
1808	TQ2396817995	1	Oak	PB + JM	10.08.11	Rot hole	1
1804	TQ2398717995	1	Oak	PB + JM	10.08.11	Hole in dead branch, possibly exposed at end of branch	1
1803	TQ2400218001	1	Unknown (dead)	PB + JM	10.08.11	Numerous holes and flaking bark	1
1807	TQ2401018004	2	Oak	PB + JM	10.08.11	Woodpecker hole	2
						<i>Split in dead limb</i>	1
1823	TQ2400818007	2	Oak	PB + JM	10.08.11	Gaps from snapped limb	2
1821	TQ2404117992	2	Oak	PB + JM	10.08.11	Holes formed from fallen limb	2
1801	TQ2404918008	2	Oak	PB + JM	10.08.11	Rot hole	1
						Rot hole	2
						<i>Extra feature observed while climbing: Small rot hole on N side of above feature.</i>	
1822	TQ2407118064	1	Oak	PB + JM	11.08.11	Rot holes on dying branch	1
						Dense ivy cover - could not fully inspect tree	1
1815	TQ2407618085	1	Oak	PB + JM	11.08.11	Rot hole	1
1816	TQ2406918107	2	Oak (2-stemmed)	PB + JM	11.08.11	Rot hole from fallen limb	1
						Woodpecker hole below snapped limb	2

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1809	TQ2407018110	2	Oak	PB + JM	11.08.11	Woodpecker hole	2
1806	TQ2406418135	2	Oak	PB + JM	11.08.11	Ramshorn with hole at bottom	2
1810	TQ2404918155	2	Oak	PB + JM	11.08.11	Rot hole	2
						Dense ivy in parts	1
1818	TQ2402118156	1	Oak	PB + JM	11.08.11	Rot hole	1
1805	TQ2401118154	3	Oak	PB + JM	11.08.11	Woodpecker hole	3
						Woodpecker hole	3
						Splits formed from fallen limb	1
1819	TQ2399918161	2	Oak	PB + JM	11.08.11	Flaking bark	1
						Gap around wound scar from fallen limb	1
						Woodpecker hole	2
No Tag	TQ2399818141	1	Unknown	PB + JM	11.08.11	Only Inspected E Side	
						Loose bark	1
						Numerous Woodpecker holes	1
No Tag	TQ2399018125	1	Unknown	PB + JM	11.08.11	Only Inspected E Side	
						Loose bark	1
1825	TQ2404518139	1	Oak	PB + JM	11.08.11	2 x Rot Holes	1
1187	TQ2404718138	1	Oak	PB + JM	11.08.11	Holes around scar of fallen limb	1
						Large rot hole	1
1174	TQ2400618164	1	Ash	PB + JM	11.08.11	Small rot hole	1

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499	TQ2405518140	2	<i>Beech (dead)</i>	PB + JM	11.08.11	3 Woodpecker holes	2
						Rot hole on tree	1
498	TQ2407318146	2	Oak	PB + JM	11.08.11	Woodpecker hole on dead branch	2
497	TQ2408718131	1	Oak	PB + JM	11.08.11	Dense ivy obscuring view of tree	1
496	TQ2409018133	2	<i>Oak</i>	PB + JM	11.08.11	Rot hole where trunk bends	2
						Rot hole on elbow of large vertical limb	2
495	TQ2409518134	1	Oak	PB + JM	11.08.11	Rot hole on dead branch	1
						Rot hole	1
493	TQ2410318120	1	Oak	PB + JM	11.08.11	Ramshorn formed from broken branch	1
492	TQ2411518124	1	Oak (dead)	PB + JM	11.08.11	Gaps where limb has fallen	1
No Tag	TQ2432518098	3	Oak	PB + JM	12.08.11	Not viewed from W side due to stream	
						Rot hole around broken branch	2
						Rot hole leads in; smooth edges	3
1900	TQ2468520458	1	Oak	AR + VG	24.03.11	Vertical split in dead branch	1
						Small hole on main trunk	1
1899	TQ2467320466	2	<i>Oak</i>	AR + VG	24.03.11	Triangle of 3 Woodpecker holes on W split of main stem	2
1898	TQ2466120455	2	Oak (dead)	AR + VG	24.03.11	Collar around dead branch with entrance into loose dead bark.	2

Tree number	Grid Reference	Highest category of bat roosting potential	Species	Surveyor(s)	Date	Features with potential to support roosting bats	Category of bat roosting potential
1897	TQ2465320438	1	Oak	AR + VG	24.03.11	Hole on elbow of dead branch (NW split of main stem)	1
						Vertical crack on dead branch just prior to split. On S split of main stem.	1
1896	TQ2465320438	2	<i>Oak</i>	AR + VG	24.03.11	<i>Woodpecker hole on end of pruned branch.</i>	2
1895	TQ2465320438	2	<i>Field Maple</i>	AR + VG	24.03.11	<i>Large vertical rot hole at base of tree extends upwards</i>	2
						<i>Rot hole</i>	1
1894	TQ2465320438	3	<i>Oak</i>	AR + VG	24.03.11	<i>Hole on underside of branch</i>	1
						<i>Large woodpecker hole on W branch from main trunk</i>	3
969	TQ2143611389	2	Ash	AR	15.08.11	Extensive vine coverage	1 to 2
948	TQ2148311366	2	<i>Ash (looks diseased)</i>	AR	15.08.11	<i>Rot hole on W side of trunk (path side)</i>	2
						<i>Rot hole</i>	1
951	TQ2147811344	2	<i>Ash</i>	AR	15.08.11	<i>Rot hole on N stem</i>	2
						<i>A number of small holes on the S stem, particularly on the S side.</i>	1

Note. Sections of the above table have been highlighted to indicate the following:

1. Italic text indicates that trees were climbed following the ground level tree assessments

APPENDIX C – TREE CLIMBING SURVEY DATA

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Tree number	Features with potential to support roosting bats	Category of BRP from ground	Category of BRP when climbed	Surveyor	Date	Notes	Fully inspected (Y/N)	Evidence of Bats (Y/N)	Emergence Survey Required?
518	Small hole / broken bark	1	1	RM + AR + SW	04.07.11		Y	N	Yes
	Large rot hole leading to hollow trunk	3	2			Hole damp with cobwebs and insects. Too low to ground to be classed as 3.	Y	N	
	Large rot hole leading to hollow trunk - HORNETS!	3				Active hornets nest flying around hole and tree. Unsafe to climb (bats could still use hole if hornets moved out in the future).			
	Woodpecker hole	2				Unsafe to climb			
	Woodpecker hole	2				Unsafe to climb			
	Fallen limb scar	1				N/A			
521	Large split / cavity extending upward	3	2	RM + AR + SW	04.07.11	Dense cobwebs and slugs - lots of debris. Extends in 40cm.	Y	N	No
522	Large cavity extends upwards	3	3	RM + AR + SW	04.07.11	Damp cavity with mushrooms and flied. No evidence but could not see the end of cavity. Extends at least 1m up tree.	N	N	No
523	Large cavity in main trunk	3	3	JP + SW	04.07.11	Birds nest in hole. Smooth and dry within. Extends further up hole than could be fully inspected (at least 1m).	N	N	No
524	Large cavity in main trunk	3	2	JP + SW	04.07.11	Leads up into woodpecker hole.	Y	N	No
	Woodpecker hole (midde) - (new feature identified during climbing)	N/A	1				Y	N	

Tree number	Features with potential to support roosting bats	Category of BRP from ground	Category of BRP when climbed	Surveyor	Date	Notes	Fully inspected (Y/N)	Evidence of Bats (Y/N)	Emergence Survey Required?
	Woodpecker hole (top)	3	1				Y	N	
	Woodpecker hole (bottom)	2	2	JP + SW	04.07.11	Extends into feature at base - doesn't go up any further.	Y	N	
525	Large cavity in main trunk	3	3	JP + SW	04.07.11	Sheltered, large cavity. Extends in 80cm.	Y	N	No
527	Large cavity in main stem - low entrance	3	3	JP + SW	04.07.11	Large cavity in trunk. Extends upwards, but could not see end. No evidence and damp.	N	N	No
530	Woodpecker hole	3	0	JP + SW	04.07.11		Y	N	No
536	Woodpecker hole	3	0	RM + AR	04.07.11	Cavity doesn't lead anywhere. Exposed.	Y	N	No
	Woodpecker hole	3	0			Connected to hole above. A nest of leaves (possibly birds nest) blocking entrance. Does not extend sown.	Y	N	
	Woodpecker hole	3	3			No evidence of bats, but extends upwards.	Y	N	
537	Woodpecker hole	3	2	RM + AR	04.07.11	Extends in approx 10cm, and 10cm down. Damp cavity with woodlice.	Y	N	No
	Woodpecker hole	3	2			Extends down (approx 15cm) , but not upwards. Clear hole with feathers, so likely used as bird roost.	Y	N	
	Woodpecker hole	3	2			Extends down approx 15cm into hollow trunk, but not up. Holw clear, but with woodlice and recent evidence of birds.	Y	N	
	Large vertical split in main stem	2	2			Extends upwards and downwards (unknown height). Cannot fully inspect with endoscope. Clear hole but used by slugs.	N	N	
540	Six woodpecker holes - may all enter same cavity	3	1 and 2	RM + AR	04.07.11	Hole at bottom extends down, but not up (cat 2); Next 2 holes are shallow, not extending up or down (Cat 1). Next 2 holes go right through the tree (can see daylight).	Y	N	No
551	Large 2m fallen limb scar that extends into hollow stem upward	3	3	RM + AR + SW	04.07.11	Two holes. Large hole (unknown depth) leads into left split trunk. Smaller hole leads into cavity. Cannot examine full extent of either hole.	N	N	No

Tree number	Features with potential to support roosting bats	Category of BRP from ground	Category of BRP when climbed	Surveyor	Date	Notes	Fully inspected (Y/N)	Evidence of Bats (Y/N)	Emergence Survey Required?
	Woodpecker hole	3	3			Leads approx 20cm into hollow and up into woodpecker hole. Possibly used by Green Woodpecker (clean with bird droppings and Green Woodpecker seen nearby at time of survey).	Y	N	
	Woodpecker hole	3	3			Extends down approx 20cm. Clean, clear and no cobwebs, but with bird droppings.	Y	N	
568	West limb			RM + AR + SW + JP	06.07.11				No
	Dead limb hanging down	2	1			Does not extend into cavity.	Y	N	
	Split in main limb	2	1			Split extends downwards, so will get wet.	Y	N	
	North West limb								
	Rams horn with internal decay and rot hole at top	1	0				Y	N	
	Main stem								
	Rot hole (top)	1	0			No hole	Y	N	
	2 Rot holes (bottom)	1	0			No hole	Y	N	
	Woodpecker hole (west split)	3	2			Hole extends in approx 8cm.	Y	N	
	Woodpecker hole	3	2			Does not extend upwards, but extends in approx 20cm.	Y	N	
	Woodpecker hole	3	2			Does not extend upwards, but extends in approx 20cm.	Y	N	
	5 woodpecker holes possibly connected to rot hole (top) by internal cavity	3	3				N	N	
	South limb								
	Rot hole	2	0				Y	N	
	Rot hole	2	2			Hole extends 10cm into hollow branch.	Y	N	

Tree number	Features with potential to support roosting bats	Category of BRP from ground	Category of BRP when climbed	Surveyor	Date	Notes	Fully inspected (Y/N)	Evidence of Bats (Y/N)	Emergence Survey Required?
	Woodpecker hole at broken limb at base that extends west	1	1			Does not extend into cavity (shallow, 5cm deep).	Y	N	
570	Cracked main stem with horizontal split - needs further inspection	2	2	SW + JP	06.07.11	Extends in approx 10cm. Good feature surrounded with some additional Cat 1 features.	Y	N	No
572	South side			BL + AR	27.07.11				No
	Broken dead limb with woodpecker holes	2	3			Main feature past woodpecker hole (which is exposed) extend up approx 20cm into pockets suitable for roosting bats.	Y	N	
	Three woodpecker holes on main stem	2	Lower two (Cat 1); Upper (0)			Lower 2 woodpecker holes do not extend far, but suitable cavity for individual bats	Y	N	
	Rot hole from broken limb	2	1			Upper entrance leads into small cavity suitable for individual bats (bird feathers noted)	Y	N	
	West side								
	Ram horn split running length of main stem and up limb	1							
	Rot hole from broken limb	2				Could not find feature on tree			
	Dying back limb with rot holes	1							
	North side								
	Main stem cavity extending upwards	1	2			Two cavities extend up approx 20cm along trunk. Start height of cavity entrance 4m. Difficult to inspect upper parts of crevice.	N	N	
573	North side			BL + AR	27.07.11				Yes

Tree number	Features with potential to support roosting bats	Category of BRP from ground	Category of BRP when climbed	Surveyor	Date	Notes	Fully inspected (Y/N)	Evidence of Bats (Y/N)	Emergence Survey Required?
	Borken main stem may have cavities extending into south facing limb	2	N/A			Inaccessible (could not obtain high enough anchor point to climb)			
	Broken limb with rot cavity	2	N/A			Inaccessible (could not obtain high enough anchor point to climb)			
	West side								
	Broken limb with large cavity exposed at entrance	2	3			Extends up branch at least 0.5m; south-facing entrance.	N	N	
	Rot hole in main stem that extends into central cavity	1	0			Shallow; doesn't extend in very much.	Y	N	
	Extra feature: Rot hole on top side of western extending branch, close to above feature.	1	0			Shallow; doesn't extend in very much.	Y	N	
	East side								
	Small rot hole on main stem	1							
574	East side			BL + AR	27.07.11				No
	Rot hole	3	3			Extends up into hollowed out limb; bird's nest.	Y	N	
	Hollowed out branch		1				Y	N	
	Woodpecker hole	2	2			Extends upwards 10cm.	Y	N	
	Woodpecker hole	2	0			Doesn't extend in very far	Y	N	
	Woodpecker hole	2	0			Doesn't extend in very far	Y	N	
	North side								
	Rot cavity	2	2			2 cavities leading off underneath bowl, extend upwards approx 10cm - high density of cobwebs at time of inspection. Unable to inspect fully with endoscope.	N	N	
	6 woodpecker holes including top fork and N limb	2	0			Doesn't extend in very far	Y	N	

Tree number	Features with potential to support roosting bats	Category of BRP from ground	Category of BRP when climbed	Surveyor	Date	Notes	Fully inspected (Y/N)	Evidence of Bats (Y/N)	Emergence Survey Required?
	Rot hole from broken limb - large	1							
	Rot hole from broken limb - small at end of branch	1							
576	Woodpecker hole - possibly unsheltered	1		BL + AR	28.07.11				No
	6 woodpecker holes	2	0				Y	N	
	Broken limb with rot cavity	1	0				Y	N	
	2 woodpecker holes on main stem	2				Unable to find on tree			
	Rot hole on southern dead limb	1	2			Extends 10cm horizontally, then 7cm up. Full of cobwebs.	Y	N	
	Rot hole at end of broken southern limb	2	1			Extends in horizontally approx 0.75m - few cavities quite exposed - potential night roost.	Y	N	
	Rot hole at end of broken southern limb	2	0				Y	N	
577	Dead Vertical Stem			BL + AR	28.07.11				Yes
	Large rot hole at top of rams horn	2	2			Hollow to top but suitable crevices that offer suitable shelter for individual bats. Bird nest noted.	N	N	
	Rot hole and cavity from fallen limb	3				Inaccessible			
	Small Northern side stem								
	Rot hole and cavity from fallen limb	2	0			Does not extend far enough	Y	N	
	Largest stem								
	Broken limb	2	2			Extends inwards 0.5m - high density cobwebs. Horizontal cavity.	Y	N	

Tree number	Features with potential to support roosting bats	Category of BRP from ground	Category of BRP when climbed	Surveyor	Date	Notes	Fully inspected (Y/N)	Evidence of Bats (Y/N)	Emergence Survey Required?
	Fallen limb resting on above feature	2	1			Can see hollow - some crevices along edge for individual bats.	Y	N	
	Rot hole on elbow of limb	1	3			1m long. Sheltered and suitable for bats, but no evidence.	Y	N	
	Rot hole from fallen limb - may lead to feature below	2	0				Y	N	
	Rot hole in limb	2	3			Lots of cobwebs noted at time of inspection. Cavity extends in 40cm, then curves around and extends upwards. Could not fully inspect with endoscope.	N	N	
	Rot hole on main stem	1	2			Extends inwards 20cm horizontally, then goes upwards approx 5cm creating suitable crevices for small number of bats.	Y	N	
578	Ivy cover	1		RM + AR	06.07.11				No
	Woodpecker hole on main stem	2	0			Shallow hole (4cm), no BRP.	Y	N	
	Rot hole - possibly too exposed	1							
	Rot hole - possibly too exposed	1							
	Woodpecker hole in main stem next to rot hole - probably exposed	3	3			6cm x 9cm hole leads into 20cm x 20cm chamber - very damp and sub-optimal for bats (Cat 1). There is another 6cm x 6cm hole extending upwards from this chamber into main trunk (Cat 3).	N	N	
588	Woodpecker hole	2	0	BL + AR	25.07.11	Shallow - doesn't go anywhere	Y	N	No
	Dead limb - possibly exposed	1							

Tree number	Features with potential to support roosting bats	Category of BRP from ground	Category of BRP when climbed	Surveyor	Date	Notes	Fully inspected (Y/N)	Evidence of Bats (Y/N)	Emergence Survey Required?
	Large rot hole on W side of S limb. Cavity extends up inside of trunk and beyond length of endoscope. Cavity full of clutter and not currently being used by bats.	2	N/A			Inspected from ground	N	N	
	Rot hole with included cavity	1							
604	Small dead branch on main limb with flaking bark and rot hole	1	0	JP + SW	06.07.11	Unsuitable	Y	N	No
	Rot hole into central cavity	2	1				Y	N	
	Large cavity extending up entire eastern limb - multiple features within cavity	2	1				Y	N	
	Large 2m split in main stem	3	0			Large , open and exposed with old bird nest. Unsuitable.	Y	N	
	Three dead limbs extending west all with horizontal splits	1							
	Rot hole	2							
	Three rot holes on eastern stem	2							
629	Rot hole	2	2	RM + SP + JP	18.07.11	Possible staining. Extends in approx 30cm.	Y	?	Yes
	Rot hole leading to possible cavity	3	1			Not extensive hole - narrows off.	Y	N	
	Rot hole	1	1				Y	N	
	Hole from broken branch	2	2			Leads in. No evidence. Dry.	Y	N	
	Broken branch with possible hole	1	1				Y	N	

Tree number	Features with potential to support roosting bats	Category of BRP from ground	Category of BRP when climbed	Surveyor	Date	Notes	Fully inspected (Y/N)	Evidence of Bats (Y/N)	Emergence Survey Required?
630	Gap where broken limb meets south eastern stem	1	1	SP + AR	14.09.11	Mostly too open and exposed to support roosting bats. However, two smaller cavities within the split are suitable for individual bats. Cavety full of cobwebs.	Y	N	No
	Hole formed from broken branch	1							
	Hole at the elbow formed from broken branch	1							
	Split in dead limb	2							
633	Cavity in trunk	1	?	RM + SP + JP	18.07.11	?			
	Cavity in trunk	3	?			?			
	Two woodpecker holes	3	?			?			
635	Three rot holes on trunk and thin branch	2	0	RM + SP + JP	18.07.11	Flaking bark; does not extend into cavity to provide enough shelter for bats.	Y	N	No
	Cavity into trunk where limb has snapped - 2.5m above stream surface	3	3			Extends in approx 20 - 25cm. Sheltered, dark and protected. Quite extensive cobwebs.	Y	N	
	Rot hole in main limb leading to cavity	2	1			Only extends in 5cm.	Y	N	
	Woodpecker hole	2	0			Does dot extend in.	Y	N	
	Woodpecker hole on broken branch	3	1			Only extends in approx 6cm.	Y	N	
	Woodpecker hole leading to activity with staining	3	1			Only extends in approx 6-7cm.. Staining just water run-off mixed with sap / mud.	Y	N	
	Extra feature identified during climbing assessments. Rot hole on SW stem (1.5m above 2nd feature)	N/A	1			Does dot extend in very far.	Y	N	

Tree number	Features with potential to support roosting bats	Category of BRP from ground	Category of BRP when climbed	Surveyor	Date	Notes	Fully inspected (Y/N)	Evidence of Bats (Y/N)	Emergence Survey Required?
640	Large rot hole leading to cavity in trunk	3	1	RM + JP	18.07.11	Wet with birds nest	Y	N	No
	Extra feature: Small hole in trunk.	1	1				Y	N	
	Rot hole in trunk - HONEY BEE NEST!	3				Bees nest still active.			
	Flaking bark, splits and cavities on two dead limbs extending east	1							
	Two cavities on dead branch	1							
	Cavity formed from fallen stress limb	3				Bees entering on both sides of trees through cavity.	Y	N	
643	Large rot hole from broken limb	2	0	RM + SW + AR	07.07.11		Y	N	No
	Rot hole on stump	2	0				Y	N	
	Small rot hole on elbow branch	1	N/A						
	Extra feature identified during climbing - Rot cavity on W side of main limb, 4m above "V" (view from N side)		2			4cm x 10cm opening leads to cavity 20cm deep. Extends up into branch so cannot see full extent. No evidence of bats.	N	N	
644	Two rot holes on dead branch	2	2	AR + BL	11.07.11	Extends upwards approx 20cm - quite exposed. Height / width 5cm. Another hole on other side increases exposure of cavity. No evidence of staining / rubbing etc.	N	N	No
	Woodpecker hole at base of dead limb. Dead limb also has numerous splits in it	3	0			Not fully formed holes. Not a suitable feature for roosting bats.	Y	N	

Tree number	Features with potential to support roosting bats	Category of BRP from ground	Category of BRP when climbed	Surveyor	Date	Notes	Fully inspected (Y/N)	Evidence of Bats (Y/N)	Emergence Survey Required?
	Rot hole	2	0			Unsuitable depth.	Y	N	
	Rot hole	2	0			Doesn't lead into suitable cavity for roosting bats. Open and exposed - does have lifted bark adjacent.	Y	N	
645	Splits along dead limb that curls upwards and to east	1		AR + BL	11.07.11				No
	Rot hole	2	0			Insufficient depth to support roosting bats.	Y	N	
	Extra feature: Crack		2			4cm x 20cm opening leads to cavity 10cm deep.	Y	N	
648	Rot hole close to where limb meets trunk	2	1	RM + JP	18.07.11	Not extensive	Y	N	No
651	Cavity on trunk formed from rot hole	1		BL + AR	12.07.11				No
	Rot hole on branch elbow	1							
	Rot hole on trunk	2	0			3cm x 3cm opening leads to cavity 5cm deep. Cavity doesn't extend upwards and is open to wind and rain. Does not offer sufficient protection or shelter for significant bat roost.	Y	N	
652	Snapped off limb with two gaps leading to cavity in dead wood	2		BL + AR	12.07.11	Power cables within 15m of tree base. Recommend emergence survey based on quality of features.			Yes
	Crack where vertical broken branch meets limb	2							
654	Cavity on underside of limb	2	1	BL + AR	12.07.11	Only big enough for individual bats. Type of rot cavity may extend in future. Deepest section 5-6cm.	Y	N	No
	Extra feature: N side of above branch - rot hole leading into cavity where dead branch comes out.		3			Cannot fully inspect	N	N	
657	Hole in trunk leading to cavity	3	1	BL + AR	12.07.11	Very small cavity - big enough for individual bat where small	Y	N	No

Tree number	Features with potential to support roosting bats	Category of BRP from ground	Category of BRP when climbed	Surveyor	Date	Notes	Fully inspected (Y/N)	Evidence of Bats (Y/N)	Emergence Survey Required?
						area extends upwards.			
662	Flaking bark - large bark plates	2	3	BL + AR	12.07.11	Partially inspected with endoscope - good sized cavities behind bark. Would not be fully inspected. Key area with roosting potential. Bat dropping found on east face. Potential for Barbastelle.	N	Y	Yes
663	Rot hole	2	0	BL + AR	12.07.11	Doesn't lead anywhere. No suitable crevices.	Y	N	No
	Split in limb on eastern stem	2	0			Very small cavities at extreme ends of crack - too open and exposed to elements to provide suitable roosting locations.	Y	N	
	Split in dead limb on western stem	1							
664	Cracks where dead limb meets trunk	2	1	BL + AR	26.07.11	Cracks / holes don't lead to extensive enough cavities to offer support / protection for larger numbers of bats. Potential for additional features to develop within 2 years.	Y	N	No
666	Hole and split leading to cavity in side of limb	3	2	BL + AR	26.07.11	No evidence of bats found. Suitable crevices for 5+ bats / small maternity.	Y	N	No
	Rot hole on underside of branch	1	0			Not suitable for roosting bats - insufficient depth / protection from elements	Y	N	
669	Rot hole	2	1	BL + AR	26.07.11	Cavity extends downwards - extends in approx 20cm. Similar feature adjacent to it NNW.	Y	N	No
	Scar from broken branch	1							
	Rot hole leading to cavity	3	1			Start of birds nest. Extends into trunk 25cm - quite exposed to elements.	Y	N	
	Rot hole into cavity	3	2			Extends upwards 17cm at top of feature.	Y	N	
	Rot hole	1							
	Rot hole at elbow	1							
	Cavity from broken branch at	1							

Tree number	Features with potential to support roosting bats	Category of BRP from ground	Category of BRP when climbed	Surveyor	Date	Notes	Fully inspected (Y/N)	Evidence of Bats (Y/N)	Emergence Survey Required?
	elbow								
808	Large rot hole	3	1	RM + JP	22.07.11	Not very extensive	Y	N	No
	Small holes at the end of broken branch (constraint - Ivy and leaves)	1							
	Loose bark on dead branch	1							
812	Hole in topside of dead limb	1		RM + JP	22.07.11				No
	Splits in base of branch where it meets trunk	1							
	Possible holes in elbow of branch	1							
	Branch with flaking bark	2	0				Y	N	
	Ivy - view obscured	1							
818	Hole / split under dead branch	3	1	RM + JP	22.07.11	Not very extensive	Y	N	No
	Rot hole	3	1			Not very extensive	Y	N	
	Woodpecker hole	3	1			Only extends 4cm into tree, not extending up or down.	Y	N	
	Holes in dead branch	3	0			Not holes, just holes in bark	Y	N	
	Gappy branch around dead branch	1							
	Split in underside of branch	1							
877	Dead limb attached to trunk with numerous splits in branch and trunk.	3	3	BL + AR	28.07.11	Extensive cavity starting at base and leading all the way up where hartwood exposed. Cavity between bark and hartwood. Bat dropping found at entrance to feature 9m up.	N	Y (bat dropping)	Yes
	Loose bark around cut branch	1							
1879	Rot hole from falling limb	2	2	BL + AR	22.08.11	Extends up approx 5-6 cm (2-3cm wide)	Y	N	No
	Ivy obscuring view of large								

Tree number	Features with potential to support roosting bats	Category of BRP from ground	Category of BRP when climbed	Surveyor	Date	Notes	Fully inspected (Y/N)	Evidence of Bats (Y/N)	Emergence Survey Required?
	areas of tree								
1877	Hole from fallen limb	2	1	BL + AR	22.08.11	Extends up approx 10 cm.	Y	N	No
1869	Large split on underside of branch	3	2	AR + BL	27.09.11	Cavity extends longitudinally 10 cm both directions - central part is very open to weather - 10cm x 15 cm	Y	N	No
	Woodpecker hole	3	3			Goes upwards 25cm and downwards 25cm. Feathers noted at base.	Y	N	
	Hole at base of broken branch	1	1			Hole goes down to birds nest	Y	N	
1868	Split along the length of branch formed from broken branch	2	1	AR + BL	27.09.11	Majority of split too enclosed for bats to enter, but section of split nearer trunk suitable for individual bats	Y	N	No
1866	Split formed from broken branch	1							
	Rot hole	2	0	SP + AR	12.09.11	Does not extend in	Y	N	No
1864	3 Woodpecker holes on underside of branch	3	1 (lowest); 0 (highest 2)	AR + BL	27.09.11	Highest 2 - no depth for roosting bats; Lowest hole - extends upwards 5-6cm, damp inside, water staining suggests regularly wet.	Y	N	No
	Splits formed from broken branch	1							
	Crack in fallen limb - limb being held up by stem	1							
1863	Fallen tree resting on hazel has hollow stem	2	2	AR + BL	27.09.11	Too long to fully inspect	N	N	No
1861	Rot hole	2	2	SP + AR	12.09.11	Slugs in cavity. Extends up approx 30cm.	Y	N	No
1856	Hole where dead limb meets trunk	2	1	AR + BL	19.08.11	May get individual bats where bark folds over, although probably only on a transient basis.	Y	N	No

Tree number	Features with potential to support roosting bats	Category of BRP from ground	Category of BRP when climbed	Surveyor	Date	Notes	Fully inspected (Y/N)	Evidence of Bats (Y/N)	Emergence Survey Required?
	Splits and flaking bark on dead end of trunk	1							
	Extra feature: Lifted bark on dead vertical limb with cavities.	2	2			Unable to fully inspect an inaccessible for climbing (limnb is dead)	N	N	
1855	2x Woodpecker hole on underside of branch	2	1	AR + BL	19.08.11	Top woodpecker hole = category 0 (shallow) Bottom woodpecker hole = category 1(Extends up into small cavity)	Y	N	No
	Knot hole above woodpecker holes has small cavity around collar	1	1			Cavity quite shallow. Also quite large cavity at base of knot hole, extends downwards approx 20cm, but this is too exposed for bats. Evidence of nesting birds.	Y	N	
1854	Rot hole on trunk	2	0	AR + BL	19.08.11	Only extends upwards 2cm - 3cm. Too open and exposed to be suitable for bats.	Y	N	No
1852	Rot hole on trunk	1	1	AR + BL	19.08.11	Hole is approximately with a few additional cavities, big enough for individual bats.	Y	N	No
1843	Woodpecker hole	2	1	SP + AR	16.09.11	Extends in approx 6 inches (not upwards or downwards).	Y	N	No
	Woodpecker hole	2	1			Extends in approx 4 inches (not up or down)	Y	N	
	Woodpecker hole	2	0			Does not extend in very far	Y	N	
	Loose flaking bark over main stem up to 3m	1							
	Large broken limb with cavity	2	0			Does not go anywhere	Y	N	
	Rot hole	2	2			Extends up a fair way - longer than the endoscope extends, but narrows significantly towards the end and is cluttered with cobwebs and debris.	Y	N	
1833	Rot hole	2	0	AR + SP	07.09.11		Y	N	No
	Woodpecker hole	2	2			Contains old mammal nest - extends down approx 20cm. Sheltered.	Y	N	
	Splits in dead limbs	1							

Tree number	Features with potential to support roosting bats	Category of BRP from ground	Category of BRP when climbed	Surveyor	Date	Notes	Fully inspected (Y/N)	Evidence of Bats (Y/N)	Emergence Survey Required?
	Rot hole	1							
	Rot hole	1							
	Rot hole	1							
1826	Holes on broken branch	1		AR + SP	07.09.11				No
	Rot hole on trunk	3	3			Contained birds nest. Cavity extends up over 40cm into trunk - beyond length of endoscope.	N	N	
1829	Rot hole	2	0	AR + SP	07.09.11	Not extensive	Y	N	No
	Broken limb	1							
1813	Large split on underside of branch	3	2	AR + SP	07.09.11	Extends up further than endoscope reaches (over 40cm). No evidence but possible staining (could simply be water staining).	N	N	No
	Crack from fallen limb	1							
1817	Woodpecker hole	2	2	SP + AR	17.09.11	Extends down to cavity (approx 20cm) with debris at the base.	Y	N	No
	Rot hole	2	2			Hole contains leaves and is open at the base, but is sheltered in the middle section and the arm.	Y	N	
	Rot hole	2	0			Does not extend in	Y	N	
1807	Woodpecker hole	2	2	SP + AR	17.09.11	Hole extends down with cobwebs and birds nest.	Y	N	No
	Split in dead limb	1							
1823	Gaps from snapped limb	2	1	SP + AR	17.09.11	Small hole with cobwebs and bird droppings.	Y	N	No
1821	Holes formed from fallen limb	2	1	SP + AR	17.09.11	Hole only extends in a few inches.	Y	N	No
1801	Rot hole	1		SP + AR	17.09.11				No
	Rot hole	2	0			Does not extend in.	Y	N	
	Extra feature observed while climbing: Small rot hole on N side of above feature.		2			Extends in a short way.	Y	N	
1816	Rot hole from fallen limb	1	0	SP + AR	14.09.11	Does not extend in.	Y	N	No

Tree number	Features with potential to support roosting bats	Category of BRP from ground	Category of BRP when climbed	Surveyor	Date	Notes	Fully inspected (Y/N)	Evidence of Bats (Y/N)	Emergence Survey Required?
	Woodpecker hole below snapped limb	2	0			Does not extend in.	Y	N	
1809	Woodpecker hole	2	3	AR + SP	14.09.11	Hole extends upwards and downwards. Cannot fully inspect with endoscope because of tight corners. Old nuthatch nest in hole.	N	N	No
1806	Ramshorn with hole at bottom	2	0	AR + SP	08.09.11	Does not extend in.	Y	N	No
1810	Rot hole	2	1	AR + SP	08.09.11	No extensive - goes down slightly	Y	N	No
	Dense ivy in parts	1							
1805	Woodpecker hole	3	2	AR + SP	08.09.11	Goes in and down slightly	Y	N	No
	Woodpecker hole	3	1			Not extensive	Y	N	
	Splits formed from fallen limb	1							
499	3 Woodpecker holes	2	0	AR + SP	08.09.11	All WP holes Cat 0. Bird dropping found at base of hole. Feature itself extends up tree into open hole and is exposed to wind and rain.	Y	N	No
	Rot hole on tree	1							
496	Rot hole where trunk bends	2	1	AR + SP	14.09.11	Extends in slightly, but is quite wet and exposed.	Y	N	No
	Rot hole on elbow of large vertical limb	2	2			Extends in approx 20cm - evidence of recent bird roost.	Y	N	
1899	Triangle of 3 Woodpecker holes on W split of main stem	2	1	SP + AR	15.09.11	Top hole Cat 1. Other holes Cat 0.	Y	N	No
1896	Woodpecker hole on end of pruned branch.	2	1	SP + AR	15.09.11	Extends in approx 20cm	Y	N	No
1895	Large vertical rot hole at base of tree extends upwards	2	2	SP + AR	15.09.11	Hole extends very far up tree - more than the length of endoscope allows to inspect. Mammal nest at base.	N	N	No
	Rot hole	1							
1894	Hole on underside of branch	1	1	SP + AR	13.09.11	Old squirrel cache of acorns. Three holes all lead into the same cavity so is fairly open and exposed.	Y	N	No

Tree number	Features with potential to support roosting bats	Category of BRP from ground	Category of BRP when climbed	Surveyor	Date	Notes	Fully inspected (Y/N)	Evidence of Bats (Y/N)	Emergence Survey Required?
	Large woodpecker hole on W branch from main trunk	3							
948	Rot hole on W side of trunk (path side)	2	1	SP + AR	15.09.11	Extends up approx 20cm - long but very narrow. Full of cobwebs and debris.	Y	N	No
	Rot hole	1							
951	Rot hole on N stem	2	1	SP + AR	15.09.11	Extends up approx 5 - 6 inches. Quite narrow and full of cobwebs.	Y	N	No
	A number of small holes on the S stem, particularly on the S side.	1							

***APPENDIX D – AUTOMATED BAT ACTIVITY RESULTS FROM JULY
AND AUGUST***

APPENDIX D – AUTOMATED BAT ACTIVITY RESULTS FROM JULY AND AUGUST

Location	Date	Bat Species Recorded									
		Pip40	Pip40/45	Pip45	Pip45/55	Pip55	Nyc/Ept	Myotis	Myo/BLE	BLE	Bb
5	26/7/11			2	64	4	5	38			
	27/7/11			2	37	1	7	16	2		
	28/7/11			1	43	1	3	2	2		
6	26/7/11				309	8	23	5	33		
	27/7/11				213	3	7	2	40		
	28/7/11				51	6	7		5		1
8	26/7/11				42	2	4	6	5		3
	27/7/11				32		1	6	6		2
	28/7/11				38	1	3		5		
9	26/7/11				224		2	1	2		
	27/7/11				293			4			
	28/7/11			1	85			2			1
11	26/7/11	3			116	2	32	30	28		
	27/7/11		1		97		223	63	17	9	3
	28/7/11				56		10	10	3	9	2
12	26/7/11				40		9	31	2	5	1
	27/7/11				34		9	68	1	7	1
	28/7/11				23	1	4	9	3	5	
13	26/7/11				11		4	3	5	4	
	27/7/11				13		1	7	5	1	
	28/7/11				12		1	10	3		

Location	Date	Bat Species Recorded									
		Pip40	Pip40/45	Pip45	Pip45/55	Pip55	Nyc/Ept	Myotis	Myo/BLE	BLE	Bb
14	26/7/11			280		86	5	202	35	2	
	27/7/11		1	174	2	43	10	208	20	4	
	28/7/11			117	3	22	13	126	5	5	
15	29/7/11			228	1	6	18	83	2		
	30/7/11			210	3	33	7	123	4		
	31/7/11			78	1	11	1	16	3	1	
16	8/8/11			22		2	6				
	9/8/11			30		4	6				
	10/8/11			88		5	4				
17	8/8/11			163		150	7	2			
	9/8/11			11	1	7	5				
	10/8/11			428		438	5				
19	29/7/11			14		13	18	1			
	30/7/11			8		9		2	1	1	
	31/7/11			5		9	3		4		
20	29/7/11			9		6	2	4			
	30/7/11			105	4	35					
	31/7/11			120		4	1		1		
21	29/7/11			7			2				
	30/7/11			110		3		1			
	31/7/11			12	1		2	1	2		
22	29/7/11			34		16	5	6	2		
	30/7/11			2		2	2	3			
	31/7/11			9		6	2	4			
23	1/8/11			12	1	10	4	22	7		

Location	Date	Bat Species Recorded									
		Pip40	Pip40/45	Pip45	Pip45/55	Pip55	Nyc/Ept	Myotis	Myo/BLE	BLE	Bb
24	2/8/11			22		1	13	3	6	6	
	3/8/11			19			11	1	1	1	
	4/8/11			61			66	3	29	6	
	5/8/11			61	2	134		2	32	2	
25	1/8/11			36	1	43	11	7		1	
	2/8/11			24		18	5	1		1	
	3/8/11			27		9	2	2		1	
26	1/8/11			27		13	14				
	2/8/11			28		19	5	1		1	
	3/8/11			102		39	2				
27	8/8/11			32		16	3			1	
	9/8/11			56	1	12	18	1		2	
	10/8/11		2	135		26	1			2	2
28	29/7/11			88	2	15	5	1			
	30/7/11			59	1			3		2	
	31/7/11			28	1	9					
29	29/7/11			179		281	1	1			
	30/7/11	1		19		3					
	31/7/11			95		7	2				
41	1/8/11			153		12	3			7	1
	2/8/11			167	1	8	1	1		10	
	3/8/11			163		17	1			2	
42	4/8/11			202		21				1	
	5/8/11			41		38	3	3		4	
	6/8/11			208		115	3				

Location	Date	Bat Species Recorded									
		Pip40	Pip40/45	Pip45	Pip45/55	Pip55	Nyc/Ept	Myotis	Myo/BLE	BLE	Bb
	7/8/11			356		96		4			
43	11/8/11			194		14	3		3	4	
	12/8/11			65	1	5	5		3		
	13/8/11			87		6	2		1	8	
	14/8/11			301		10	1	1	1	3	
47	11/8/11			49		57	2				
	12/8/11			25		9				1	
	13/8/11			59		8			1		
	14/8/11			4		3	2		6		
48	11/8/11	1	7	171	2	27	57	4	4		
	12/8/11		1	315	4	15	35	3			
	13/8/11			70	2	9	50	2			
	14/8/11			59		9	37	2			
49	8/8/11			180		435	8	1	3		
	9/8/11			75		83		3	2		
	10/8/11		9	38		333	1		5	1	
50	8/8/11			72	1	62					
	9/8/11			27		28					
	10/8/11			154	7	91					

***APPENDIX E – TIMES AFTER SUNSET AND NUMBERS OF BAT
PASSES RECORDED BY ANABATS IN JULY AND AUGUST***

**APPENDIX E – TIMES AFTER SUNSET AND NUMBERS OF BAT
PASSES RECORDED BY ANABATS IN JULY AND AUGUST**

Figure A5.1. Times after sunset and numbers of bat species passes recorded at Location 5 on the 26-28th July 2011

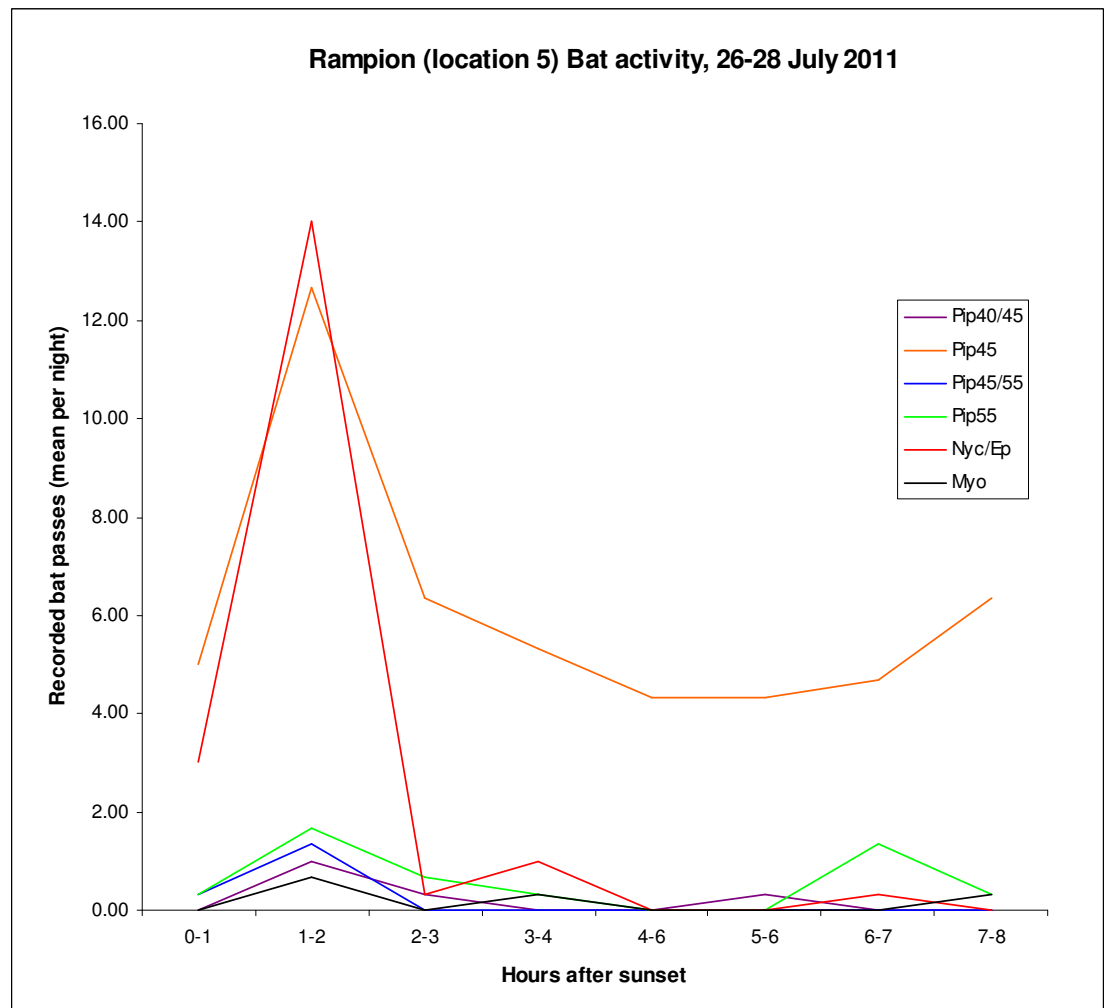


Figure A5.2. Times after sunset and numbers of bat species passes recorded at Location 6 on 26-28th July 2011

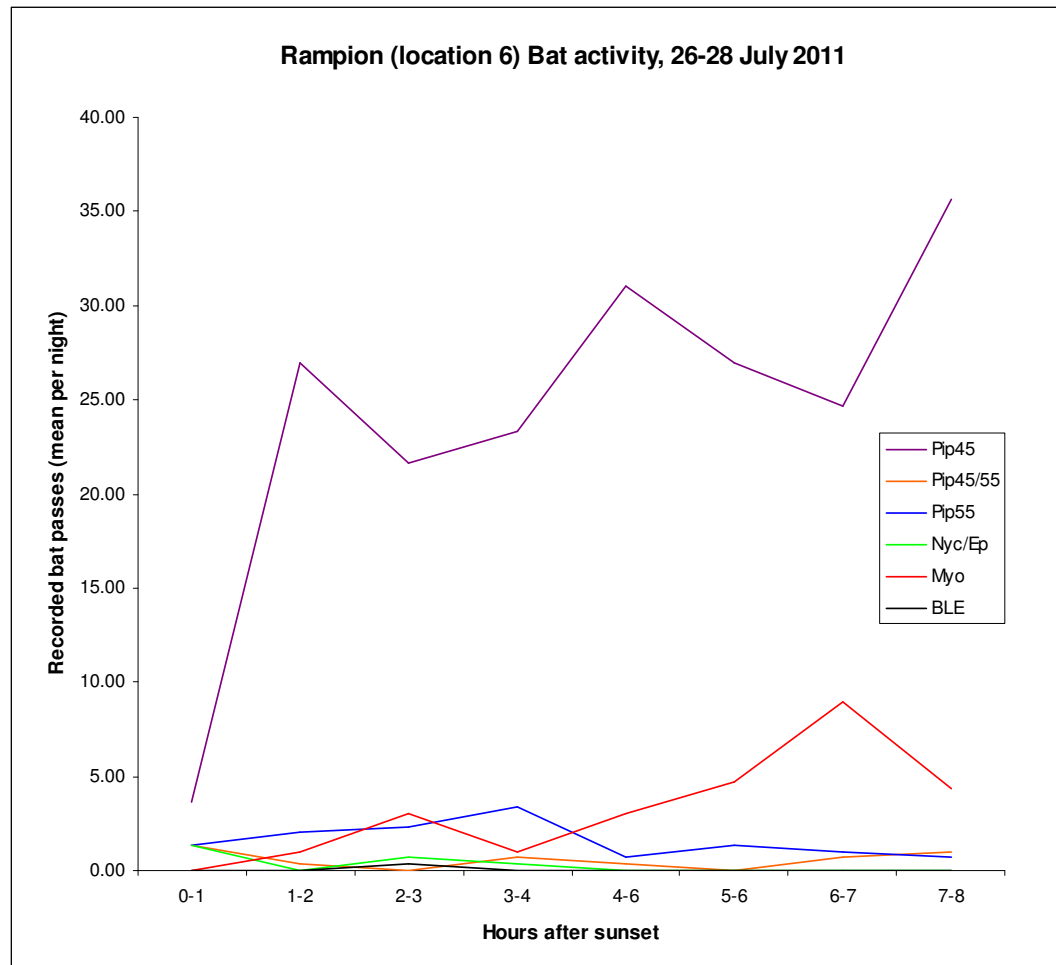


Figure A5.3. Times after sunset and numbers of bat species passes recorded at Location 8 on 26-28th July 2011

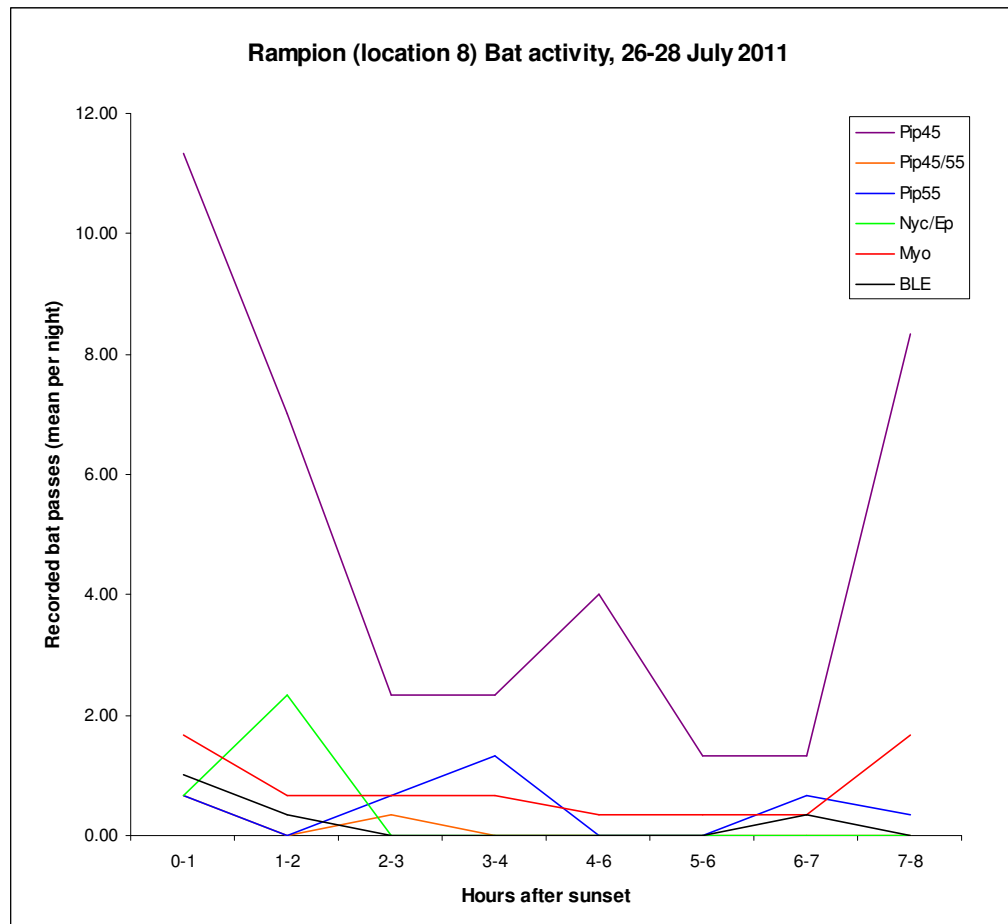


Figure A5.4. Times after sunset and numbers of bat species passes recorded at Location 9 on 26-28th July 2011

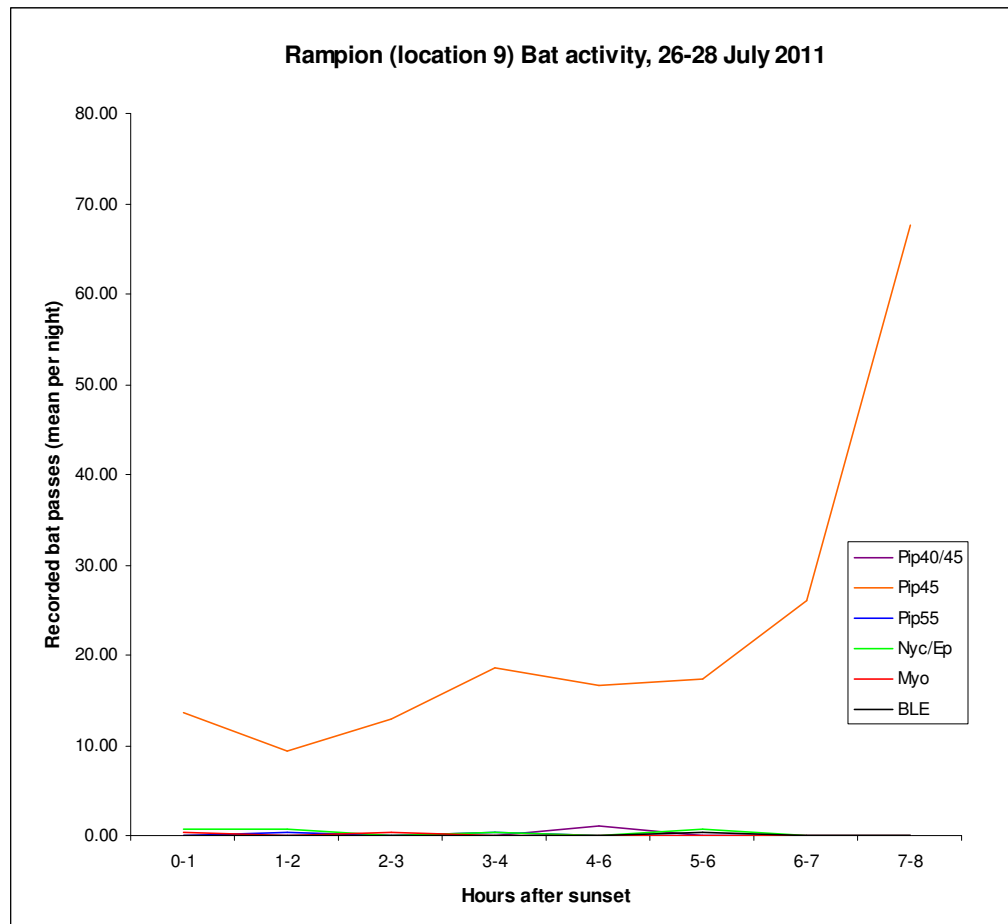


Figure A5.5. Times after sunset and numbers of bat species passes recorded at Location 11 on 26-28th July 2011

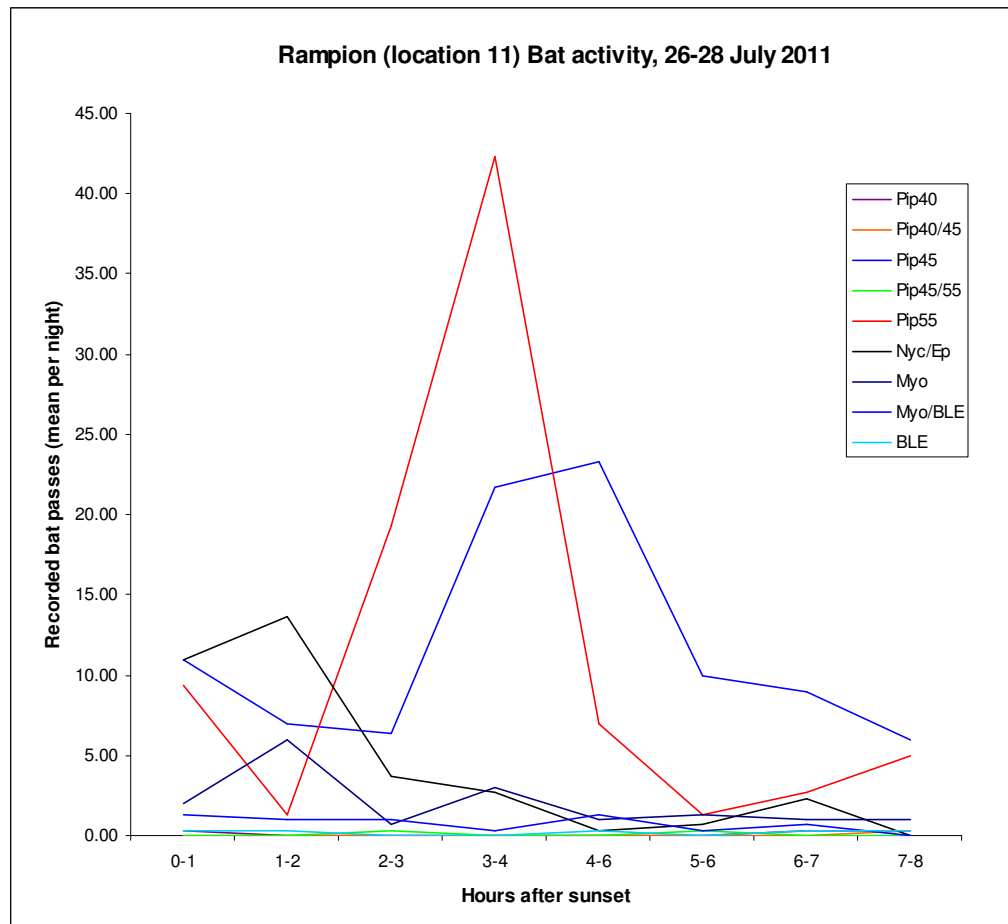


Figure A5.6. Times after sunset and numbers of bat species passes recorded at Location 12 on 26-28th July 2011

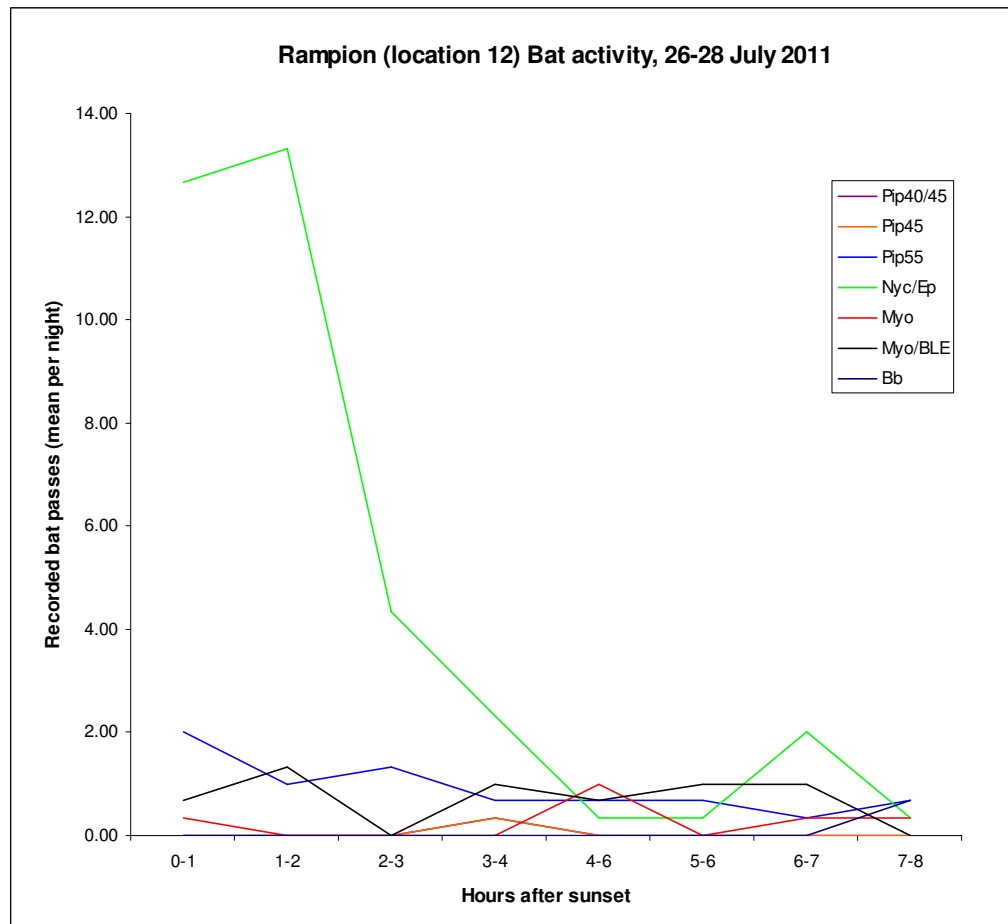


Figure A5.7. Times after sunset and numbers of bat species passes recorded at Location 13 on 26-28th July 2011

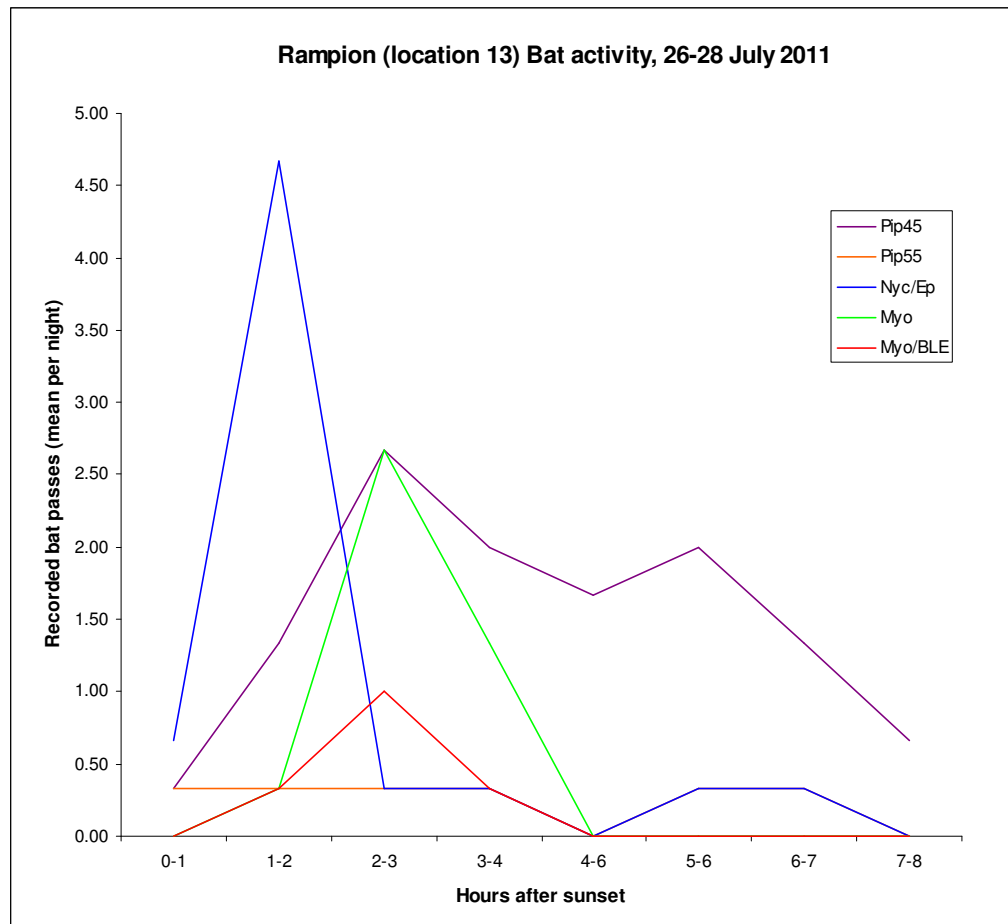


Figure A5.8. Times after sunset and numbers of bat species passes recorded at Location 14 on 26-28th July 2011

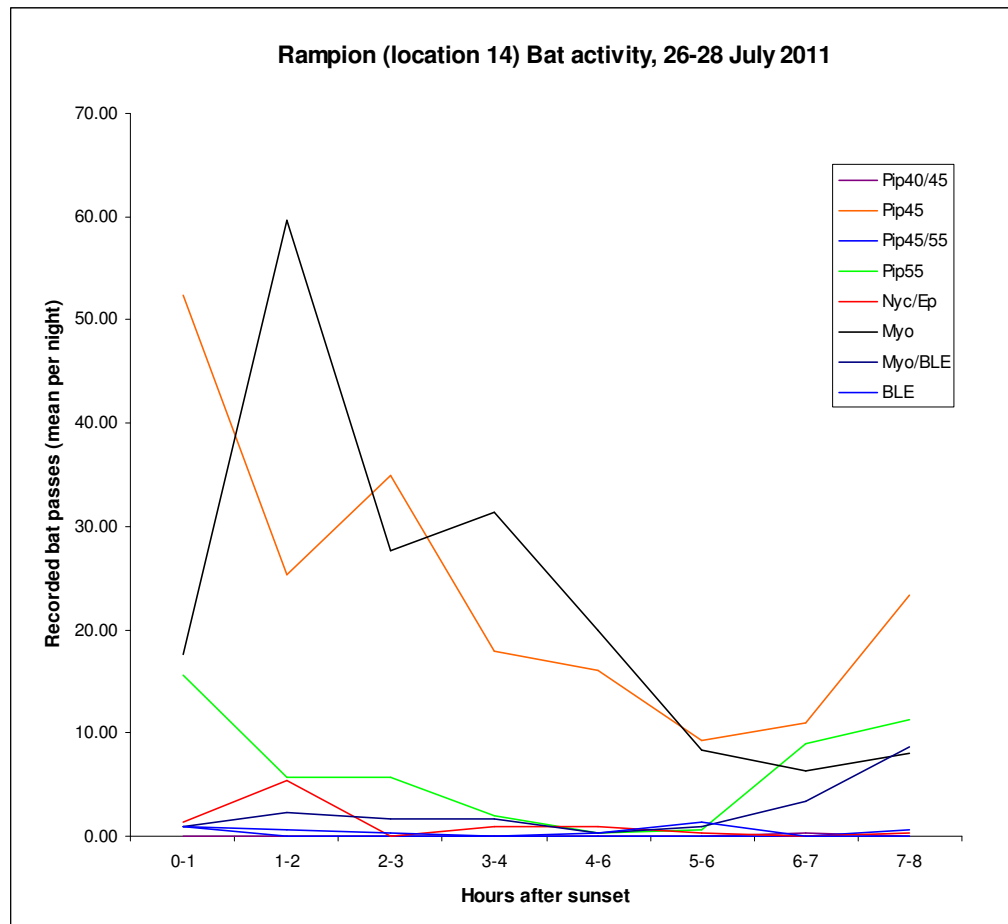


Figure A5.9. Times after sunset and numbers of bat species passes recorded at Location 15 on 26-28th July 2011

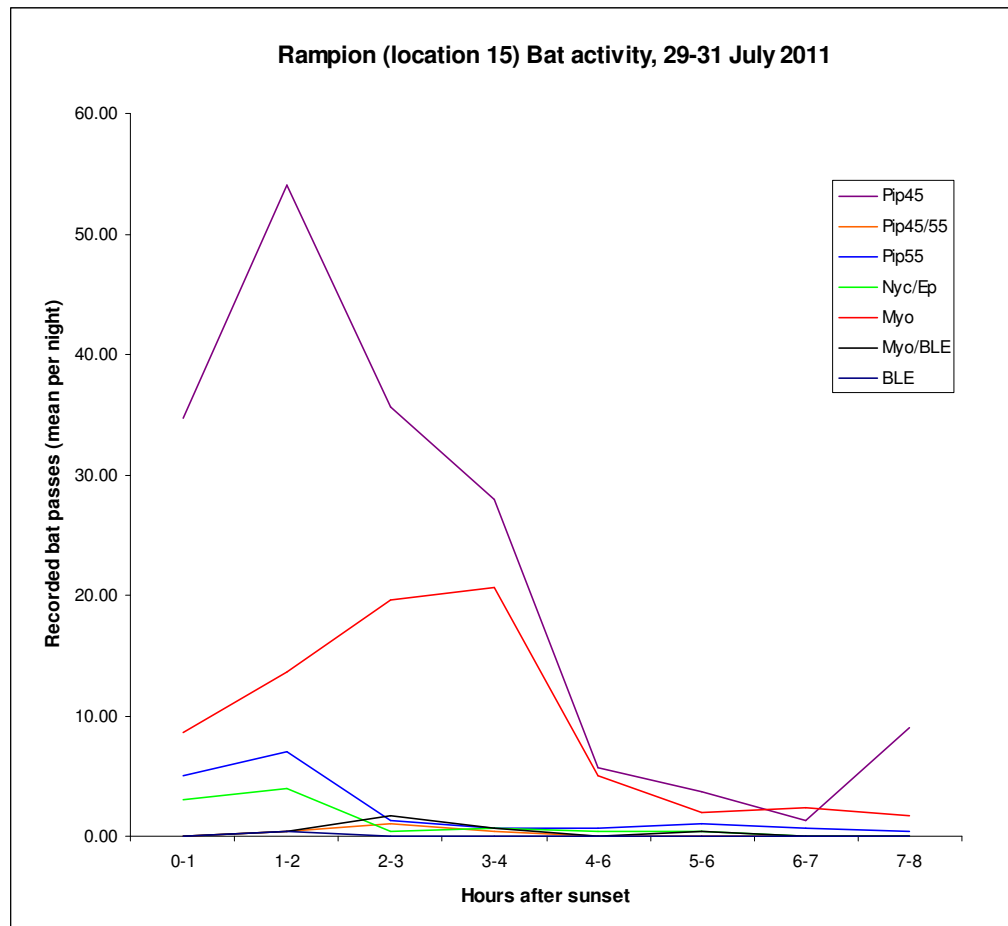


Figure A5.10. Times after sunset and numbers of bat species passes recorded at Location 16 on 26-28th July 2011

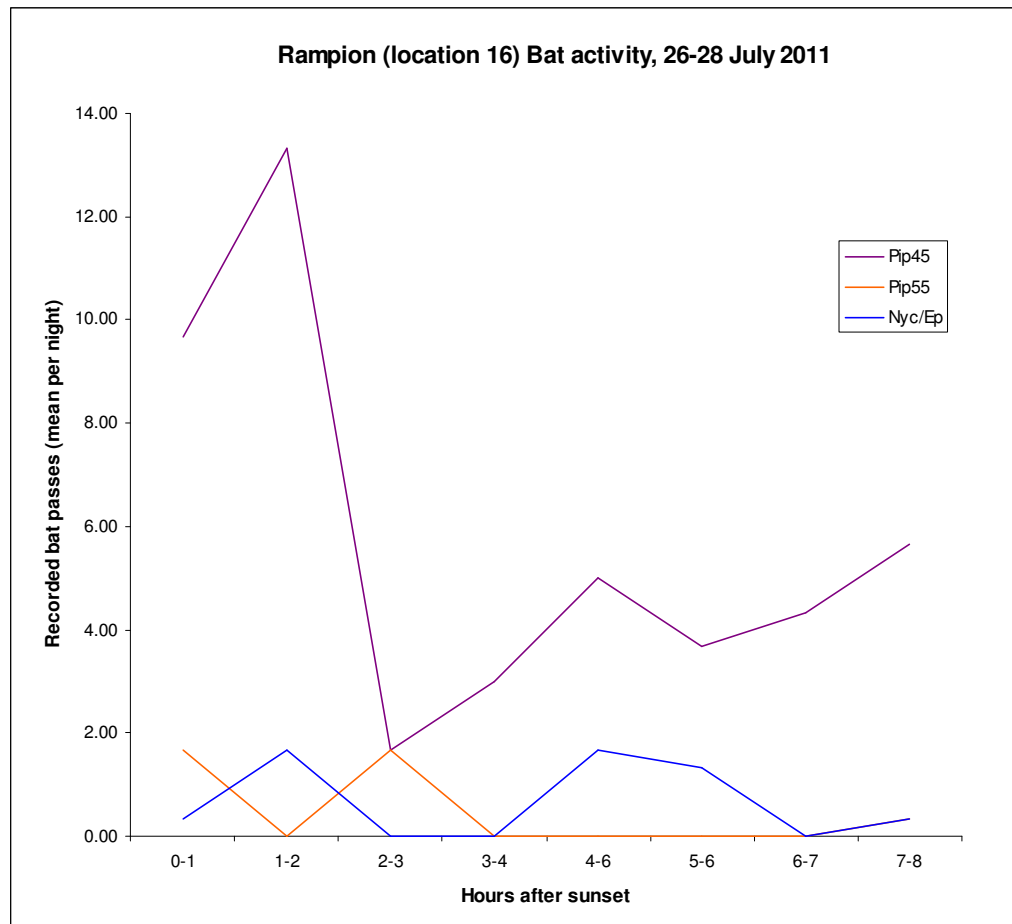


Figure A5.11. Times after sunset and numbers of bat species passes recorded at Location 17 on 8-10th August 2011

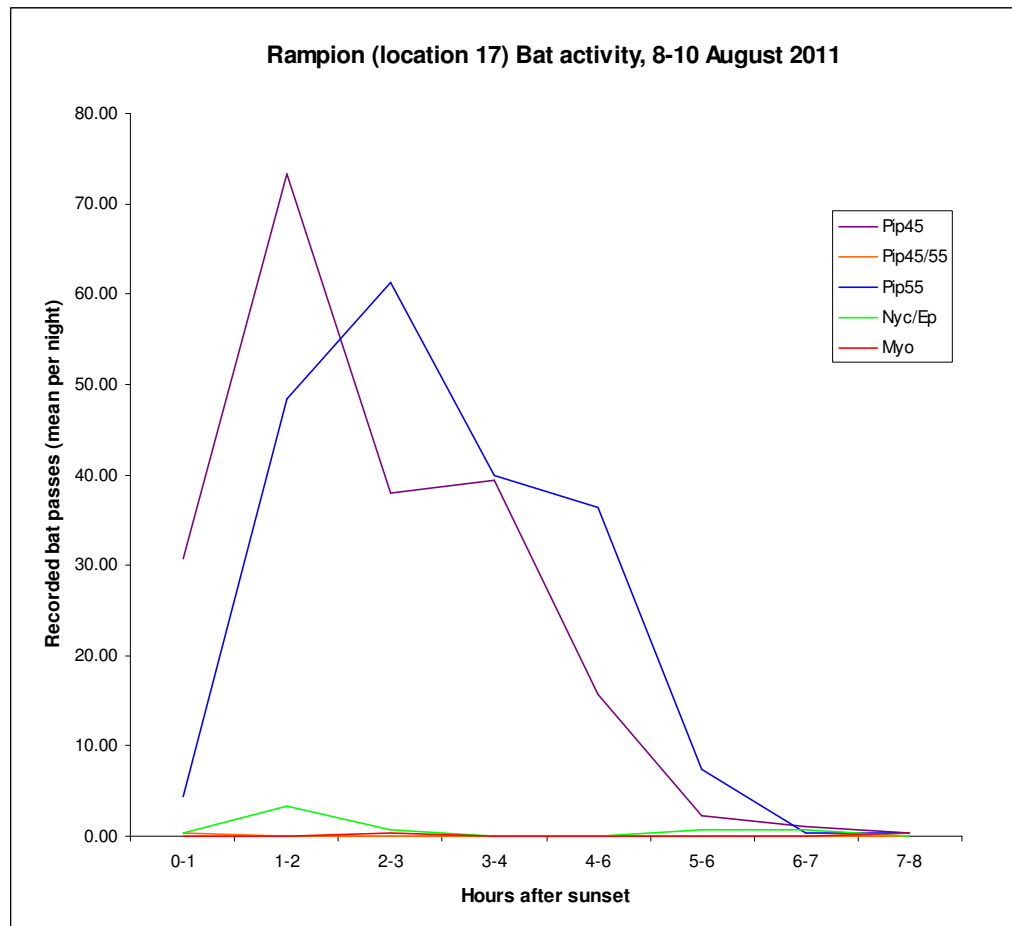


Figure A5.12. Times after sunset and numbers of bat species passes recorded at Location 18 on 29-31st July 2011

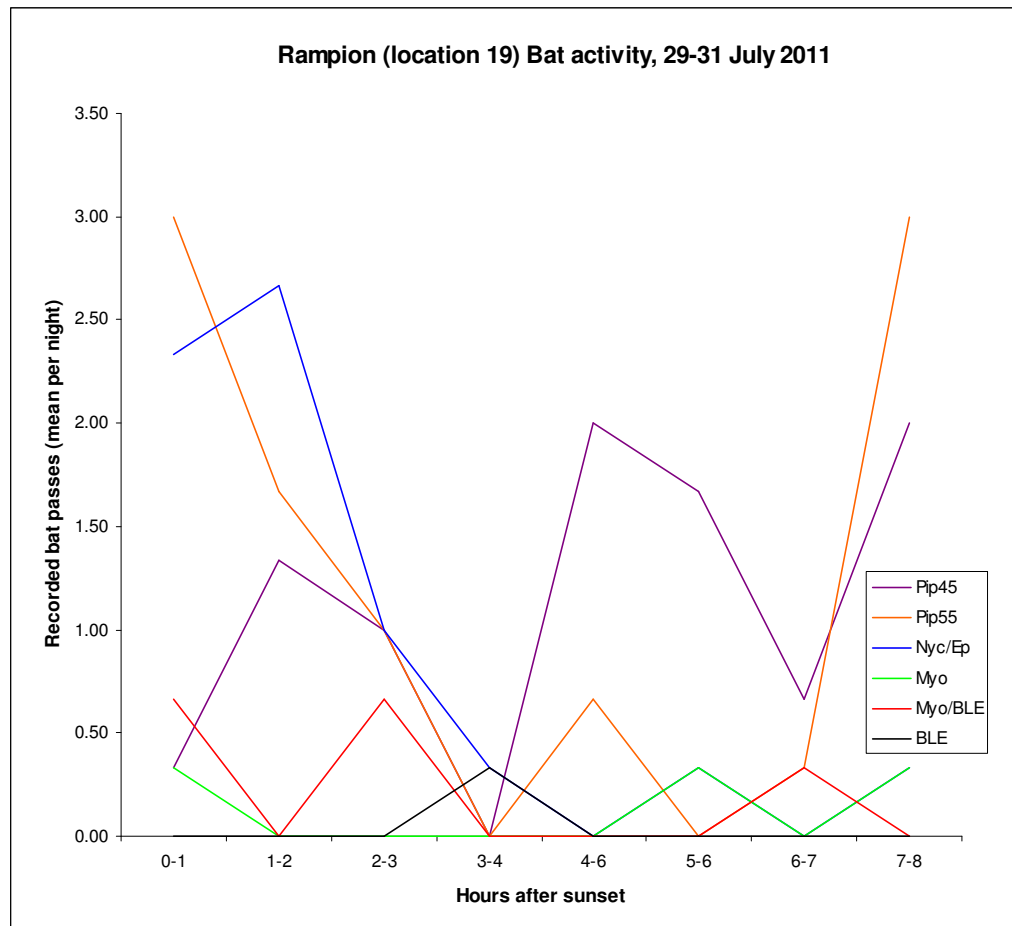


Figure A5.13. Times after sunset and numbers of bat species passes recorded at Location 20 on 29-31st July 2011

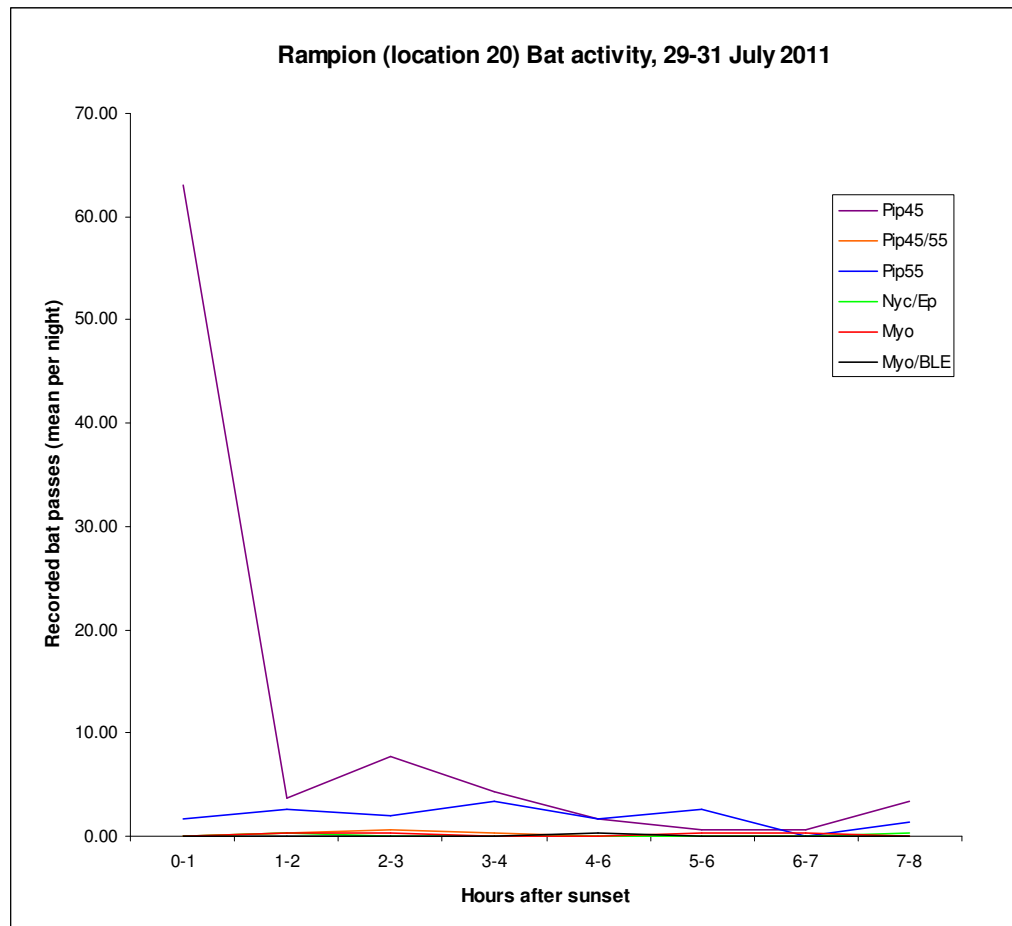


Figure A5.14. Times after sunset and numbers of bat species passes recorded at Location 21 on 29-31st July 2011

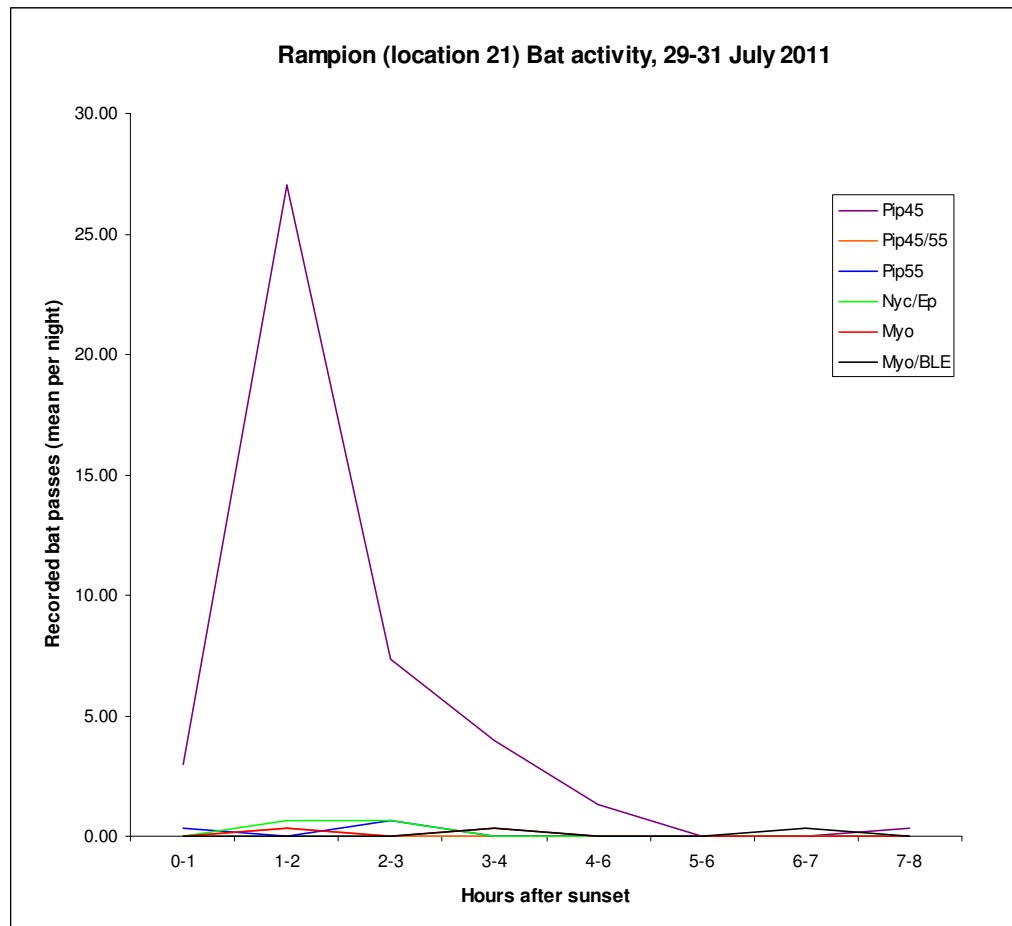


Figure A5.15. Times after sunset and numbers of bat species passes recorded at Location 22 on 29-31st July 2011

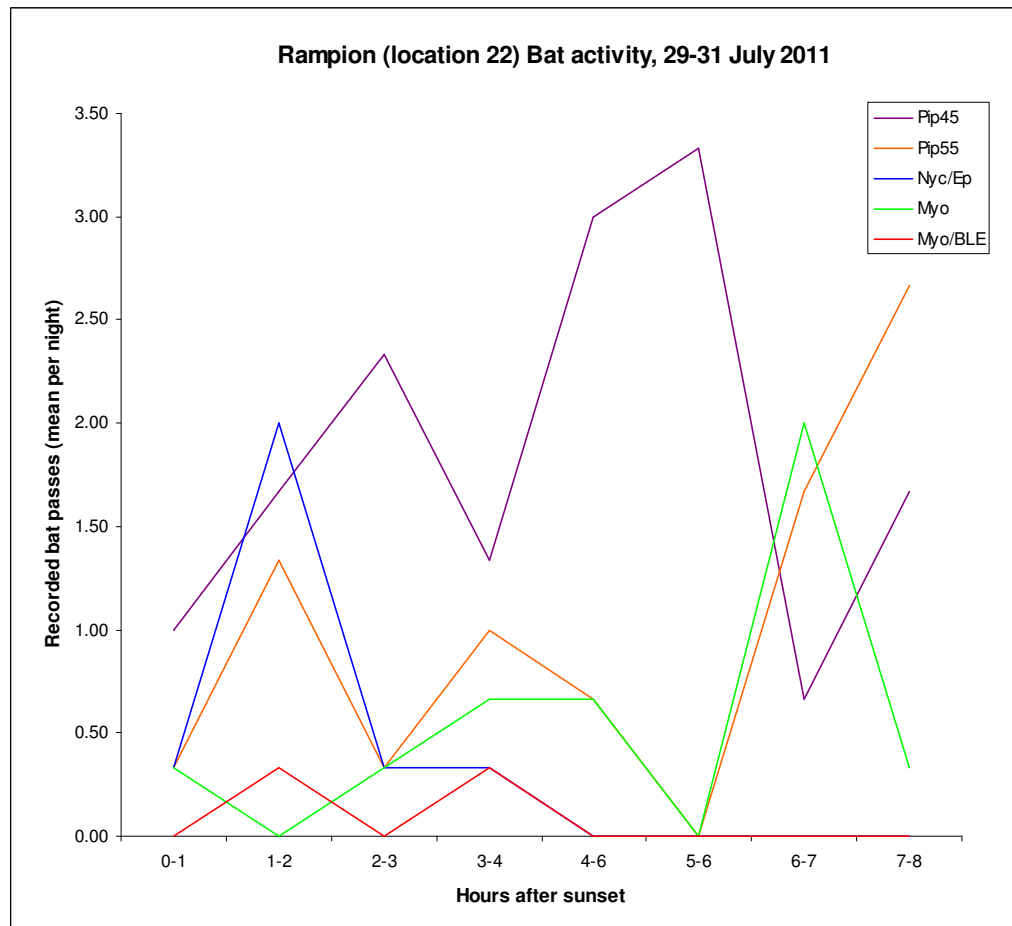


Figure A5.16. Times after sunset and numbers of bat species passes recorded at Location 23 on 29-31st July 2011

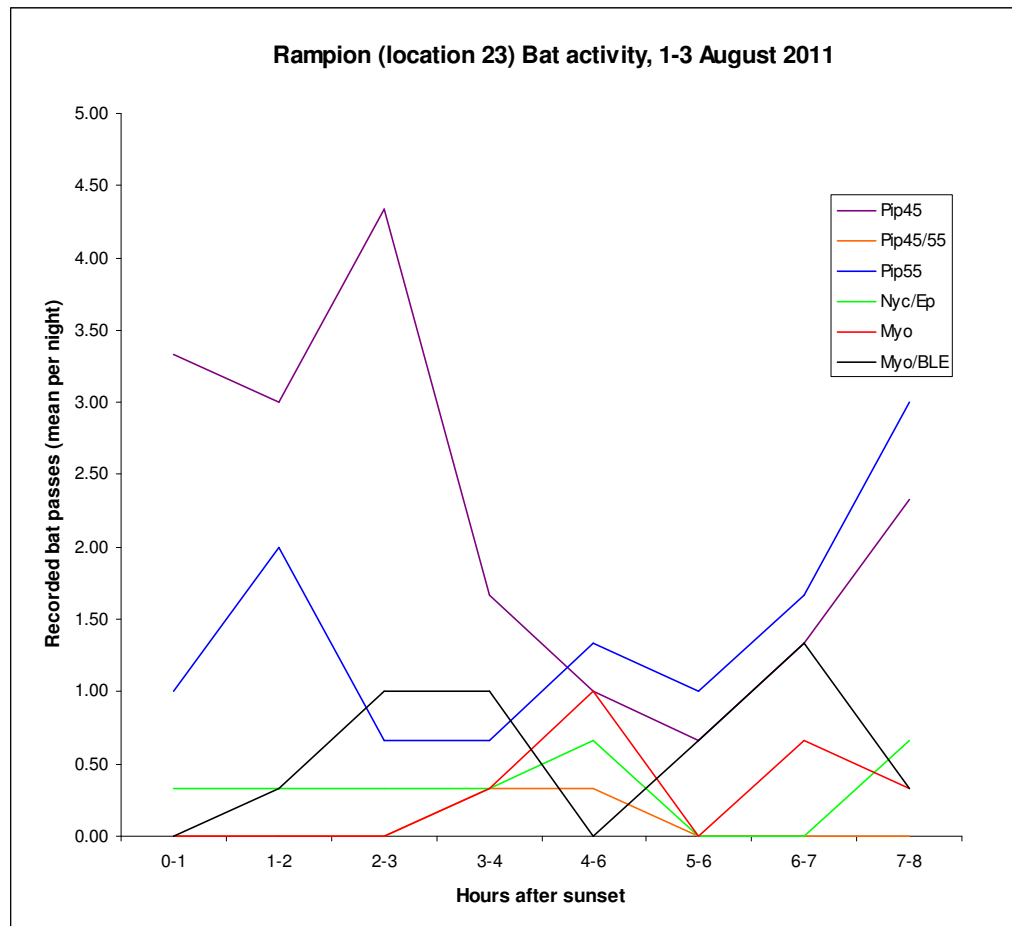


Figure A5.17. Times after sunset and numbers of bat species passes recorded at Location 24 on 1-3rd August 2011

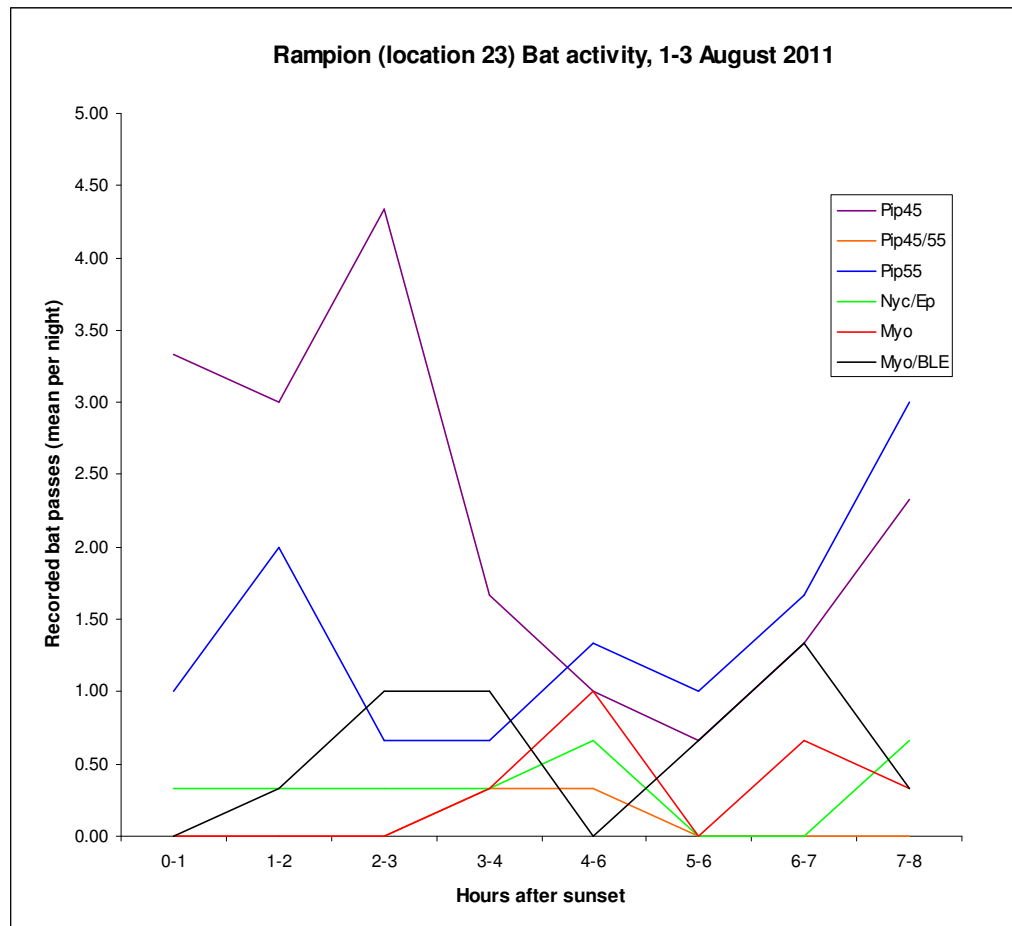


Figure A5.18. Times after sunset and numbers of bat species passes recorded at Location 25 on 1-3rd August 2011

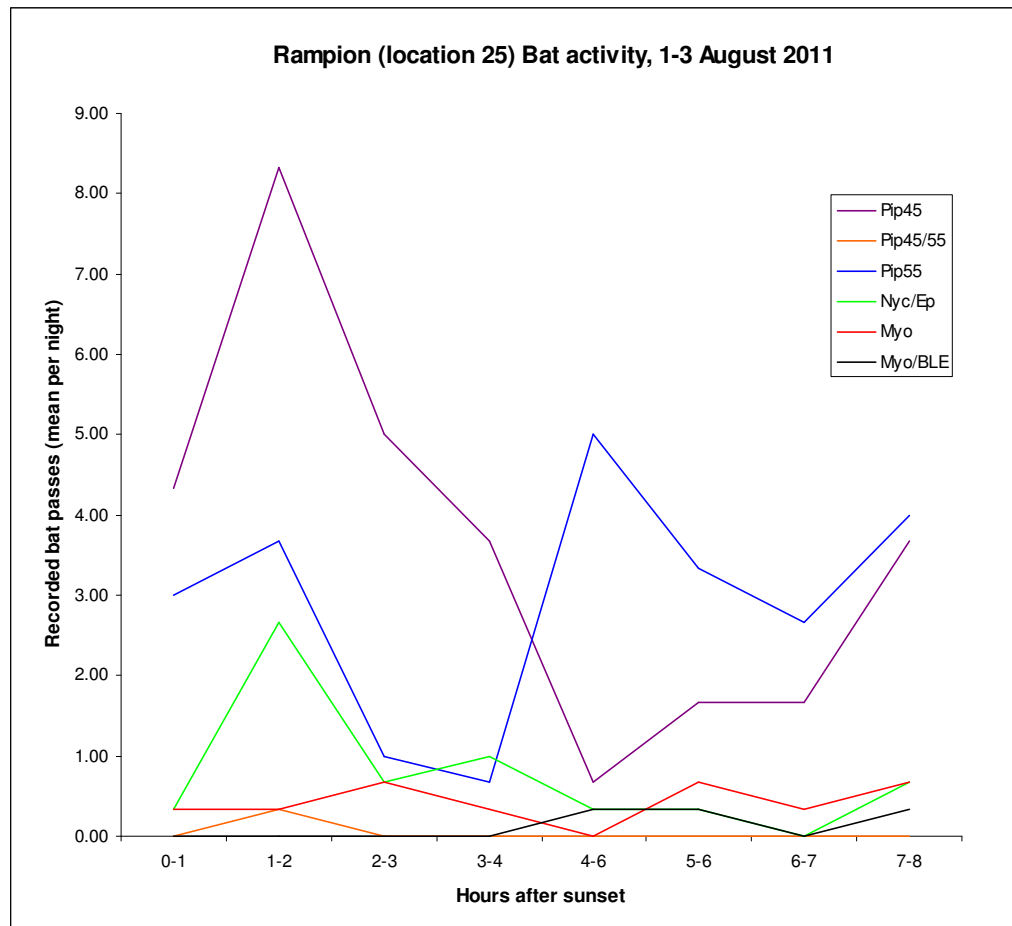


Figure A5.19. Times after sunset and numbers of bat species passes recorded at Location 26 on 1-3rd August 2011

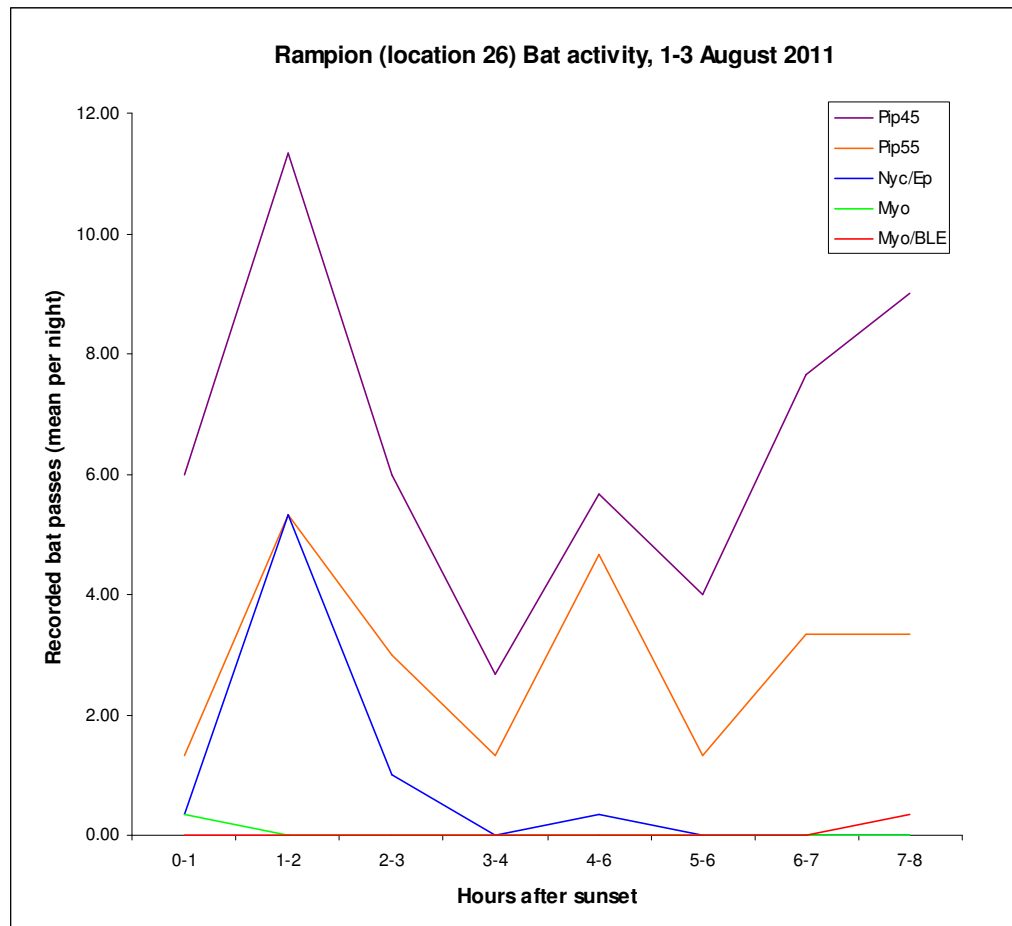


Figure A5.20. Times after sunset and numbers of bat species passes recorded at Location 27 on 8-10th August 2011

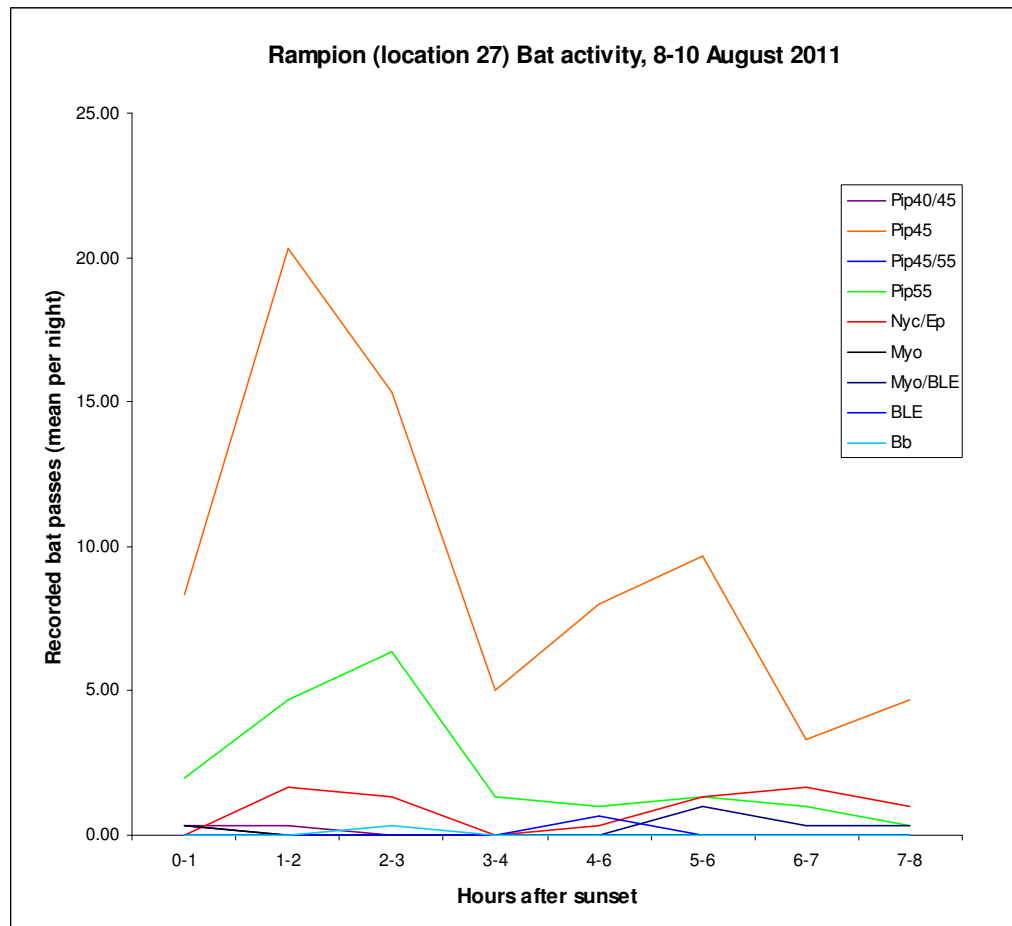


Figure A5.21. Times after sunset and numbers of bat species passes recorded at Location 28 on 29-31st July 2011

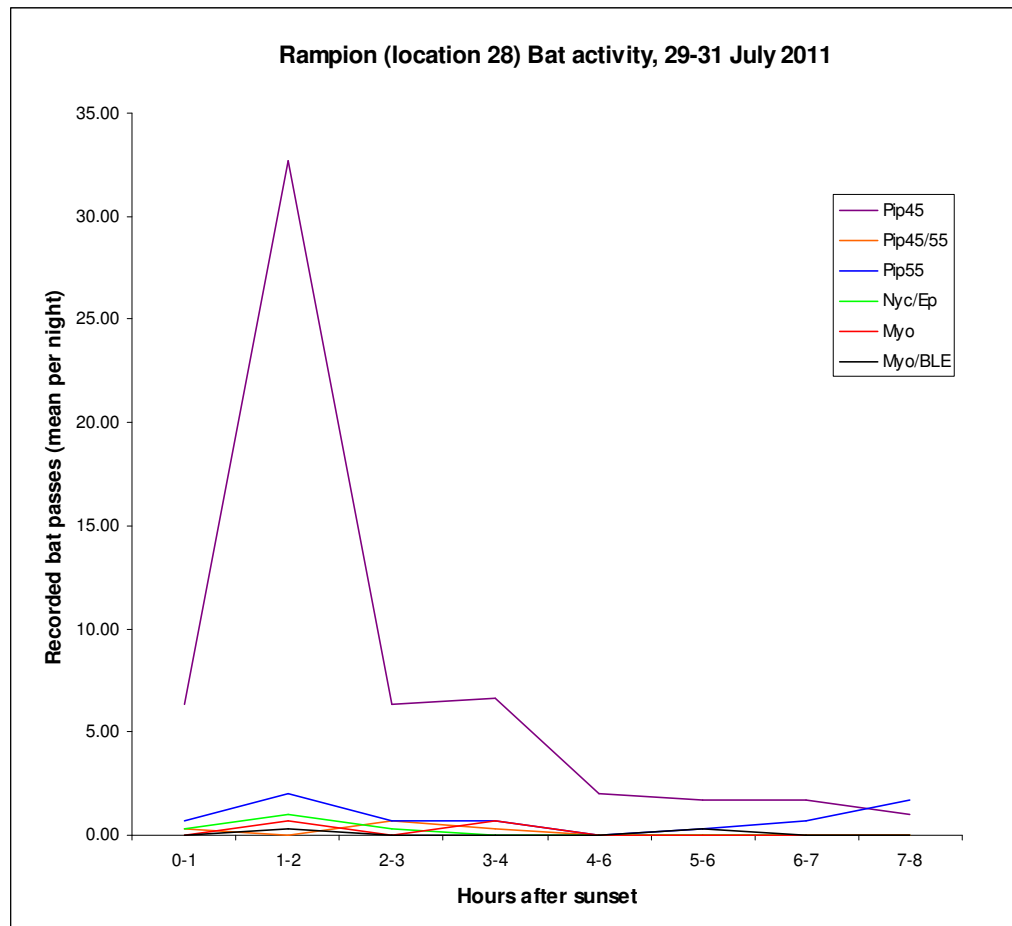


Figure A5.22. Times after sunset and numbers of bat species passes recorded at Location 29 on 29-31st July 2011

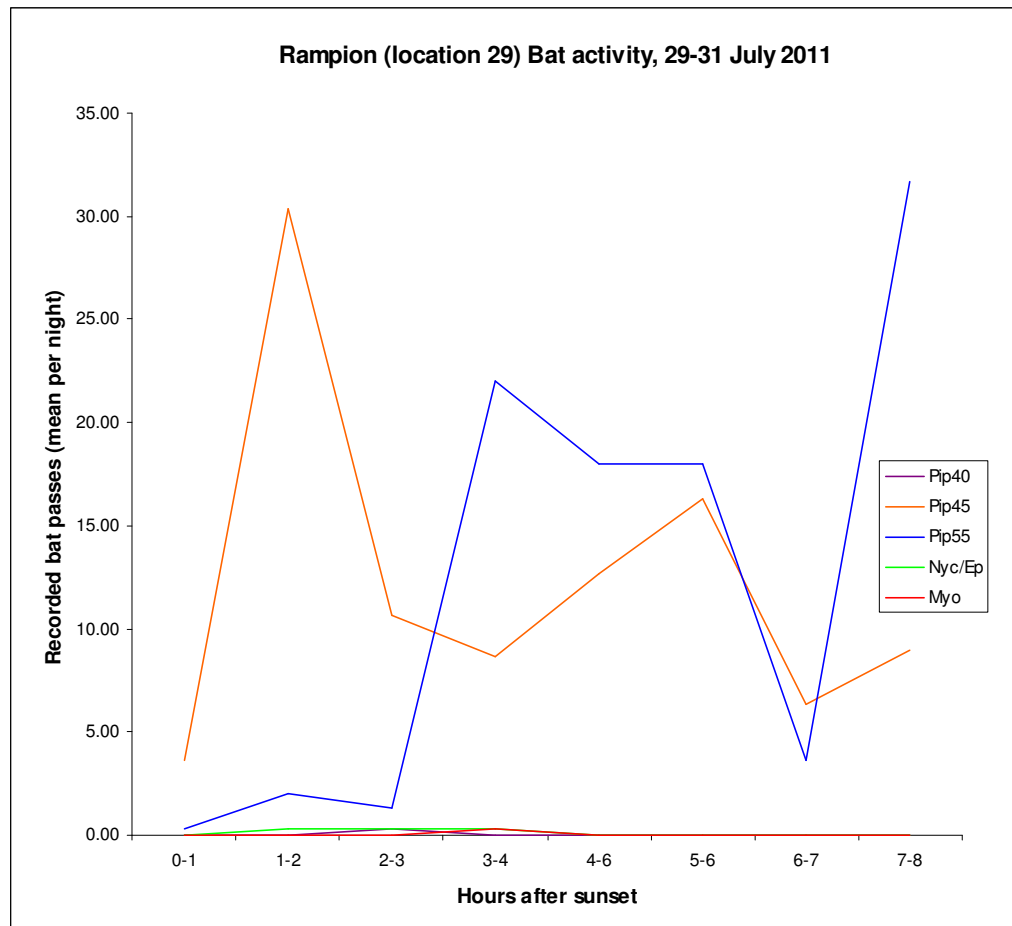


Figure A5.30. Times after sunset and numbers of bat species passes recorded at Location 41 on 1-3rd August 2011

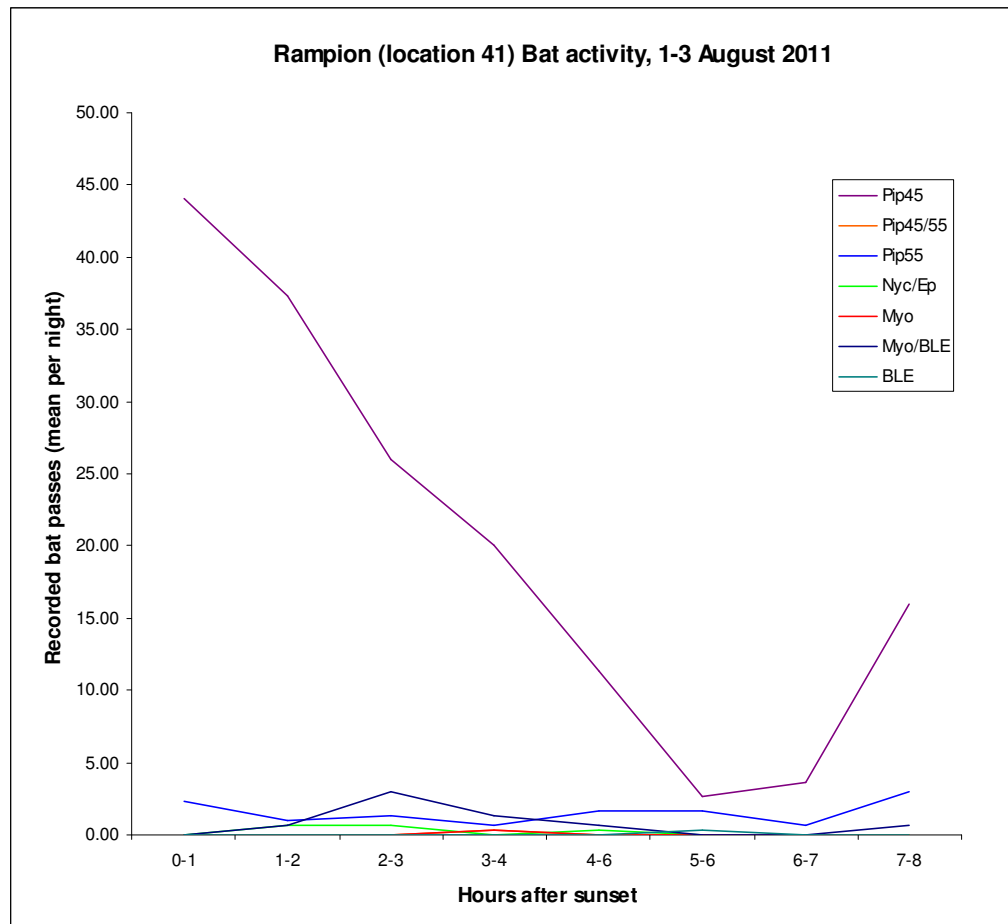


Figure A5.31. Times after sunset and numbers of bat species passes recorded at Location 42 on 4-7th August 2011

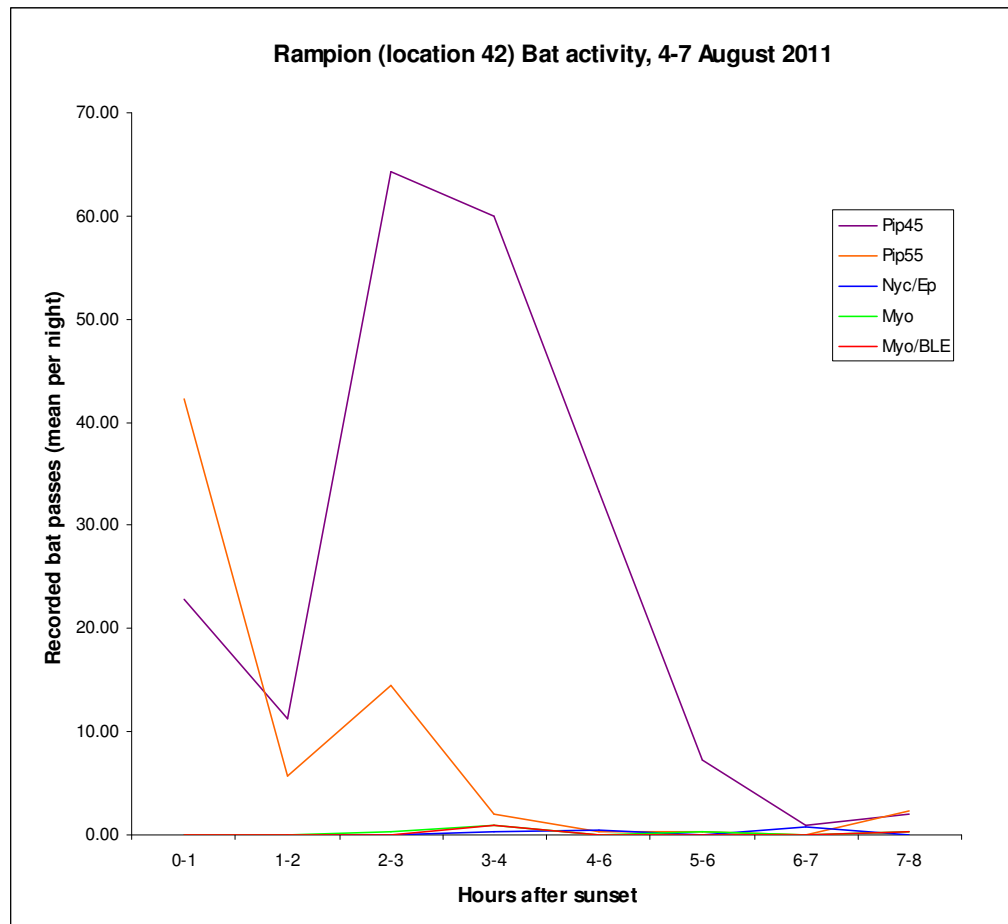


Figure A5.32. Times after sunset and numbers of bat species passes recorded at Location 43 on 11-14th August 2011

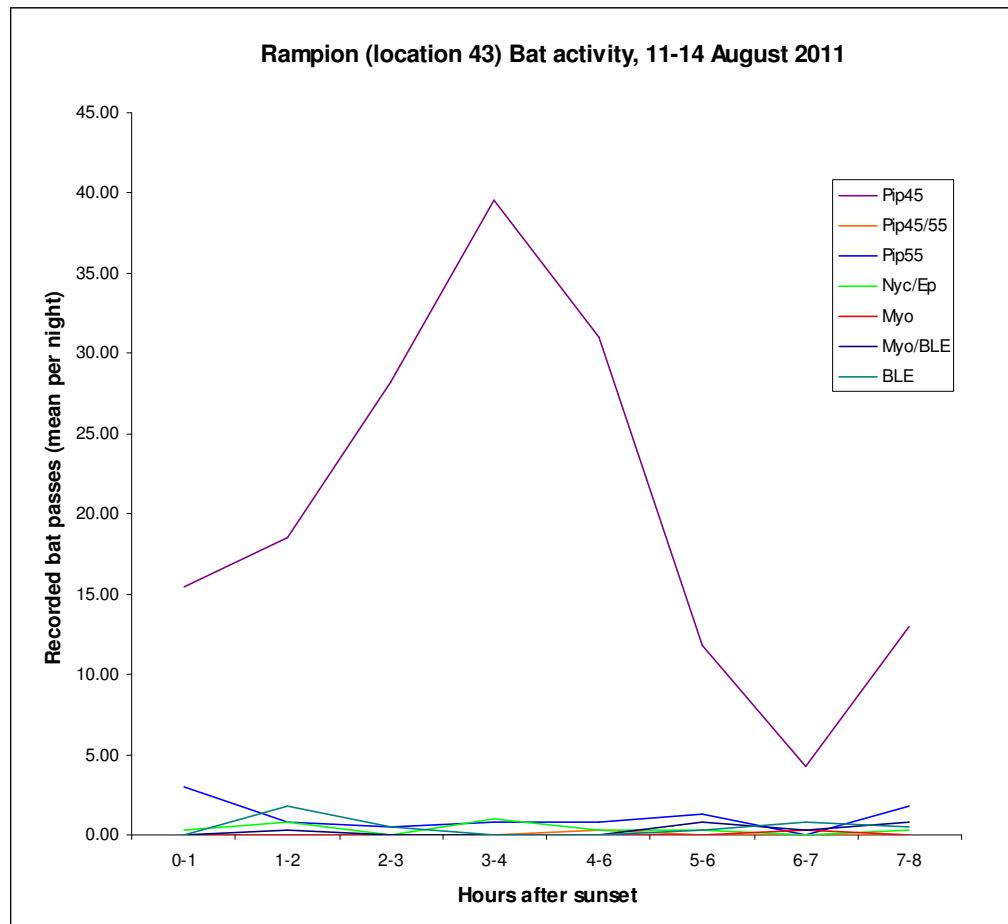


Figure A5.33. Times after sunset and numbers of bat species passes recorded at Location 47 on 11-14th August 2011

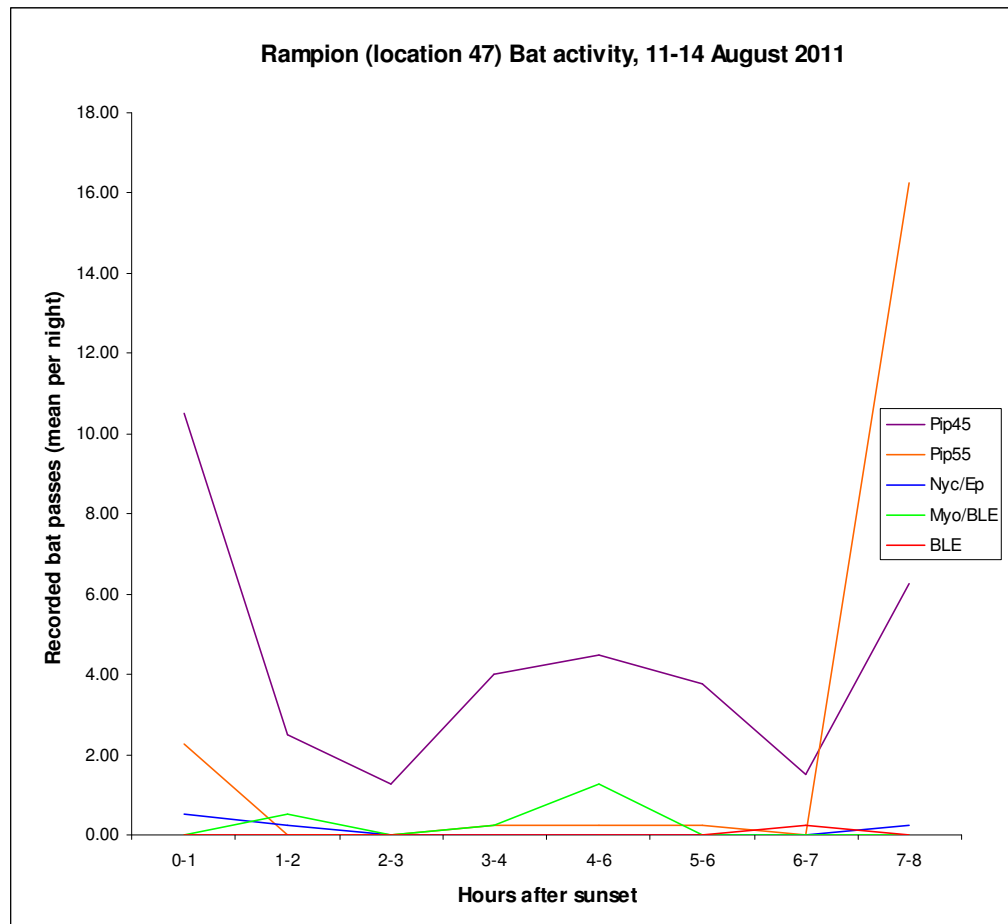


Figure A5.34. Times after sunset and numbers of bat species passes recorded at Location 48 on 11-14th August 2011

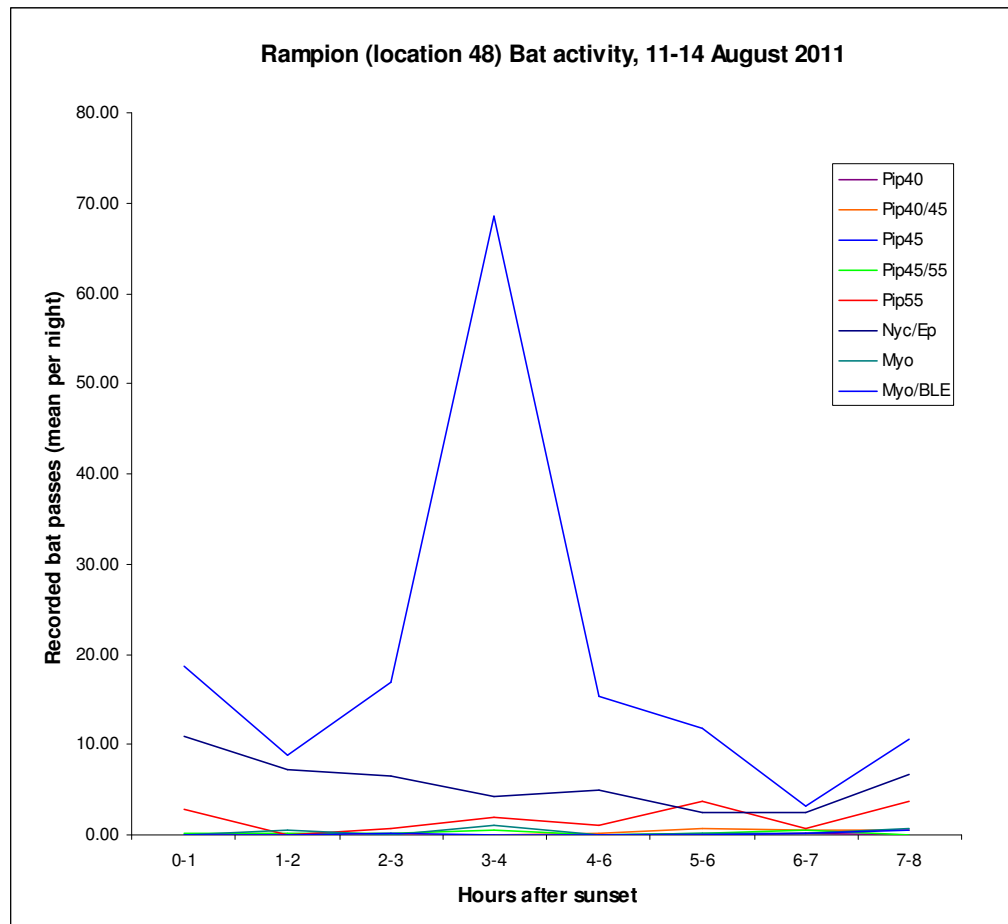


Figure A5.35. Times after sunset and numbers of bat species passes recorded at Location 49 on 8-10th August 2011

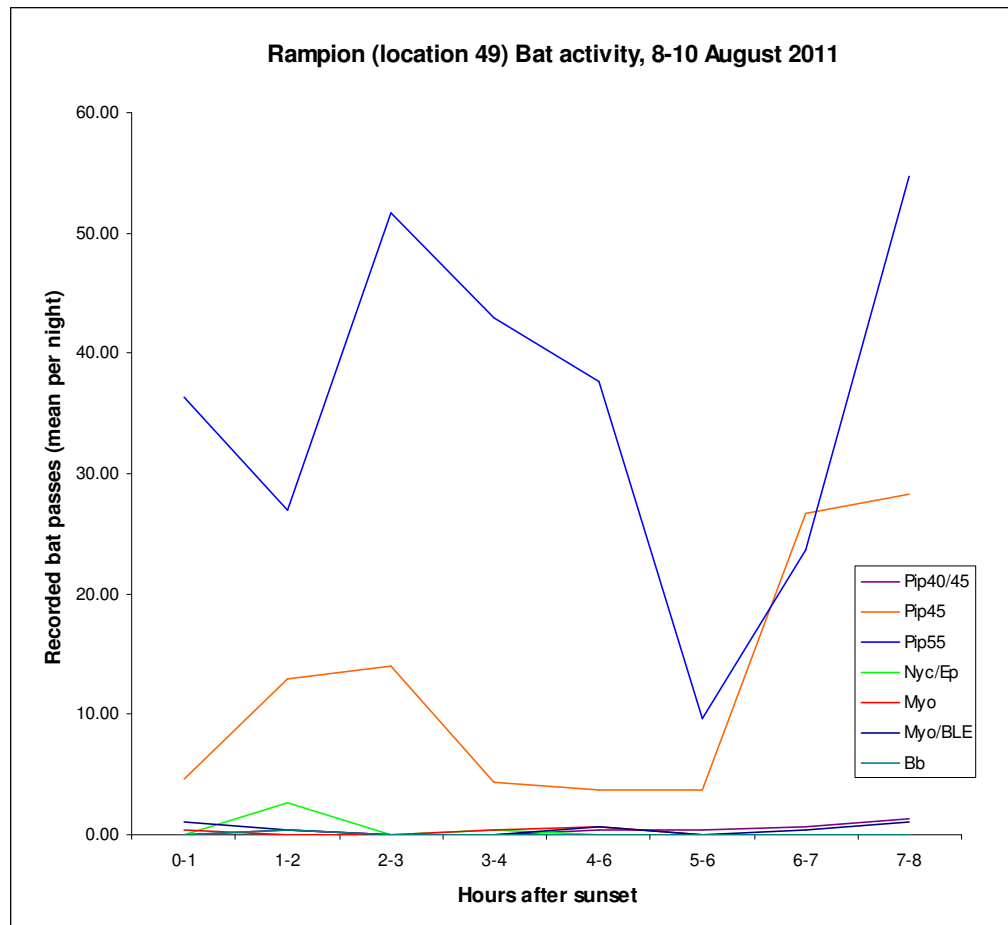
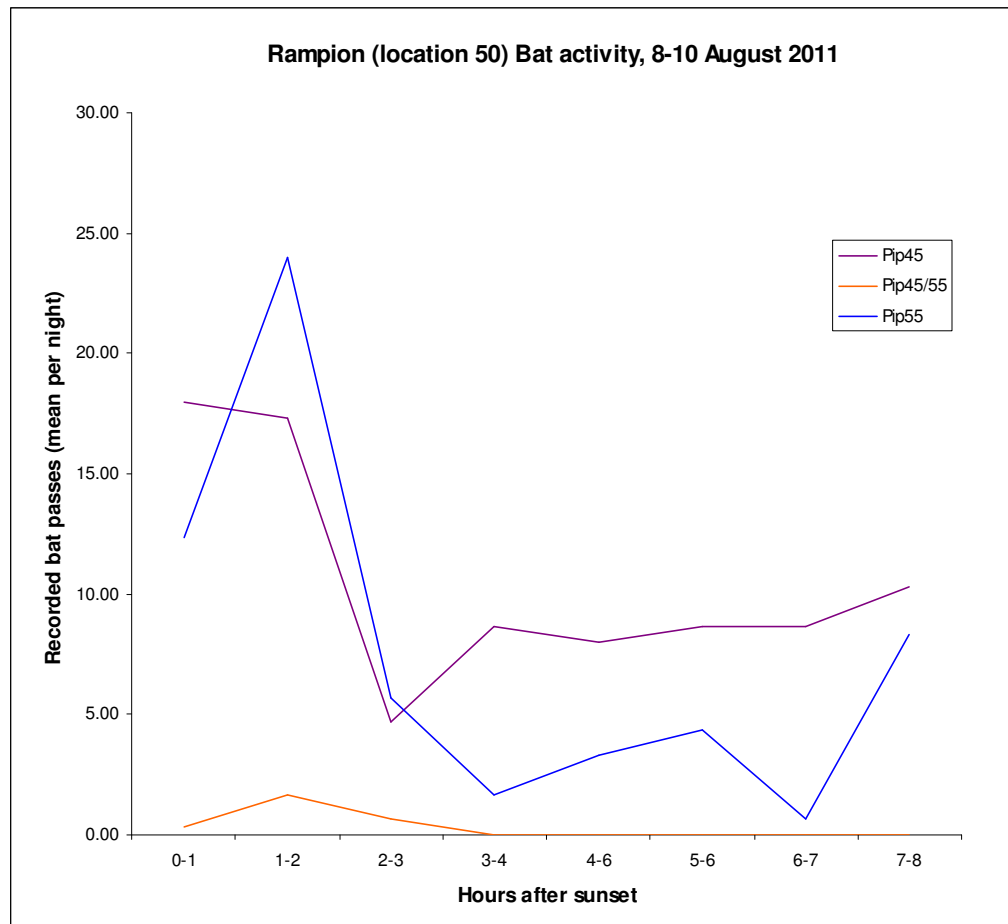


Figure A5.36. Times after sunset and numbers of bat species passes recorded at Location 50 on 8-10th August 2011



***APPENDIX F – AUTOMATED BAT ACTIVITY RESULTS FROM
SEPTEMBER***

APPENDIX F – AUTOMATED BAT ACTIVITY RESULTS FROM SEPTEMBER

Location	Date	Bat Species Recorded									
		Pip40	Pip40/45	Pip45	Pip45/55	Pip55	Nyc/Ept	Myotis	Myo/BLE	BLE	Bb
5	5/9/11	No bats									
	6/9/11	No bats									
	7/9/11									8	
6	5/9/11							1			
	6/9/11			3	2						
	7/9/11			5	13	1		7			
8	6/9/11			2							
	7/9/11			5				1			
9	5/9/11			1							
	6/9/11			13	1					5	
	7/9/11		1	41	6						
11	5/9/11	No bats									
	6/9/11	No bats									
	7/9/11			26	4	3	1	2		1	
12	5/9/11			19	1	15					
	6/9/11			16	5	2					
	7/9/11			122	8	21	5	6		2	
13	8/9/11	2	21	121	12	3	5	1			
	9/9/11		2	21		1	2				
	10/9/11		4	48	7	6	1	3			
	11/9/11		9	218	69	1					

Location	Date	Bat Species Recorded									Bb
		Pip40	Pip40/45	Pip45	Pip45/55	Pip55	Nyc/Ept	Myotis	Myo/BLE	BLE	
14	5/9/11					1					
	6/9/11			1							
	7/9/11			16		27	109	1	2	3	
15	5/9/11			23	5	2	11	5			
	6/9/11			37	1	3	2	9			
	7/9/11			94		7	8	9	3		
16	6/9/11						1				
	7/9/11			26			1				
17	5/9/11			333		828		116	13		
	6/9/11			120		65		27	8		
	7/9/11			293		95	2	23	16		
18	8/9/11			83	10	31	2				
	9/9/11			83	2	4	3	2			
	10/9/11			3			1				
	11/9/11			2		1					
19	8/9/11			1	10	27	2	1			
	9/9/11			49		18	3	6	2		
	10/9/11			2		2					
	11/9/11	No bats									
20	8/9/11			92	1	14	2	4	1		
	9/9/11			631		82	2	71	1		
	10/9/11			451	32	75	2	55	8		
	11/9/11			188		22		25			
21	8/9/11			44		8		2	1		

Location	Date	Bat Species Recorded									
		Pip40	Pip40/45	Pip45	Pip45/55	Pip55	Nyc/Ept	Myotis	Myo/BLE	BLE	Bb
	9/9/11			79		63		3	1		
	10/9/11			22		16			1		
	11/9/11			10		12					
22	8/9/11			1							
	9/9/11			1		3					
	10/9/11					3					
	11/9/11	No bats									
23	8/9/11			24		9	1				
	9/9/11			20		19	4	6	1		
	10/9/11			16		6					
	11/9/11			3		1		1			
24	8/9/11			59		123	6	9	3		
	9/9/11			35	1	83	7	11	1		
	10/9/11			30	3	21		2			
	11/9/11			5		6			1		
25	8/9/11			25		21	1	4			
	9/9/11			23	7	28	9	15	4		
	10/9/11			16		16	3	3			
	11/9/11			18	1	10		1			
26	10/9/11	No bats									
27	12/9/11			6	4			2			
	13/9/11			26	1	23		2			
	14/9/11			67	5	14	1	3			
	15/9/11			1							

Location	Date	Bat Species Recorded									
		Pip40	Pip40/45	Pip45	Pip45/55	Pip55	Nyc/Ept	Myotis	Myo/BLE	BLE	Bb
28	12/9/11			30		4		5			
	13/9/11			96		4		45	1		
	14/9/11			30		4		24	4	4	2
	15/9/11			4							
29	13/9/11			4				1			
	14/9/11			5		2		4			1
	15/9/11			1							
41	15/9/11			1				1			
42	15/9/11			11				11			
	16/9/11			220				80	16	1	
	17/9/11			58				8	4		
43	15/9/11			21		1		2			
	16/9/11			120				7	4		
	17/9/11			1							
47	15/9/11			74				14		12	
	16/9/11			68				6			
	17/9/11			30				2	1		
48	15/9/11			18				12			
	16/9/11			63		5		138	5		
	17/9/11			16				39		1	
49	15/9/11			6				35		90	
	16/9/11			7				141	1	42	1
	17/9/11							50		17	
50	15/9/11			85		1		82		22	

Location	Date	Bat Species Recorded									
		Pip40	Pip40/45	Pip45	Pip45/55	Pip55	Nyc/Ept	Myotis	Myo/BLE	BLE	Bb
	16/9/11			189	82	764	1	34			
	17/9/11			89	1	104		22	1		

APPENDIX G – MANUAL BAT ACTIVITY RESULTS

APPENDIX G – MANUAL BAT ACTIVITY RESULTS

Results of Manual Activity Survey Carried Out at Location 2s on 18th August 2011
(Surveyor – Andrew Ross)

Time	Bat Species	Number of bats	Bat Activity	Map target Note
2045	Common Pipistrelle	1	Commuting east to west over tree line (8m)	TN1
2048	Soprano Pipistrelle	1	Heard not seen	
2053	Myotis species	1	Heard not seen	
2054	Soprano Pipistrelle	1	Heard not seen	
2055	Common Pipistrelle	1	Heard not seen	
2057	Common Pipistrelle	1	Heard not seen	
2059	Soprano Pipistrelle	1	Heard not seen	
2100	Common Pipistrelle	1	Heard not seen	
2103	Common Pipistrelle	1	Heard not seen 2 passes	
2104	Common Pipistrelle	1	Heard not seen	
2108	Common Pipistrelle	1+	Heard not seen 9 passes	
2110	Common Pipistrelle	1	Heard not seen 2 passes	
2111	Common Pipistrelle	1	Heard not seen 3 passes	
2112	Common Pipistrelle	1	Heard not seen	
2113	Common Pipistrelle	1+	Heard not seen 4 passes	
2114	Common Pipistrelle	1	Heard not seen	
2115	Common Pipistrelle	2	Heard not seen	
2116	Common Pipistrelle	1	Heard not seen	
2117	Common Pipistrelle	1	Heard not seen	
2118	Common Pipistrelle	1	Heard not seen 2 passes	
2119	Common Pipistrelle	1	Heard not seen 2 passes	
2122	Myotis species	1	Heard not seen	
2123	Common Pipistrelle	1	Heard not seen	
2127	Common Pipistrelle	1	Heard not seen	
2128	Common Pipistrelle	1	Heard not seen	
2133	Common Pipistrelle	1	Heard not seen	
2134	Common Pipistrelle	1	Heard not seen	
2136	Common Pipistrelle	2	Heard not seen	
2137	Common Pipistrelle	1	Heard not seen	
2139	Common Pipistrelle	1	Heard not seen	
2140	Common Pipistrelle	1	Heard not seen	
2141	Common Pipistrelle	1	Heard not seen	
2142	Common Pipistrelle	1	Heard not seen	
2144	Common Pipistrelle	1	Heard not seen	

2145	Common Pipistrelle	1	Heard not seen
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Results of Manual Activity Survey Carried Out at Location 2s on 18th August 2011
(Surveyor – Beth Ludlow)

Time	Bat Species	Number of bats	Bat Activity	Map target Note
2044	Common Pipistrelle	1	Heard not seen 3 passes	
2047	Common Pipistrelle	2	Commuting close to tree top (10m)	F1, F2
2047	Common Pipistrelle	1	Heard not seen	
2050	Common Pipistrelle	1+	Heard not seen several passes	
2050	Common Pipistrelle	1	Heard not seen 2 passes	
2053	Common Pipistrelle	1	Heard not seen	
2054	Soprano Pipistrelle	1	Heard not seen	
2054	Soprano Pipistrelle	1	Close to tree top (10m)	F3
2055	Common Pipistrelle	1	Heard not seen	
2100	Common Pipistrelle	1	Heard not seen	
2100	Common Pipistrelle	1	Heard not seen	
2100	Common Pipistrelle	1	Heard not seen	
2101	Common Pipistrelle	1	Heard not seen	
2102	Common Pipistrelle	1	Foraging near tree top (10m)	F4
2104	Common Pipistrelle	1	Heard not seen 2 passes	
2106	Common Pipistrelle	1	Heard not seen	
2107	Common Pipistrelle	2		F5, F6, F7
2109	Common Pipistrelle	1	Height 10m	F1
2109	Common Pipistrelle	1+	Heard not seen 2 passes	
2111	Common Pipistrelle	1	Heard not seen 2 passes	
2112	Common Pipistrelle	1	Heard not seen	
2113	Common Pipistrelle	1	Heard not seen	
2114	Common Pipistrelle	1	Heard not seen	
2115	Common Pipistrelle	1	Heard not seen	
2116	Common Pipistrelle	1	Height at 10m	F6
2117	Common Pipistrelle	1	Heard not seen several passes	
2120	Common Pipistrelle	2	Height 10m	F8
2122	Common Pipistrelle	1	Heard not seen	
2123	Pipistrellus species	1	Heard not seen	
2125	Common Pipistrelle	1+	Heard not seen 3 passes	
2128	Common Pipistrelle	1	Heard not seen	
2129	Common Pipistrelle	1+	Heard not seen several passes	
2129	Common Pipistrelle	1	Several passes	F10

2131	Common Pipistrelle	1	Foraging	F11
2135	Common Pipistrelle	1	Height 6m	F12
2136	Common Pipistrelle	1+	Heard not seen several passes	F13
2138	Common Pipistrelle	1	Heard not seen several passes	
2140	Common Pipistrelle	1+	Heard not seen several passes	F14
2142	Soprano Pipistrelle	1	Heard not seen	
2143	Common Pipistrelle	2+	Heard not seen several passes	
2148	Common Pipistrelle	1	Height 6m	F13
2151	Common Pipistrelle	1+	Height 6m	F13
2152	Soprano Pipistrelle	1	Heard not seen	
	Common pipistrelle and Soprano			
2153	Pipistrelle	2+	Height 4m	

Results of Manual Activity Survey Carried Out at Location 3 on 22nd August 2011

Time	Bat Species	Number of bats	Bat Activity	Map target Note
2047	Soprano Pipistrelle	1	Heard not seen	
2052	Myotis species	1	Commuting north to south (2m)	TN1
2053	Common Pipistrelle	1	Commuting west to east over hedge (10m)	TN2
2056	Common Pipistrelle	1	Commuting west to east over hedge (10m)	TN2
2056	Common Pipistrelle	1	Commuting west to east over hedge (10m)	TN2
2059	Soprano Pipistrelle	1	Heard not seen	
2100	Common Pipistrelle	1	Commuting west to east (10m)	TN2
2100	Common Pipistrelle	1	Foraging/Commuting west to east	TN4
2103	Common Pipistrelle	1	Heard not seen	
2105	Common Pipistrelle	1	Heard not seen foraging	
2105	Common Pipistrelle	2	Foraging on west side of hedge	TN4
2107	Common Pipistrelle	1	Heard not seen	
2107	Soprano Pipistrelle	1	Heard not seen	
2111	Common Pipistrelle	1	Heard not seen	
2116	Common Pipistrelle	1	Foraging over headge	TN5
2123	Common Pipistrelle	2	Heard not seen foraging	
2127	Common Pipistrelle	2	Heard not seen foraging	
2129	Common Pipistrelle	1	Heard not seen three passes	
2130	Common Pipistrelle	1	Heard not seen	
2131	Common Pipistrelle	1	Heard not seen	
2132	Common Pipistrelle	1	Heard not seen	
2135	Common Pipistrelle	1	Heard not seen	

2136	Common Pipistrelle	1	Heard not seen 2 passes
2137	Common Pipistrelle	1	Heard not seen 2 passes
2138	Common Pipistrelle	2	Heard not seen 3 passes
2139	Common Pipistrelle	1	Heard not seen 6 passes

Results of Manual Activity Survey Carried Out at Location 6 on 22nd August 2011

Time	Bat Species	Number of bats	Bat Activity	Map target Note
2049	Common Pipistrelle	1	Commuting across hedge (6m)	F1
2055	Common Pipistrelle	1	Commuting (2m)	F2
2055	Myotis species	1	Commuting (2m)	F2
2055	Common Pipistrelle	1	Commuting (6m)	F1
2056	Common Pipistrelle	1	Commuting (6m)	F1
2058	Common Pipistrelle	1	Commuting (6m)	F1
2059	Common Pipistrelle	1	Commuting (6m)	F1
2100	Myotis species	2	Commuting (2-3m)	F3
	Common Pipistrelle and Soprano			
2101	Pipistrelle	2	Commuting (6m)	F1
2102	Common Pipistrelle	1	Commuting (5m)	F1
2102	Common Pipistrelle	1	Foraging	F4
2104	Common Pipistrelle	1	Foraging in field	F1, F5
2106	Common Pipistrelle	1	Foraging near hedge and in field	F6
2106	Myotis species	1	Foraging near hedge and in field	F6
2107	Common Pipistrelle	1		F8
				F1, F9,
2108	Common Pipistrelle	2	Commuting	F10
2110	Soprano Pipistrelle	1	Heard not seen	
2111	Common Pipistrelle	1	Foraging around tree	F1
2113	Common Pipistrelle	1	heard not seen foraging	F2
2115	Common Pipistrelle	1	Foraging around tree	
2116	Common Pipistrelle	2	Foraging around tree and hedge	
2117	Soprano Pipistrelle	1	Foraging around tree and hedge	
	Common Pipistrelle and Soprano			
2125	Pipistrelle	2+	Foraging around tree	
2126	Common Pipistrelle	2+	Foraging around tree	
2131	Common Pipistrelle	1	Heard not seen	
2133	Common Pipistrelle	2+	Heard not seen	
2134	Common Pipistrelle	1	Heard not seen two passes	

2137	Common Pipistrelle	1	Heard not seen
2137	Common Pipistrelle	2+	Heard not seen foraging

Results of Manual Activity Survey Carried Out at Location 14 on 23rd August 2011

Time	Bat Species	Number of bats	Bat Activity	Map target Note
2020	Common Pipistrelle	1	Commuting	
2021	Soprano Pipistrelle	1	Commuting	1
2121	Soprano Pipistrelle	1	Commuting	1
2022	Soprano Pipistrelle	1	Commuting	1
2023	Common Pipistrelle	1	Commuting	1
2024	Soprano Pipistrelle	1	Commuting	1
2024	Myotis species	1	Heard not seen	1
2026	Common Pipistrelle	2	Commuting	1
2026	Soprano Pipistrelle	1	Commuting	1
2028	Myotis species	1	Commuting	1
2028	Myotis species	1	Heard not seen	
2029	Myotis species	2	Commuting	1
2029	Myotis species	1	Commuting	1
2030	Myotis species	1	Commuting	1
2030	Common Pipistrelle	1	Commuting	2
2030	Common Pipistrelle Common Pipistrelle and Soprano	2	Commuting	1
2032	Pipistrelle Common Pipistrelle and Soprano	3	Commuting	1
2032	Pipistrelle	5	Foraging	
2033	Common Pipistrelle Common Pipistrelle and Soprano	1	Foraging	
2034	Pipistrelle	2	Foraging	
2035	Soprano Pipistrelle	1	Foraging	
2036	Common Pipistrelle	4	Foraging	
2036	Common Pipistrelle	1	Foraging	
2037	Common Pipistrelle	1	Foraging	
2039	Myotis species	1	Heard not seen	
2039	Myotis species	1	Heard not seen	
2040	Soprano Pipistrelle	1	Foraging	
2043	Common Pipistrelle	2	Foraging	

2044	Soprano Pipistrelle	1	Foraging
2045	Common Pipistrelle	1	Foraging
2045	Soprano Pipistrelle	1	Foraging
2046	Soprano Pipistrelle	1	Foraging
2047	Common Pipistrelle	1	Foraging
2048	Common Pipistrelle	1	Foraging
2048	Common Pipistrelle, Soprano Pipistrelle	5+	Foraging
2048	Serotine	1	Heard not seen
2053	Pipistrelle	5+	Foraging
2053	Serotine	1	Heard not seen
2056	Pipistrelle	5+	Foraging
2100	Pipistrelle	5+	Foraging
2102	Pipistrelle	5+	Foraging
2102	Serotine	1	Heard not seen
2105	Pipistrelle	5+	Foraging
2110	Pipistrelle	5+	Foraging
2110	Myotis species	1	Heard not seen
2112	Pipistrelle	5+	Foraging
2117	Pipistrelle	5+	Foraging
2122	Serotine	1	Heard not seen
2122	Pipistrelle	5+	Foraging
2123	Serotine	1	Heard not seen
2123	Common Pipistrelle and Soprano	5+	Foraging

Pipistrelle			
Common Pipistrelle and Soprano			
2128	Pipistrelle	5+	Foraging
2128	Serotine	1	Heard not seen
Common Pipistrelle and Soprano			
2130	Pipistrelle	5+	Foraging
2131	Serotine	1	Heard not seen
Common Pipistrelle and Soprano			
2131	Pipistrelle	5+	Foraging
2131	Serotine	1	Heard not seen
Common Pipistrelle and Soprano			
2135	Pipistrelle	5+	Foraging
2135	Serotine	1	Heard not seen

Results of Manual Activity Survey Carried Out at Location 15 on 23rd August 2011

Time	Bat Species	Number of bats	Bat Activity	Map target Note
2032	Soprano Pipistrelle	1	Heard not seen	
2035	Noctule	1	Heard not seen foraging	
2035	Soprano Pipistrelle	1	Heard not seen	
2036	Common Pipistrelle	1	Heard not seen	
2039	Common Pipistrelle	1	Heard not seen	
2040	Soprano Pipistrelle	1	Commuting east to west along hedge	1
2040	Soprano Pipistrelle	1	Commuting along road north to south	2
2041	Common Pipistrelle	1	Heard not seen	
2041	Common Pipistrelle	1	Heard not seen	
2043	Common Pipistrelle	1	Heard not seen foraging	
2044	Common Pipistrelle	1	Heard not seen	
2044	Common Pipistrelle	1	Heard not seen	
2046	Common Pipistrelle	1	Foraging	4
2047	Common Pipistrelle	1	Foraging	4
2048	Common Pipistrelle	2	Heard not seen	1, 2
2049	Common Pipistrelle	1	Heard not seen	
2050	Common Pipistrelle	2	Heard not seen	
2051	Soprano Pipistrelle	2	Heard not seen	

2052	Common Pipistrelle	5	Height 3m, commuting	1, 3, 4
2053	Common Pipistrelle	2	Heard not seen	
2056	Common Pipistrelle	2	Commuting north to south along road	1
2056	Common Pipistrelle	1	Commting north to south	1,2
2056	Common Pipistrelle Common Pipistrelle and Soprano	1	Commting north to south	1
2057	Pipistrelle	2	Heard not seen	
2058	Common Pipistrelle	1	Heard not seen	
2059	Common Pipistrelle	1	Heard not seen	
2100	Common Pipistrelle	2	Heard not seen	
2101	Common Pipistrelle	1	Heard not seen	
2102	Common Pipistrelle	1	Heard not seen	
2103	Common Pipistrelle	2	Heard not seen	
2104	Common Pipistrelle	1	Heard not seen	
2105	Common Pipistrelle	1	Heard not seen	
2106	Common Pipistrelle	1	Heard not seen	
2107	Common Pipistrelle	1	Heard not seen	
2108	Common Pipistrelle	2	Heard not seen foraging	
2109	Common Pipistrelle	1	Heard not seen	
2110	Common Pipistrelle	1	Heard not seen	
2111	Common Pipistrelle	1	Heard not seen	
2112	Common Pipistrelle Common Pipistrelle and Soprano	1	Heard not seen	
2114	Pipistrelle	2	Commuting south to north	2
2115	Common Pipistrelle	2	Heard not seen foraging	
2116	Common Pipistrelle	2	Heard not seen	
2118	Common Pipistrelle	1	Heard not seen	
2120	Soprano Pipistrelle	1	Heard not seen	
2121	Common Pipistrelle	2	Heard not seen foraging	
2122	Common Pipistrelle	1	Heard not seen	
2123	Common Pipistrelle	3	Heard not seen	
2124	Common Pipistrelle	1	Heard not seen	
2125	Common Pipistrelle	1	Heard not seen	
2126	Common Pipistrelle	1	Heard not seen	
2128	Common Pipistrelle	2	Heard not seen foraging	
2130	Common Pipistrelle	2	Heard not seen	
2132	Common Pipistrelle	1	Heard not seen	
2133	Common Pipistrelle	1	Heard not seen	
2134	Common Pipistrelle	1	Heard not seen	
2136	Common Pipistrelle	1	Heard not seen	
2137	Common Pipistrelle	2	Heard not seen	

and Soprano
Pipistrelle

Results of Manual Activity Survey Carried Out at Location 17 on 23rd August 2011

Time	Bat Species	number of bats	Bat Activity	Map target Note
2022	Pipistrellus species	1	Heard not seen several passes	
2029	Soprano Pipistrelle	1	Commuting (5m)	F1
			Commuting east to west along	
2031	Common pipistrelle	1	hedge (4m)	F2
2031	Pipistrellus species	1	Heard not seen	
2033	Soprano Pipistrelle	1	Heard not seen	
	Nyctalus/Epseticus			
2036	species	1	Foraging over field (5m)	F1
	Nyctalus/Epseticus			
2039	species	1		F3
2039	Soprano Pipistrelle	1		F3
2039	Common pipistrelle	1	Heard not seen	
2046	Common pipistrelle	1	Commuting (5m)	F1
2048	Common pipistrelle	1	Foraging (5m)	F2, F3
2051	Common pipistrelle	1	Foraging	F4
2053	Common pipistrelle	1		
2055	Common pipistrelle	1	Foraging (7m)	F5
2056	Common pipistrelle	1	Foraging along edge of field	F3
2059	Myotis Species	1		F3
2059	Common pipistrelle	1		F4
2102	Common pipistrelle	1	Several passes	
2109	Common pipistrelle	1	Heard not Seen	
2109	Myotis Species	1	Heard not seen	
2113	Common pipistrelle	1	Heard not seen	
2113	Myotis Species	1	Heard not seen	
2116	Soprano Pipistrelle	1	Commuting	
2116	Myotis Species	1	Commuting	
	Common Pipistrelle and Soprano			
2119	Pipistrelle	2	Commuting	
2120	Myotis Species	1	Commuting	
2121	Soprano Pipistrelle	1	Commuting	
2121	Myotis Species	1	Commuting	
2123	Common Pipistrelle	2	Commuting	

	and Soprano		
	Pipistrelle		
2124	Common Pipistrelle	1	Commuting
2125	Soprano Pipistrelle	1	Commuting
2132	Myotis Species	1	Commuting
2133	Common Pipistrelle	1	Heard not seen

Results of Manual Activity Survey Carried Out at Location 18 on 23rd August 2011

Time	Bat Species	Number of bats	Bat Activity	Map target Note
2023	Myotis species	1	Heard not seen	
2026	Myotis species	1	Heard not seen	
2027	Common Pipistrelle	1	Heard not seen	
			Foraging east to west over	
2027	Soprano Pipistrelle	1	hedge (4m)	TN1
			Commuting east to west along	
2028	Common Pipistrelle	1	hedge (1.5m)	TN2
2032	Common Pipistrelle	1	Heard not seen	
2033	Common Pipistrelle	1	Heard not seen	
2034	Common Pipistrelle	1+	Heard not seen 4 passes	
			Commuting east to west along	
2036	Myotis species	1	hedge (3m)	TN2
2037	Common Pipistrelle	1	Heard not seen 3 passes	
2038	Common Pipistrelle	1	Heard not seen	
2039	Common Pipistrelle	1	Heard not seen	
			Commuting west to east along	
2039	Common Pipistrelle	1	hedge	TN3
2040	Common Pipistrelle	1	Commuting along hedge (5m)	TN3
2040	Myotis species	1	Commuting along hedge (4m)	TN2
2041	Common Pipistrelle	1	Commuting west to east (3m)	TN3
2042	Common Pipistrelle	1	Heard not seen	
2043	Common Pipistrelle	1	Heard not seen 2 passes	
			Foraging west to east along	
2044	Common Pipistrelle	1	hedge	TN4
2045	Common Pipistrelle	1	Heard not seen 2 passes	
2048	Soprano Pipistrelle	1	Heard not seen	
2101	Common Pipistrelle	1	Heard not seen	
			Foraging south to north down	
2102	Myotis species	1	field then west to east along	TN5

			hedge
2106	Soprano Pipistrelle	1	Heard not seen
2107	Soprano Pipistrelle	1	Heard not seen
2108	Soprano Pipistrelle	1	Heard not seen
2108	Myotis species	1	Heard not seen
2112	Common Pipistrelle	1	Heard not seen
2113	Common Pipistrelle	1	Heard not seen 2 passes
2114	Common Pipistrelle	1	Heard not seen 2 passes
2115	Common Pipistrelle	1	Heard not seen
2116	Common Pipistrelle	1	Heard not seen 2 passes
2117	Common Pipistrelle	1	Heard not seen
2119	Soprano Pipistrelle	2	Heard not seen
2119	Myotis species	1	Heard not seen
2120	Myotis species	1	Heard not seen
2123	Myotis species	1	Heard not seen
2125	Common Pipistrelle	1	Heard not seen
2132	Soprano Pipistrelle	1	Heard not seen foraging
2136	Common Pipistrelle	1	Heard not seen
2138	Common Pipistrelle	1	Heard not seen

Results of Manual Activity Survey Carried Out at Location 24 on 24th August 2011

Time	Bat Species	Number of bats	Bat Activity	Map target Note
2008	Soprano Pipistrelle	1		1
2012	Soprano Pipistrelle	1	Commuting (2.5m)	2
2019	Soprano Pipistrelle	1	Commuting	2
2023	Soprano Pipistrelle	1	c	3
2025	Soprano Pipistrelle	1	c	2
2031	Soprano Pipistrelle	1	Heard not seen	
2033	Myotis species	1	Heard not seen	
2034	Soprano Pipistrelle	1	Heard not seen	
2035	Myotis species	1	Heard not seen	
2036	Common Pipistrelle	1	Heard not seen	
2037	Myotis species	1	Heard not seen	
2039	Soprano Pipistrelle	1	Heard not seen	
2039	Myotis species	1	Heard not seen	
2041	Myotis species	1	Foraging	2
2041	Myotis species	1	Heard not seen	
2043	Myotis species	1	Foraging	2

2044	Common Pipistrelle	1	Foraging	4
2044	Myotis species	2	Foraging	
2045	Soprano Pipistrelle	1	Heard not seen	
2046	Soprano Pipistrelle	1	Heard not seen	
2047	Soprano Pipistrelle	2	Foraging	
2048	Myotis species	2	Foraging	
2050	Myotis species	1	Heard not seen	
2051	Myotis species	1	Heard not seen	
2052	Myotis species	1	Heard not seen	
2053	Myotis species	1	Foraging	
2053	Common Pipistrelle	1	Foraging	
2054	Myotis species	1	Foraging	
2054	Common Pipistrelle	2	Heard not seen	
2055	Myotis species	1	Foraging	
2055	Common Pipistrelle	2	Foraging	
2057	Brown long-eared	1	Heard not seen	
2058	Myotis species	1+	Foraging	
2058	Soprano Pipistrelle	1+	Foraging	
2059	Common Pipistrelle	1	Heard not seen	
	Common Pipistrelle and Soprano			
2100	Pipistrelle	2	Heard not seen	
2102	Common Pipistrelle	1	Heard not seen	
2104	Common Pipistrelle	1	Heard not seen	
2105	Brown long-eared	1	Heard not seen	
2105	Myotis species	1	Heard not seen	
2106	Brown long-eared	1	Heard not seen	
2107	Myotis species	2	Heard not seen	
2112	Common Pipistrelle	1	Heard not seen	
2113	Common Pipistrelle	1	Heard not seen	
2115	Common Pipistrelle	1	Heard not seen	
2116	Common Pipistrelle	1	Heard not seen	
2118	Common Pipistrelle	1	Heard not seen	
2119	Brown long-eared	1	Heard not seen	
2122	Myotis species	1	Foraging	
2124	Myotis species	1	Foraging	
2124	Soprano Pipistrelle	1	Foraging	
2125	Myotis species	2	Foraging	
2128	Myotis species	2	Foraging	
2131	Common Pipistrelle	1	Foraging	
2134	Common Pipistrelle	1	Foraging	