



The Sizewell C Project

6.13 Additional Ecology Survey Reports (October 2021)

Revision: 1.0
Applicable Regulation: Regulation 5(2)(a)
PINS Reference Number: EN010012

October 2021

Planning Act 2008
Infrastructure Planning (Applications: Prescribed
Forms and Procedure) Regulations 2009



CONTENTS

1	INTRODUCTION.....	1
2	TWO VILLAGE BYPASS SITE 2021 BAT BACKTRACKING SURVEY REPORT	1
3	HAZEL DORMOUSE SURVEY REPORT 2	1
4	2021 OTTER HOLT SURVEY REPORT (CONFIDENTIAL)	1
5	SSSI TRIANGLE TREE ASSESSMENT SURVEY REPORT – 2021..	2
6	2021 TERRESTRIAL INVERTEBRATE SURVEY REPORT.....	2
7	BAT STATIC MONITORING SURVEY REPORT 2021	2

TABLES

None Provided.

FIGURES

None Provided.

APPENDICES

APPENDIX A: TWO VILLAGE BYPASS SITE 2021 BAT BACKTRACKING SURVEY REPORT.....	3
APPENDIX B: HAZEL DORMOUSE SURVEY REPORT 2.....	4
APPENDIX C: 2021 OTTER HOLT SURVEY REPORT (CONFIDENTIAL)	5
APPENDIX D: SSSI TRIANGLE TREE ASSESSMENT SURVEY REPORT – 2021	6
APPENDIX E: 2021 TERRESTRIAL INVERTEBRATE SURVEY REPORT	7
APPENDIX F: BAT STATIC MONITORING SURVEY REPORT 2021.....	8

1 INTRODUCTION

1.1.1 This report has been prepared to include the reporting associated with the ecological survey work undertaken in 2021 and submitted to examination at Deadline 10. The appendices included within this report are:

- **Appendix A:** Two Village Bypass Site 2021 Bat Backtracking Survey Report
- **Appendix B:** Hazel Dormouse Survey Report 2
- **Appendix C:** 2021 Otter Holt Survey Report (Confidential)
- **Appendix D:** SSSI Tree Assessment Survey Report – 2021
- **Appendix E:** 2021 Terrestrial Invertebrate Survey Report
- **Appendix F:** Bat Static Monitoring Survey Report 2021

2 TWO VILLAGE BYPASS SITE 2021 BAT BACKTRACKING SURVEY REPORT

2.1.1 The **Two Village Bypass Bat Backtracking Survey Report** outlines the results of the 2021 woodland backtracking surveys conducted on the Sizewell C two village bypass site in September 2021.

3 HAZEL DORMOUSE SURVEY REPORT 2

3.1.1 The **Hazel Dormouse Survey Report 2** provides the results of the 2021 dormouse survey (first and second visit) conducted within woodland and hedgerow habitat within and in close proximity to the proposed order limits for the two village bypass.

4 2021 OTTER HOLT SURVEY REPORT (CONFIDENTIAL)

4.1.1 The **2021 Otter Holt Survey Report** provides the results of motion sensor camera traps which deployed outside the entrance of holts B, E and F and left in place for two week periods in each season; spring, summer and autumn.

5 SSSI TRIANGLE TREE ASSESSMENT SURVEY REPORT – 2021

- 5.1.1 The **SSSI Triangle Tree Assessment Survey Report - 2021** provides the results of the 2021 bat tree inspection surveys, conducted on the Sizewell C main development site in the SSSI Triangle area in 2021.

6 2021 TERRESTRIAL INVERTEBRATE SURVEY REPORT

- 6.1.1 The **2021 Terrestrial Invertebrate Survey Report** outlines the methodology and results of the terrestrial invertebrate sampling events and two moth trapping events were conducted during the Summer of 2021 from May until August. Two areas were sampled: the Coastal Strip and the proposed Sizewell C Platform.

7 BAT STATIC MONITORING SURVEY REPORT 2021

- 7.1.1 The **Bat Static Monitoring Survey Report 2021** outlines the methodology, schedule and results to date of the ongoing 2021 bat static surveys conducted in the main development site area between April and July.

APPENDIX A: TWO VILLAGE BYPASS SITE 2021 BAT BACKTRACKING SURVEY REPORT

CONTENTS

1	SUMMARY	1
2	OVERVIEW	6
3	METHODS.....	7
4	RESULTS	9
5	DISCUSSION	25
6	CONCLUSION.....	27
	REFERENCES	28
	FIGURES.....	29

TABLES

Table 1: Summary of survey results gathered between 2013 and 2020 to inform the DCO

Table 2: Dates of Woodland Backtracking

Table 3: Results of the Pond Wood backtracking surveys conducted

Table 4: Results of the Nuttery Belt backtracking surveys conducted

Table 5: Results of the Foxburrow Wood backtracking surveys conducted

FIGURES

Figure 1: Bat Backtracking Study Area

Figure 2: Bat Backtracking Survey Results – Pond Wood 2021

Figure 3: Bat Backtracking Survey Results – Nuttery Belt 2021

Figure 4: Bat Backtracking Survey Results – Foxburrow Wood 2021

APPENDICES

A.1. August and September 2021 Backtracking Survey Results for Pond Wood

A.2. August and September 2021 Backtracking Survey Results for Nuttery Belt

A.3. August and September 2021 Backtracking Survey Results for Foxburrow Wood

1 SUMMARY

- 1.1.1 This **Two Village Bypass Bat Backtracking Survey Report 2** outlines the results of the 2021 woodland backtracking surveys conducted on the Sizewell C two village bypass site in September 2021. To provide context, a summary of previous surveys conducted to inform the Development Consent Order (DCO) submission is provided, along with a summary of the bat species valuation and mitigation provided in the two village bypass Terrestrial Ecology and Ornithology Environmental Statement (ES) chapter [\[APP-425\]](#). This report supplements the **Two Village Bypass Bat Backtracking Survey Report 1** [\[REP7-027\]](#) submitted at Deadline 7.
- 1.1.2 These surveys were undertaken in response to a request for further information by the Examining Authority (ExA) dated 18 June 2021 [\[PD-027\]](#) and as detailed in [\[REP4-006\]](#).
- a) Species Status - Submitted Baseline Summary Overview (for DCO)
- 1.1.3 Bat surveys were undertaken of land associated with the proposed Sizewell C TVB Site by Arcadis between 2013 – 2020 [\[APP-426\]](#). These surveys were utilised to inform the two village bypass Terrestrial Ecology and Ornithology ES Chapter [\[APP-425\]](#) submitted as part of the DCO application and are summarised in this section of the report, to provide the context of the surveys conducted in 2021.
- 1.1.4 Summaries of the data utilised to inform the DCO application are provided in **Table 1** below.

Table 1: Summary of survey results gathered between 2013 and 2020 to inform the DCO.

Survey	Summary of Results.
Desk-study.	<p>Confirmed extensive use of the site and the surrounding area and landscape by bats, largely from data gathered by Suffolk Wildlife Trust (SWT).</p> <p>Six confirmed species of bat have been recorded historically within the study area, these being: noctule <i>Nyctalus noctula</i>, common pipistrelle <i>Pipistrellus pipistrellus</i>, soprano pipistrelle <i>Pipistrellus pygmaeus</i>, serotine <i>Eptesicus serotinus</i>, barbastelle <i>Barbastella barbastellus</i> and brown long-eared <i>Plecotus auritus</i>. Records were also identified for unspecified species within the <i>Plecotus</i> spp., <i>Myotis</i> spp. and <i>Pipistrellus</i> spp. groups.</p>
Habitat (landscape) appraisal.	<p>Confirmed a high-quality mosaic of habitats suitable for bats when foraging, commuting and roosting. The habitats were considered to be well established and mature, diverse in species composition and habitat type, and to offer many local roosting opportunities in farm buildings and mature woodlands/scattered trees.</p> <p>Also confirmed that there is generally excellent connectivity between the proposal site and the wider landscape, especially through the hedgerow network, and that the area is largely undeveloped.</p>
Tree surveys.	<p>Habitats within the site boundary predominantly consist of open arable land, which is of limited value for bats. However, the site also includes habitat features such as hedgerows and blocks of woodland which provide suitable foraging, commuting and roosting habitat. An assessment of trees within Nuttery Belt identified 13 trees with bat roost potential (five high potential, four medium potential, one low potential, and three negligible potential). Climbing surveys in 2021 did not record any evidence of bats.</p>
Transect surveys	<p>Activity and static detector surveys recorded at least 13 bat species/species groups within the site (Natterer's <i>Myotis nattereri</i>, common pipistrelle, soprano pipistrelle, Nathusius' pipistrelle</p>

NOT PROTECTIVELY MARKED

Survey	Summary of Results.
and automated detector surveys.	(<i>Pipistrellus nathusii</i>), serotine, barbastelle, noctule, brown long-eared, pipistrelle species, <i>Myotis</i> species, <i>Nyctalus</i> species, “big bat” and long-eared species (<i>Plecotus</i> spp). The activity surveys demonstrated that activity within the site and within adjacent habitats was dominated by common and soprano pipistrelle with low levels of other species recorded.

NOT PROTECTIVELY MARKED

b) Species Status 2021 Summary Overview – Bat Backtracking Surveys

i. Overview

- 1.1.5 Bat backtracking surveys were undertaken of land associated with the proposed Two Village Bypass site by Arcadis in August and September 2021, at Pond Wood, Nuttery Belt and Foxburrow Wood.

ii. Pond Wood

- 1.1.6 The bat species recorded within and around Pond Wood were common pipistrelle, barbastelle, brown long-eared bat, soprano pipistrelle, serotine, noctule, 'big bat' species, long-eared bat species, Nyctalus species and Myotis species. The surveys identified a number of bats foraging within and around the edges of Pond Wood. Bat activity was more frequent within areas of woodland to be retained. Commuting activity was also observed coming from Farnham Hall to the woodland and along the woodland edges. Activity was noticeably higher along the northern and western edges in August. No confirmed roosts within the woodland were identified.

iii. Nuttery Belt

- 1.1.7 The bat species recorded within and around Nuttery Belt were common pipistrelle, barbastelle, noctule, serotine, brown long-eared, soprano pipistrelle, big bat species, Nyctalus species and Myotis species. The surveys identified a number of bats commuting and foraging along the woodland edges. Activity was noticeably higher along the southern edge of the woodland in August. During the backtracking surveys no confirmed roosts were identified, although two common pipistrelle bats were observed leaving the southern edge of the woodland some 50 minutes after sunset. Therefore one pipistrelle roost was considered likely to be located within the northern section of this woodland, around TM 36324 59499, identified through bat behaviour.

iv. Foxburrow Wood

- 1.1.8 The bat species recorded within and around Foxburrow Wood were common pipistrelle, barbastelle, brown long-eared, soprano pipistrelle, noctule, serotine, big bat species, Nyctalus species and Myotis species. Bats were observed commuting and foraging along the woodland edges, in particular along the tree lined track to the south of the woodland. No confirmed roosts within this woodland were identified.

c) 2021 Conclusion

- 1.1.9 The results of the 2021 bat backtracking survey do not change the assessment provided in the **Volume 5, Chapter 7** of the **ES** [\[APP-425\]](#) which was based on the previous baseline survey. Similarly, the mitigation proposed for the two village bypass in the **Sizewell C Project Bat Method Statement** (Doc Ref. 9.92 (A)) **Bat Non-Licensable Method Statement** (Doc Ref. 8.11(F)) remains the same as in the ES, and the conservation status of bats will not be impacted by the proposed development on the site. The findings of these surveys will be used to detail the mitigation required, inform licenses and to provide an updated baseline for future monitoring.
- 1.1.10 Once the proposed two village bypass is completed, and associated habitat creation and reinstatement has matured, it is considered that there will be an increase in greater habitat availability for use by bats.

2 OVERVIEW

a) The Aims of the 2021 Backtracking Surveys

2.1.1 The aims of the 2021 bat backtracking survey were to:

- update the existing bat baseline which can be used for future monitoring;
- establish the potential roost resource present within and adjacent to the proposed TVB site; and
- provide data on bat activity and use of the woodland blocks to inform licensing and details of mitigation.

2.1.2 Please refer to Section 2 of the **Two Village Bypass Bat Backtracking Survey Report 1** [[REP7-027](#)] submitted at Deadline 7 for a description of the site, a summary of the baseline and proposed mitigation.

3 METHODS

a) Survey Methodology

3.1.1 Details of the survey methodology, data analysis methodology, survey limitations and analysis limitations are set out in the **Two Village Bypass Bat Backtracking Survey Report 1** [[REP7-027](#)].

3.1.2 This report outlines the results from the surveys since the **Two Village Bypass Bat Backtracking Survey Report 1** [[REP7-027](#)], and where additional data analysis had modified the results reported in the first surveys.

3.1.3 **Table 2** below outlines the dates that woodland backtracking was conducted.

Table 2: Dates of Woodland Backtracking

Survey Date	Woodland	Sunset	Dusk Temp. °C
1st Survey			
Dusk 16/08/2021	Pond Wood	20:18	17
Dusk 17/08/2021	Nuttery Belt	20:16	19
Dusk 18/08/2021	Foxburrow Wood	20:13	21
2nd Survey			
Dusk 21/09/2021	Pond Wood	18:55	17
Dusk 20/09/2021	Nuttery Belt	18:58	17
Dusk 22/09/2021	Foxburrow Wood	18:52	16

b) Survey Limitations

3.1.4 Within woodlands with dense canopy cover, it is often very hard to observe a bat leaving a roost, this is a constraint of finding roosts in trees. While any bats observed returning to roost would have been recorded, the objective

of these surveys was to assess levels of bat activity and movement through the woodland.

c) **Analysis Limitations**

- 3.1.5 For some of the bat passes, it was possible to determine the broad group (i.e. “big bat” (Leisler’s, serotine and noctule) or myotis), but not possible to definitively determine the species. Where this was the case, the broad group was utilised within the analysis and mapping. This is not a significant constraint as the differentiation of these calls is unlikely to impact upon the identification of roosts or the species / woodland valuation.

4 RESULTS

4.1.1 This section of the report outlines the results of the woodland backtracking surveys conducted at Pond Wood, Nuttery Belt and Foxburrow Wood woodlands.

a) Pond Wood

i. Woodland Description

4.1.2 Pond Wood comprised a block of semi-mature broadleaved plantation woodland (likely to have been a formal landscape feature for adjacent manor house), and the eastern part is recorded on the Ancient Woodland Inventory as replanted ancient woodland, supporting a canopy of predominantly Sycamore (*Acer pseudoplatanus*) and Ash (*Fraxinus excelsior*) with scattered mature Pedunculate Oak (*Quercus robur*) trees on woodland edge and a number of introduced conifer species throughout, along with Cherry Laurel (*Prunus laurocerasus*). A very sparse understorey comprising some scattered Elder (*Sambucus nigra*), Hazel (*Corylus avellana*), Hawthorn (*Crataegus monogyna*) and Sycamore. Due to the season the ground flora cover appeared quite sparse with some Dog's Mercury (*Mercurialis perennis*) and Bluebell (*Hyacinthoides non-scripta*) recorded. This woodland is a continuation of the gardens from adjacent properties and some low level management was apparent. A number of wet and seasonally dry ponds were recorded within the woodland.

ii. Bat Back Tracking Results

4.1.3 The bat species recorded within and around this woodland were Common pipistrelle, barbastelle, brown long-eared, soprano pipistrelle, serotine, noctule, big bat species, long-eared bat species, Nyctalus species and Myotis species. It was not possible to confirm any roost sites within this woodland block, however early activity suggests that bats are likely to be roosting within the woodland, particularly pipistrelle and noctule.

b) Nuttery Belt Wood

i. Woodland Description

4.1.4 Nuttery Belt comprises a small block of semi-mature broadleaved woodland with an open canopy of Ash, Field Maple (*Acer campestre*) and Wild Cherry (*Prunus avium*), with scattered mature Pedunculate Oak trees. A generally sparse understorey (with exception of woodland edges) supported a number of species including English Elm (*Ulmus minor*) Hawthorn, Holly (*Ilex*

aquifolium), Elder, Blackthorn (*Prunus spinosa*) and Hazel. Due to the season and extensive growth of Bramble (*Rubus fruticosus* agg.), Common Nettle (*Urtica dioica*) and Cow Parsley (*Anthriscus sylvestris*) the ground flora was difficult to assess, however, Bluebell and Primrose (*Primula vulgaris*) were recorded, the woodland also shows some disturbance from game management.

ii. Bat Back Tracking Results

- 4.1.5 The bat species recorded within and around this woodland were common pipistrelle, barbastelle, noctule, serotine, brown long-eared, soprano pipistrelle, big bat species, *Nyctalus* species and *Myotis* species. It was not possible to confirm any roost sites within this woodland block. On 17 August 2021 two common pipistrelle bats were observed leaving the southern edge of the woodland some 50 minutes after sunset. On 20 September 2021 one pipistrelle roost was considered likely to be located within the northern section of this woodland, around TM 36324 59499, identified through bat behaviour, but the exact location of this roost was not identified and its presence not confirmed. As such, there is strong evidence that pipistrelles roost within this woodland.

c) Foxburrow Wood

i. Woodland Description

- 4.1.6 Foxburrow Wood is a large block of semi-natural broadleaved woodland and is recorded on the Ancient Woodland Inventory as replanted ancient woodland and comprises two distinct woodland compartments. To the east the canopy is predominantly tall semi-mature Sycamore with scattered mature and semi-mature Pedunculate Oak, Ash and Beech (*Fagus sylvatica*) trees, generally restricted to the woodland edge. The relatively sparse understorey showed some evidence of recent underplanting, and supported a number of species including Hawthorn, English Elm, Sycamore, Hazel and Blackthorn. To the west the woodland supports a more mature canopy with Hornbeam (*Carpinus betula*), Beech, Ash and Pedunculate Oak, but still supporting tall semi-mature Sycamore. The understorey remains constant across the whole woodland with Cherry Laurel and Rhododendron (*Rhododendron ponticum*) recorded in the west. Due to the season the ground flora was generally sparse across the woodland as a whole but evidence of abundant Bluebell growth was still apparent.

ii. Bat Back Tracking Results

4.1.7 The bat species recorded within and around this woodland were common pipistrelle, barbastelle, brown long-eared, soprano pipistrelle, noctule, serotine, big bat species, Nyctalus species and Myotis species. It was not possible to confirm any roost sites within this woodland block.

d) Summary of Results

4.1.8 **Tables 3, 4 and 5** below, present the results of the woodland backtracking surveys that were conducted. **Appendices 1, 2 and 3** at the end of this report present the bat passes recorded for each species by surveyor location for backtracking surveys. A map of the woodland locations is presented in **Figure 1**. A map of the locations of surveyors is presented in **Figure 2** (Pond Wood), **Figure 3** (Nuttery Belt) and **Figure 4** (Foxburrow Wood).

Table 3: Results of the Pond Wood backtracking surveys conducted

Survey Date (Dusk). Surveyor Grid Reference	Bat Roost Confirmed?	Potential Bat Roost Identified?	Bat Foraging Areas Identified?	Bat Commuting Routes Identified
16/08/2021 AM TM 36415 59614	No	Potential identified within the woodland, with pipistrelles heard within 16 minutes of sunset and noctule heard within 7 minutes after sunset.	Generally, bats foraging up and down woodland edge and at canopy height.	Surveyor deployed on southern edge of woodland, some evidence of commuting bats.
16/08/2021 EM TM 36301 59718	No	Potential identified within the woodland, with pipistrelles and Nyctalus sp.	No	Surveyor deployed on north-western edge of woodland,

Survey Date (Dusk). Surveyor Grid Reference	Bat Roost Confirmed?	Potential Bat Roost Identified?	Bat Foraging Areas Identified?	Bat Commuting Routes Identified
		heard within 8 minutes of sunset.		some evidence of commuting bats.
16/08/2021 MH TM 36604 59613	No	Potential identified within the woodland, with pipistrelles and Nyctalus sp. heard within 12 minutes of sunset. Myotis sp. and brown long-eared bat were heard within 32 minutes of sunset.	Generally, bats foraging up and down woodland edge and at canopy height. Soprano pipistrelle foraging over ponds within woodland.	Surveyor deployed on eastern edge of woodland, no evidence of commuting bats.
16/08/2021 RR TM 36513 59718	No	Potential identified within the woodland, with pipistrelle heard at sunset and Myotis sp. heard within 52 minutes of sunset.	Generally, bats foraging up and down woodland edge and within field to north.	Surveyor deployed on northeast edge of woodland south of Farnham Hall, evidence that bats are commuting from this direction

Survey Date (Dusk). Surveyor Grid Reference	Bat Roost Confirmed?	Potential Bat Roost Identified?	Bat Foraging Areas Identified?	Bat Commuting Routes Identified
				towards the woodland.
21/09/2021 AR TM 36349 59655	No	Potential identified within the woodland, with but soprano pipistrelle heard within 12 minutes after sunset.	Possible foraging (Heard Not Seen (HNS))	Surveyor deployed on southern edge of woodland, single bat was identified commuting west through woodland.
21/09/2021 DO TM 36474 59628	No	Potential identified within the woodland, with soprano pipistrelles heard within 17 minutes of sunset, Nyctalus sp. heard within 6 minutes of sunset and brown long-eared bat heard within 44 minutes of sunset.	No	Surveyor deployed on southern edge of woodland, evidence of commuting Nyctalus sp. was identified.

Survey Date (Dusk). Surveyor Grid Reference	Bat Roost Confirmed?	Potential Bat Roost Identified?	Bat Foraging Areas Identified?	Bat Commuting Routes Identified
21/09/2021 EP TM 36291 59642	No	Myotis sp. heard 35 minutes after sunset – does not necessarily suggest a nearby roost.	No	Surveyor deployed on western edge of woodland, no evidence of commuting bats.
21/09/2021 RR TM 36381 59655	No	Potential identified within the woodland, with pipistrelle heard within 18 minutes, noctule heard within 3 minutes, probable brown long- eared bat heard within 22 minutes and barbastelle heard within 33 minutes after sunset.	Possible foraging (HNS)	Surveyor deployed on southern edge of woodland, evidence of bats commuting both north and south on separate occasions through woodland.
21/09/2021 SP TM 36451 59672	No	Myotis sp. heard within 44 minutes of sunset – does not necessarily	No	Surveyor deployed on eastern side of woodland, no evidence

NOT PROTECTIVELY MARKED

Survey Date (Dusk). Surveyor Grid Reference	Bat Roost Confirmed?	Potential Bat Roost Identified?	Bat Foraging Areas Identified?	Bat Commuting Routes Identified
		suggest a nearby roost.		of commuting bats.
21/09/2021 DS TM 36525 59613	No	Potential identified within the woodland, with soprano pipistrelles and noctule heard within 4 minutes after sunset. Myotis sp., barbastelle and brown long-eared bat heard between 31-40 minutes after sunset.	Yes, pipistrelles foraging around ponds.	Surveyor deployed on the most southern extent of woodland, no evidence of commuting bats.

NOT PROTECTIVELY MARKED

Table 4: Results of the Nuttery Belt backtracking surveys conducted

Survey Date (Dusk). Surveyor Grid Reference	Bat Roost Confirmed?	Potential Bat Roost Identified?	Bat Foraging Areas Identified?	Bat Commuting Routes Identified
17/08/2021 AM TM 36257 59484	No	No. Pipistrelle heard within 44 minutes of sunset.	No	No. Surveyor deployed on western edge of woodland.
17/08/2021 EM TM 36283 59373	No	Potential identified within the woodland, with three common pipistrelle seen emerging from woodland some 50 minutes after sunset. Pipistrelle heard within 17 minutes, brown long-eared bat and Myotis sp. heard within 36-54 minutes of sunset.	No	No. Surveyor deployed on southern edge of woodland.
17/08/2021 MH	No	Potential identified	Several bats observed	Many bat passes

Survey Date (Dusk). Surveyor Grid Reference	Bat Roost Confirmed?	Potential Bat Roost Identified?	Bat Foraging Areas Identified?	Bat Commuting Routes Identified
TM 36336 59468		within the woodland, with pipistrelle heard within 17 minutes, brown long-eared bat heard within 46 minutes and Myotis sp. heard within 56 minutes of sunset.	foraging along woodland edge.	likely to just be foraging. Surveyor deployed on eastern edge of woodland.
17/08/2021 RR TM 36288 59452	No	Potential identified within the woodland, with pipistrelle heard within 14 minutes of sunset.	Foraging bats recorded (and seen) within the woodland.	No. Surveyor deployed within southern half of woodland.
20/09/2021 AR TM 36305 59430	No	Potential identified within the woodland, with soprano pipistrelles heard within 23 minutes after sunset.	Bats recorded (and seen) foraging along the woodland edge.	No. Surveyor deployed on the south-eastern edge of woodland.

Survey Date (Dusk). Surveyor Grid Reference	Bat Roost Confirmed?	Potential Bat Roost Identified?	Bat Foraging Areas Identified?	Bat Commuting Routes Identified
20/09/2021 DO TM 36337 59498	No	Potential identified within the woodland, with pipistrelles and Myotis sp. heard within 20-27 minutes after sunset.	No	No. Surveyor deployed on the eastern edge of woodland.
20/09/2021 EP TM 36263 59382	No	Potential identified within the woodland, with pipistrelles heard within 22 minutes after sunset and noctule heard within 10 minutes after sunset.	No	Surveyor deployed on the southern edge of woodland. Evidence of bat commuting south along hedgerow in south-western corner.
20/09/2021 RR TM 36349 59537	No	Yes, evidence of potential pipistrelle roost at TM 36324 59499. Pipistrelles heard within	Bats recorded (and seen) foraging at TM 36324 59499	Yes. Surveyor deployed on the north-eastern tip of woodland. Evidence of bats

Survey Date (Dusk). Surveyor Grid Reference	Bat Roost Confirmed?	Potential Bat Roost Identified?	Bat Foraging Areas Identified?	Bat Commuting Routes Identified
		14 minutes, noctule heard within 6 minutes and myotis species heard within 17 minutes after sunset.		commuting from the north to south along the eastern edge of woodland.
20/09/2021 SP TM 36281 59475	No	Pipistrelles heard within 35 minutes after sunset	Individual pipistrelle recorded (and seen) foraging within the woodland.	No. Surveyor deployed on the south-western edge of woodland.
20/09/2021 DS TM 36328 59540	No	Yes, evidence of potential pipistrelle roost at TM 36324 59499. Pipistrelles heard within 14 minutes, noctule heard within 5 minutes and Myotis sp. heard within 18 minutes after sunset.	Several bats observed foraging along woodland edge.	No. Surveyor deployed on the north-western edge of woodland.

Table 5: Results of the Foxburrow Wood backtracking surveys conducted

Survey Date (Dusk). Surveyor Grid Reference	Bat Roost Confirmed?	Potential Bat Roost Identified?	Bat Foraging Areas Identified?	Bat Commuting Routes Identified
18/08/2021 AM TM 37127 59792	No	No, but pipistrelle heard within 31 minutes and myotis species heard within 59 minutes of sunset.	No	Surveyor deployed on eastern edge of woodland, evidence that bats are commuting from the north to south along the woodland edge.
18/08/2021 EM TM 36960 59782	No	Potential identified within the woodland, with pipistrelle heard within 9 minutes, big bat heard within 12 minutes and brown long-eared bat heard within 50 minutes of sunset.	Several bats foraging along the track to the south of the woodland.	Surveyor deployed on southern edge of woodland on track. Many bat passes along track to south of woodland, unable to differentiate foraging and commuting bats.

Survey Date (Dusk). Surveyor Grid Reference	Bat Roost Confirmed?	Potential Bat Roost Identified?	Bat Foraging Areas Identified?	Bat Commuting Routes Identified
18/08/2021 MH TM 36973 59926	No	Potential identified within the woodland, with pipistrelle and nyctalus sp. heard within 21 minutes, and Myotis sp. heard within 52 minutes of sunset.	Several bats foraging along northern edge of woodland	Surveyor deployed on northern edge of woodland. A small number of bats identified commuting in a west to east direction along woodland edge at start of survey.
18/08/2021 RR TM 36810 59893	No	Potential identified within the woodland, with pipistrelle heard within 23 minutes, noctule heard within 22 minutes, brown long-eared bat heard within 33 minutes and myotis sp. heard	Several bats recorded foraging over field and woodland edge and around hedgerow along track.	No. Surveyor deployed on western edge of woodland.

Survey Date (Dusk). Surveyor Grid Reference	Bat Roost Confirmed?	Potential Bat Roost Identified?	Bat Foraging Areas Identified?	Bat Commuting Routes Identified
		within 56 minutes of sunset.		
22/09/2021 AR TM 36837 59942	No	No, but pipistrelle and serotine heard within 37 minutes and brown long-eared bat heard within 56 minutes of sunset.	Individual pipistrelle recorded (and seen) foraging at woodland edge.	Surveyor deployed on north-western corner of woodland. Individual serotine identified flying north to south towards woodland.
22/09/2021 DO TM 37030 59776	No	Potential identified within the woodland, with pipistrelle and Nyctalus sp. heard within 10-14 minutes and brown long-eared and myotis sp. Heard within 45-49 minutes of sunset.	Bats recorded (and seen) foraging at surveyor location and along disused track south of surveyor location.	No. Surveyor deployed on south-eastern edge of woodland.

Survey Date (Dusk). Surveyor Grid Reference	Bat Roost Confirmed?	Potential Bat Roost Identified?	Bat Foraging Areas Identified?	Bat Commuting Routes Identified
22/09/2021 EP TM 36850 59842	No	Potential identified within the woodland, with pipistrelles heard within 12 minutes of sunset and myotis sp. and brown long-eared bat heard within 39 minutes of sunset.	No	Surveyor deployed on south-western corner of woodland. Possible commuting of Big bats identified flying above woodland in both west and east directions. A small number of bats identified commuting in a west to east direction along the road south of surveyor location.
22/09/2021 RR TM 36956 59902	No	Potential identified within the woodland, with pipistrelle and noctule heard within 13	No	Surveyor deployed on northern edge of woodland, evidence of commuting pipistrelle

Survey Date (Dusk). Surveyor Grid Reference	Bat Roost Confirmed?	Potential Bat Roost Identified?	Bat Foraging Areas Identified?	Bat Commuting Routes Identified
		minutes of sunset.		and big bat were identified.
22/09/2021 SP TM 37040 59866	No	Potential identified within the woodland, with Myotis sp., noctule and pipistrelle heard within 6-13 minutes of sunset.	Bats recorded (and seen) foraging at surveyor location in canopy.	No. Surveyor deployed on north-eastern edge of woodland.
22/09/2021 DS TM 36952 59801	No	Potential identified within the woodland, with pipistrelle and noctule heard within 10 minutes of sunset and brown long-eared heard within 39 minutes of sunset.	Bats recorded (and seen) foraging along disused track south of surveyor location.	No. Surveyor deployed on southern edge of woodland.

5 DISCUSSION

5.1.1 The 2021 survey results for bat backtracking surveys identified the potential for trees to support roosting bats within woodland associated with the proposed two village bypass site.

5.1.2 Tree roosts are highly transitional (a strategy thought to be used by bats to reduce the likelihood of parasitism and predation) and therefore the chance of detection of a tree roost is reduced in comparison to other structures as the likelihood of presence during any one survey is reduced. In addition, it is possible the proposed development would result in the loss of multiple trees with bat roost potential in any one particular area. It is therefore important to assume a proportion of potential roosts may be used by roosting bats at one time or another. This is an advantage of backtracking surveys, as they not only seek to identify confirmed roosts, but also allow for the assessment of likely roosting use within a woodland and surrounding areas.

a) Pond Wood

5.1.3 No confirmed or potential roosts were identified within Pond wood. Pipistrelle, Nyctalus sp., Myotis sp., brown long-eared bat and barbastelle were all recorded during the surveys within reported emergence times for tree-roosting bat species in relation to sunset (Ref. 1). This suggests that it is possible these bats emerged from tree roosts from within Pond Wood. Foraging areas were identified on the south, east and north eastern edges of the woodland. Foraging was also identified within the field north of the woodland and surveyor location TM 36513 59718 and over the ponds within the woodland observed at surveyor location TM 36525 59613. Some evidence suggests bats are commuting along the south, north-western and north-eastern woodland edges, through the woodland and from Farnham Hall towards the woodland. All of the commuting routes and foraging areas identified that are associated with the woodland were located within the areas of the woodland which are proposed to be retained.

b) Nuttery Belt

5.1.4 No confirmed roosts were identified within Nuttery belt wood. On 20 September 2021 one pipistrelle roost was considered likely to be located within the northern section of this woodland, around TM 36324 59499, identified through bat behaviour, but the exact location of this roost was not identified. Pipistrelle, Nyctalus sp., Myotis sp. and brown long-eared bat were all recorded within reported emergence times in relation to sunset (Ref. 1). This suggests that it is possible these bats emerged from tree roosts from

within Nuttery Belt. Foraging areas were identified on the north-western and eastern edges of the woodland. Foraging was also identified within the woodland itself. Evidence suggests bats are commuting along the east and southern edges of the woodland heading south along the hedgerow present in the south western corner of the woodland. This area of southern woodland and the adjacent hedgerow are proposed to be removed. The northern extent of the woodland where the likely pipistrelle roost was identified is proposed for removal.

c) **Foxburrow Wood**

- 5.1.5 No confirmed or potential roosts were identified within Foxburrow Wood. Pipistrelle, Nyctalus sp., Myotis sp. and brown long-eared bat were all recorded within reported emergence times in relation to sunset (Ref. 1). This suggests that it is possible these bats emerged from tree roosts from within Foxburrow Wood. Foraging areas were identified along the northern woodland edge and along a disused track on the southern edge of the woodland. Foraging was also identified on the western woodland edge, within the adjacent field west of the woodland and along the hedgerow / track south of surveyor location TM 36810 59893. Evidence suggests bats are commuting south along the eastern woodland edge and big bats were recorded commuting in multiple directions above the woodland. A small number of bats were identified commuting from west to east along both the north and south woodland edges. All of the commuting routes and foraging areas identified that are associated with the woodland were located within the areas of the woodland which are proposed to be retained.

d) **Overall Summary**

- 5.1.6 The likely presence of a potential pipistrelle roost location within Nuttery Belt does not represent an exhaustive list of the roosts present within these woodlands. This is due to the large number of trees and that bats roosting within trees are highly mobile. Additional surveys (bat tree inspections) would be required to gain further insight into the roost resource present. The approach to the identification of individual roosts is outlined in the **Sizewell C Project Bat Licence Method Statement** (Doc Ref. 9.92(A)).

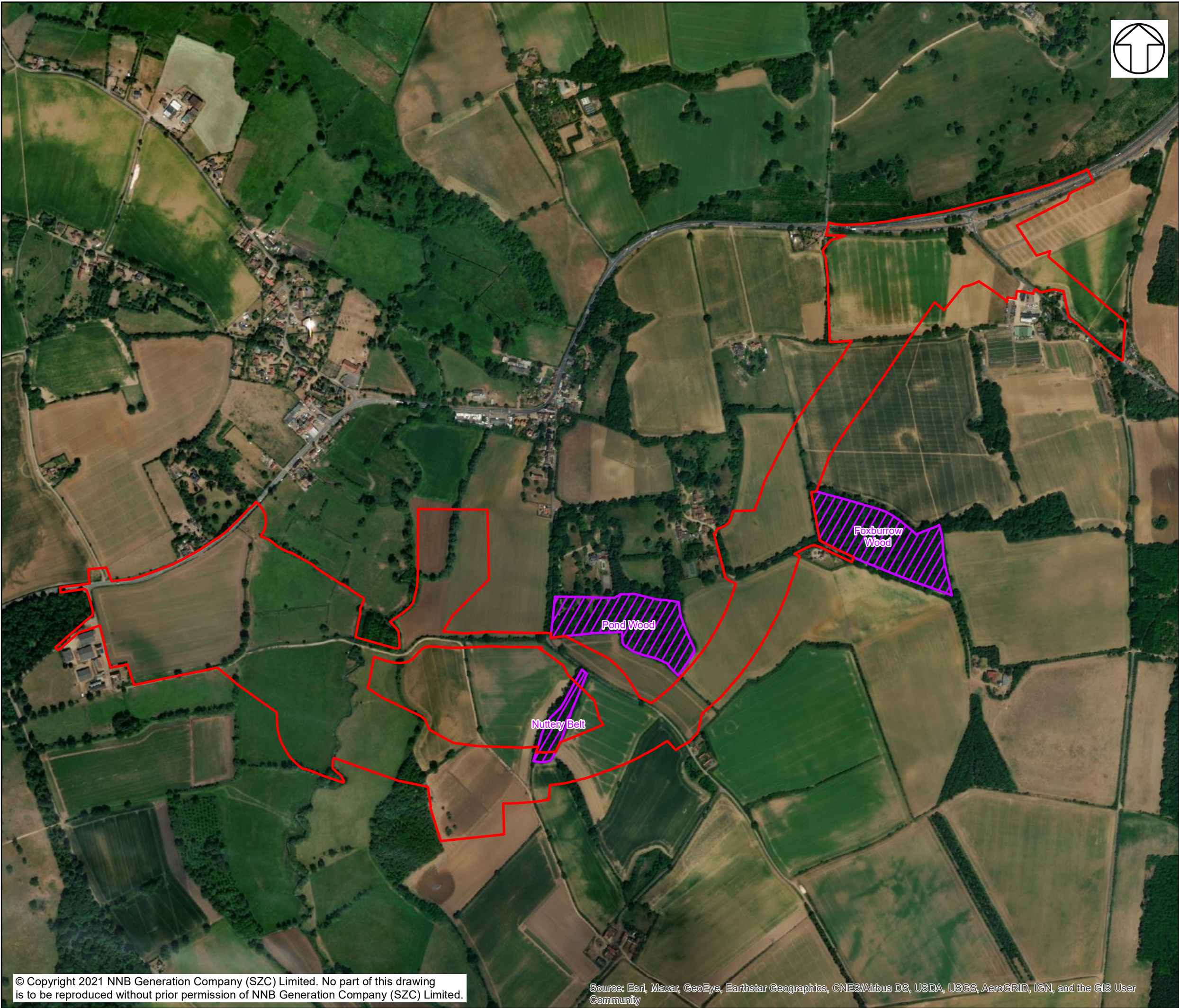
6 CONCLUSION

- 6.1.1 Based on the current survey results presented above, the overall assessment of impacts on bats presented at **Section 7.6 in Volume 5, Chapter 7** of the ES [\[APP-425\]](#) has not changed. The proposed mitigation submitted for the Sizewell C Two Village Bypass DCO in the **Sizewell C Project Bat Method Statement** (Doc Ref. 9.92 (A)) and **Bat Non-Licensable Method Statement** (Doc Ref. 8.11(F)) also remains unchanged. It is considered that the conservation status of the bat assemblage will not be impacted by the proposed development on the site.
- 6.1.2 The backtracking results of Pond Wood provided limited evidence of bat roosting behaviour (although bats were recorded at times that indicated nearby roosts). It is proposed that Pond Wood will be retained in its entirety and therefore it is considered that the overall impact on any potential roosting bats would be low.
- 6.1.3 The backtracking results provided evidence of a potential pipistrelle roost within Nuttery Belt Wood. A number of high potential trees were identified within the Nuttery Belt as detailed in the **Bat Roost Surveys in Trees – Associated Development Sites: Tree Roost Inspection Report 2021** [\[REP2-121\]](#). Though a small area of this woodland is proposed for clearance, with mitigation proposed and secured in the **Sizewell C Project Bat Method Statement** (Doc Ref. 9.92 (A)), the effect is not considered to be significant.
- 6.1.4 The backtracking results provided limited evidence of bat roosting behaviour within Foxburrow Wood (although bats were recorded at times that indicated nearby roosts). It is proposed that Foxburrow wood will be retained in its entirety and therefore it is considered that the overall impact on any potential roosting bats would be low.

REFERENCES

1. Henry Andrews, 2018. Bat Roosts in Trees; A Guide to Identification and Assessment for Tree-Care and Ecology Professionals. Exeter: Pelagic Publishing.

FIGURES



KEY
[Red outline] DEVELOPMENT SITE BOUNDARY
[Purple hatched] TVB WOODLANDS

NOT PROTECTIVELY MARKED

COPYRIGHT
Reproduced from Ordnance Survey map with the permission of Ordnance Survey on behalf of the controller of Her Majesty's Stationary Office © Crown Copyright (2021). All Rights reserved. NNB GenCo 0100060408.

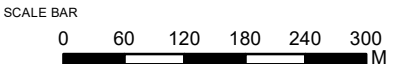


DOCUMENT:
SIZEWELL C
TVB BACK-TRACKING REPORT 2021

DRAWING TITLE:
STUDY AREA

DRAWING NO:
FIGURE 1

DATE: SEPT 2021	DRAWN: R.C.	SCALE: 1:7,500 @A3	REV: 01
--------------------	----------------	-----------------------	------------





- KEY**
- DEVELOPMENT SITE BOUNDARY
 - SURVEYOR LOCATION**
 - AUGUST 2021
 - SEPTEMBER 2021
 - INDICATOR OF AREA COVERED
 - POND WOOD

NOT PROTECTIVELY MARKED

COPYRIGHT

Reproduced from Ordnance Survey map with the permission of Ordnance Survey on behalf of the controller of Her Majesty's Stationary Office © Crown Copyright (2021). All Rights reserved. NNB GenCo 0100060408.



DOCUMENT:
SIZEWELL C
TVB BACK-TRACKING REPORT 2021

DRAWING TITLE:
POND WOOD
SURVEYOR LOCATIONS AND INDICATION OF
AREAS COVERED

DRAWING NO: FIGURE 2			
DATE: SEPT 2021	DRAWN: R.C.	SCALE: 1:1,250 @A3	REV: 01
SCALE BAR 0 10 20 30 40 50 M			



- KEY**
- DEVELOPMENT SITE BOUNDARY
 - SURVEYOR LOCATION**
 - AUGUST 2021
 - SEPTEMBER 2021
 - INDICATOR OF AREA COVERED
 - NUTTERY BELT

NOT PROTECTIVELY MARKED

COPYRIGHT
Reproduced from Ordnance Survey map with the permission of Ordnance Survey on behalf of the controller of Her Majesty's Stationary Office © Crown Copyright (2021). All Rights reserved. NNB GenCo 0100060408.

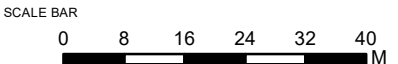


DOCUMENT:
SIZEWELL C
TVB BACK-TRACKING REPORT 2021

DRAWING TITLE:
NUTTERY BELT
SURVEYOR LOCATIONS AND INDICATION OF
AREAS COVERED

DRAWING NO:
FIGURE 3

DATE: SEPT 2021	DRAWN: R.C.	SCALE: 1:1,000 @A3	REV: 01
---------------------------	-----------------------	------------------------------	-------------------





- KEY**
- DEVELOPMENT SITE BOUNDARY
 - SURVEYOR LOCATION**
 - AUGUST 2021
 - SEPTEMBER 2021
 - INDICATOR OF AREA COVERED
 - FOXBURROW WOOD

NOT PROTECTIVELY MARKED

COPYRIGHT
Reproduced from Ordnance Survey map with the permission of Ordnance Survey on behalf of the controller of Her Majesty's Stationary Office © Crown Copyright (2021). All Rights reserved. NNB GenCo 0100060408.

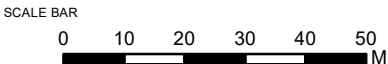


DOCUMENT:
SIZEWELL C
TVB BACK-TRACKING REPORT 2021

DRAWING TITLE:
FOXBURROW WOOD
SURVEYOR LOCATIONS AND INDICATION OF
AREAS COVERED

DRAWING NO:
FIGURE 4

DATE:	DRAWN:	SCALE:	REV:
SEPT 2021	R.C.	1:1,250 @A3	01



APPENDICES

A.1. August and September 2021 Backtracking Survey Results for Pond Wood

August 2021 backtracking survey results - Bat passes recorded for each species by surveyor location

Species Recorded	EM	AM	RR	MH	Total
Barbastelle	0	2	0	0	2
Brown long-eared bat	1	0	1	8	10
<i>Myotis</i> sp.	2	1	2	4	9
Common pipistrelle	160	6	50	17	233
Soprano pipistrelle	71	10	100	90	271
Noctule	0	5	0	7	12
<i>Nyctalus</i> sp.	1	2	0	26	29
Serotine	1	1	0	32	34
Big bat sp.	4	2	23	26	55

September 2021 backtracking survey results - Bat passes recorded for each species by surveyor location

Species Recorded	AR	DO	EP	RR	DS	SP	Total
Barbastelle	0	0	0	5	5	0	10
Brown long-eared bat	0	2	0	0	0	0	2
Long-eared bat sp.	0	0	0	9	1	0	10
<i>Myotis</i> sp.	0	1	1	0	41	1	44
Common pipistrelle	0	7	0	43	28	0	78
Soprano pipistrelle	3	70	0	6	103	0	182
Noctule	0	0	0	5	6	0	11
<i>Nyctalus</i> sp.	0	10	0	4	0	1	15
Big bat sp.	0	18	0	5	4	0	27

A.2. August and September 2021 Backtracking Survey Results for Nuttery Belt

August 2021 backtracking survey results - Bat passes recorded for each species by surveyor location

Species Recorded	EM	AM	RR	MH	Total
Barbastelle	10	1	9	1	21
Brown long-eared bat	17	0	0	4	21
<i>Myotis</i> sp.	2	0	0	3	5
Common pipistrelle	49	1	13	37	100
Soprano pipistrelle	74	0	11	14	99
Pipistrelle sp.	0	0	0	1	1
Noctule	1	0	3	3	7
<i>Nyctalus</i> sp.	2	0	0	6	8
Serotine	1	0	0	4	5
Big bat sp.	21	0	0	2	23
possible Big bat sp.	0	0	0	1	1

September 2021 backtracking survey results - Bat passes recorded for each species by surveyor location

Species Recorded	AR	DO	DS	RR	EP	SP	Total
Barbastelle	0	2	2	1	0	0	5
<i>Myotis</i> sp.	0	6	1	9	0	0	16
Common pipistrelle	9	10	42	23	32	12	128
Soprano pipistrelle	6	13	60	128	4	6	217
Noctule	0	1	4	2	40	0	47
<i>Nyctalus</i> sp.	0	1	0	0	2	0	3
Big bat sp.	3	2	2	8	1	0	16

A.3. August and September 2021 Backtracking Survey Results for Foxburrow Wood

August 2021 backtracking survey results - Bat passes recorded for each species by surveyor location

Species Recorded	EM	AM	RR	MH	Total
Brown long-eared bat	4	0	2	0	6
<i>Myotis</i> sp.	2	2	3	1	8
Common pipistrelle	144	1	17	9	171
Soprano pipistrelle	74	4	15	24	117
Noctule	0	0	2	3	5
<i>Nyctalus</i> sp.	1	0	3	14	18
Serotine	1	3	31	3	38
Big bat sp.	8	0	3	8	19

September 2021 backtracking survey results - Bat passes recorded for each species by surveyor location

Species Recorded	AR	DO	DS	EP	RR	SP	Total
Barbastelle	0	0	1	0	0	2	3
Brown long-eared bat	1	3	4	4	0	0	12
<i>Myotis</i> sp.	0	8	0	7	0	2	17
Common pipistrelle	2	79	159	7	12	49	308
Soprano pipistrelle	2	51	16	4	2	60	135
Noctule	0	8	10	0	10	4	32
<i>Nyctalus</i> sp.	0	4	1	0	9	2	16
Serotine	4	0	0	0	0	1	5
Big bat sp.	2	1	2	1	0	1	7

APPENDIX B: HAZEL DORMOUSE SURVEY REPORT 2

CONTENTS

1	INTRODUCTION	1
1.1	Overview	1
1.2	Site Location & Setting.....	1
1.3	Legislation & Conservation Status	1
2	METHODOLOGY	2
2.1	Survey Objective	2
2.2	Desk Study	2
2.3	Field Survey	2
2.4	Survey Limitations	4
3	RESULTS	5
3.1	Desk Study	5
3.2	Field Survey	5
	REFERENCES	6

FIGURES

Figure 1: Dormice tube and footprint tunnel locations

1 INTRODUCTION

1.1 Overview

- 1.1.1 This document provides the results of the 2021 dormouse survey (first and second visit) conducted within woodland and hedgerow habitat within and in close proximity to the proposed order limits for the two village bypass. This report supplements the **Hazel Dormouse Survey Report 1** submitted at Deadline 7 [\[REP7-028\]](#) which provides the justification for undertaking these surveys.

1.2 Site Location & Setting

- 1.2.1 The area within and adjacent to two village bypass site boundary consists mainly of arable fields, mostly surrounded by connected hedgerows. There are small patches of woodland interspersed between the arable field such as Nuttery Belt, Pond Wood and Foxborough wood. Some of the woodland patches are designated as ancient woodland. The majority of these woodland patches are connected via the aforementioned hedgerows.

1.3 Legislation & Conservation Status

- 1.3.1 The dormouse is protected by National and European legislation. It is listed under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) (Ref. 1) which makes it an offence to:

- Intentionally kill, injure or take a dormouse;
- Possess or control any live or dead specimen or anything derived from a dormouse;
- Intentionally or recklessly¹ damage, destroy or obstruct access to any structure or place used for shelter or protection by a dormouse (whether occupied or not); and
- Intentionally or recklessly disturb a dormouse while it is occupying a structure or place which it uses for that purpose.

- 1.3.2 The dormouse is included on Schedule 2 of the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 (Ref. 2) which makes it an offence to:

¹ The term “recklessly” was added as an amendment to the Wildlife and Countryside Act 1981 (as amended) (HMSO, 1981) as a result of the Countryside and Rights of Way Act 2000 (HMSO, 2000).

- Deliberately capture or kill a dormouse;
- Deliberately disturb a dormouse;
- Damage or destroy a breeding site or resting place of a dormouse; and
- Keep, transport, sell or exchange, or offer for sale or exchange a live or dead dormouse or any part of a dormouse.
- The dormouse is declining across much of its northern range due to habitat loss and fragmentation. Dormice need well managed woodlands connected by hedgerows in order to disperse and thrive. It is thought that their range in the UK has shrunk by approximately half in the past century and they are mostly concentrated in the south of the country (Ref. 3).

1.3.3 The dormouse was a UK Biodiversity Action Plan (BAP) Priority Species and is now included on Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006 (Ref. 4).

2 METHODOLOGY

2.1 Survey Objective

2.1.1 The objectives of the dormouse surveys were to establish the presence or likely absence of dormouse within and adjacent to the site.

2.2 Desk Study

2.2.1 Local ecological data for dormouse within 2km of the site boundary was requested from the Suffolk Biodiversity Information Service (SBIS).

2.3 Field Survey

a) Survey Scope

2.3.2 Potentially suitable dormouse habitat within the site was identified from OS mapping, aerial imagery and Phase 1 habitat data. The survey area covered potentially suitable dormouse habitat within the site and its immediate surroundings, including Nuttery belt, Pond Wood and Foxburrow Wood, along with adjoining woodlands and hedgerows. Surveys were undertaken using two differing detection methods: nest tubes and footprint tunnels.

b) Nest Tube Surveys

2.3.3 A total of 208 dormice nest tubes (locations shown on **Figure 1**) were installed at the end of July and beginning of August 2021. The tubes were well distributed through available suitable habitat and it is considered that this distribution is representative of a robust survey approach.

2.3.4 Nest tubes comprise a plastic tube containing a removable wooden floor and end wall. The tubes were attached to the branches in the hedgerows at approximately 20m intervals along the hedgerows and woodland edges and deployed in a grid approximately 20m from each other within woodland. The tubes were left to 'bed in', to allow for dormice, if present, to locate them.

c) Footprint Tunnel Surveys

2.3.5 A total of 89 footprint tunnels (shown on Figure 1) were deployed at the end of July and beginning of August 2021. The footprint tunnels were well distributed through available suitable habitat, and it is considered that this distribution is representative of a robust survey approach.

2.3.6 The footprint tunnels comprised of a plastic downpipe with a piece of plywood inserted so a landing platform protruded at each end. Centrally on the plywood, thick white card was placed. At each end of the white card, masking tape with the footprint tracking medium (a charcoal powder & oil mixture) was applied. Tunnels were hung on the underside of horizontal branches at approximately 20m intervals in the survey woodland & hedgerow habitats. The footprint tunnels were left for at least two weeks to collect any evidence of dormice activity, should they be present.

2.3.7 Checking the footprint tunnels was undertaken in conjunction with the nest tube survey and followed methods recommended in Guidance for using Hazel Dormouse Footprint Tunnels (Ref. 5). Each card with mammal evidence in the footprint tunnel was photographed to allow for data validation.

2.4 Survey Limitations

2.4.1 Nuttary Belt and areas of woodland on the eastern side of the survey area were quite overgrown and so deployment locations were difficult to reach and deploy systematically in these locations. Where vegetation was very dense, tubes and footprint tunnels were deployed where practical.

2.4.2 Multiple nest tubes were incorrectly positioned and fixed. This reduces the likelihood of dormice using the tubes. To rectify this 15-20% of the tubes have been moved to a more suitable position.

2.4.3 A number of the footprint tunnels had ink applied to duct tape instead of masking tape. This resulted in the ink drying out more quickly, which in turn reduced the time available for footprints to be recorded.

3 RESULTS

3.1 Desk Study

3.1.1 Desk Study results are as detailed within **Hazel Dormouse Survey Report 1** [[REP7-028](#)].

3.2 Field Survey

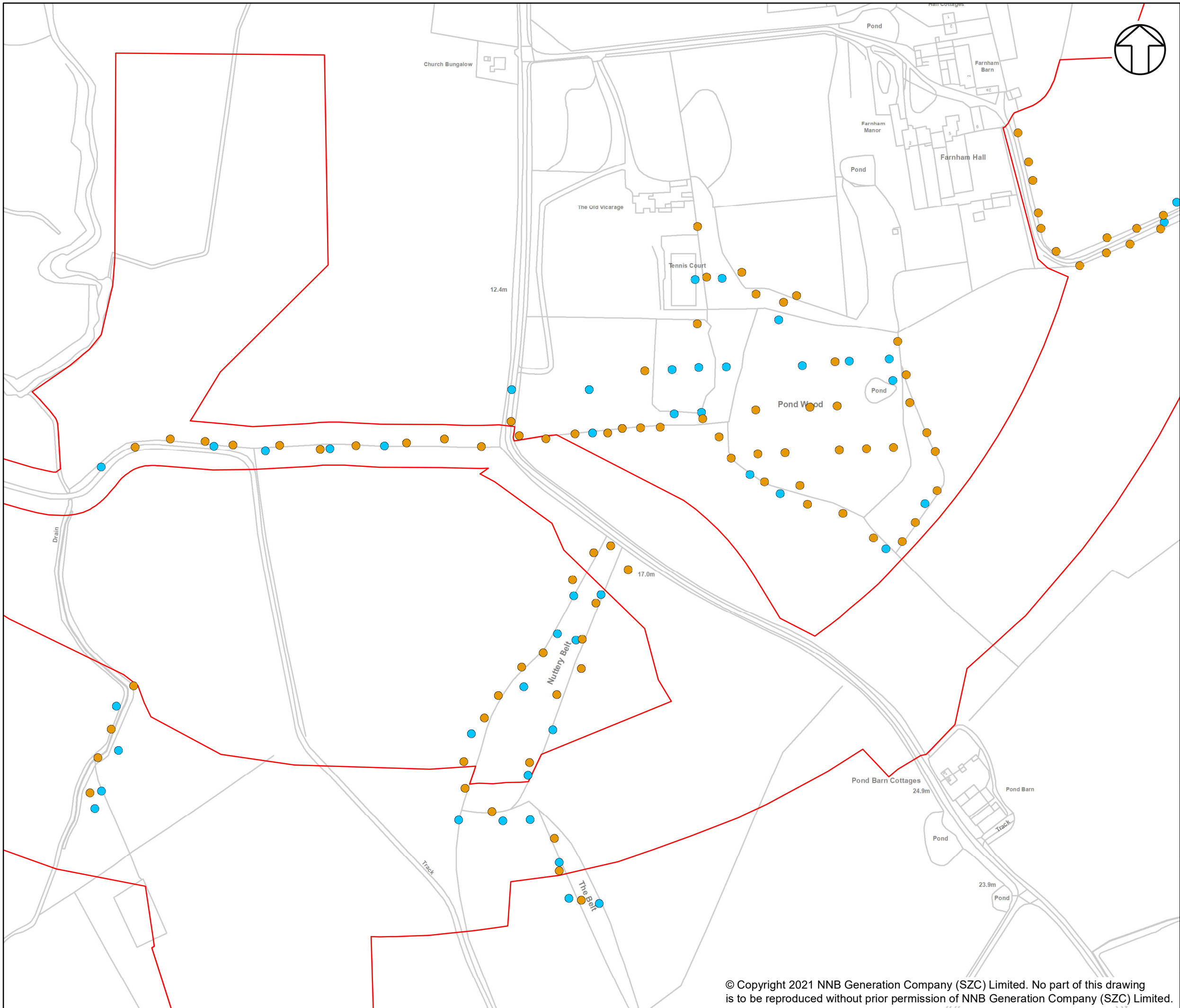
3.2.1 No dormice nests were recorded within dormice tubes during the survey visits on the 1st, 2nd, 28th, 29th or 30th of September 2021. One wood mouse (*Apodemus sylvaticus*) nest was found on the 29th of September 2021.

3.2.2 No dormice footprints were recorded within the footprint tunnels during the survey visits on 1st, 2nd, 28th, 29th or 30th of September 2021. Mouse (*Apodemus* species) footprints and droppings were recorded within 17 footprint tunnels on the 1st and 2nd of September 2021. During survey visits on the 28th, 29th and 30th of September 2021, wood mouse (*Apodemus sylvaticus*) footprints and urine marks were found in 8 tunnels.

3.2.3 During nut searches between the 28th and 30th of September 2021 a total of 8 wood mouse (*Apodemus sylvaticus*) feeding stashes were found.

REFERENCES

1. HMSO (1981) Wildlife and Countryside Act 1981. HMSO, London.
2. HMSO (2019) The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019. HMSO, London.
3. Wembridge, D., Al-Fulaij, N., Langton, S. (2016) The State of Britain's Dormice 2016. Available online: <https://ptes.org/wp-content/uploads/2016/09/State-of-Britains-Dormice-2016.pdf> [Accessed August 2021].
4. HMSO (2006) Natural Environment and Rural Communities Act 2006. HMSO, London.
5. Bullion, S., & Looser, A. (2019) Guidance for using Hazel Dormouse Footprint Tunnels. Suffolk Wildlife Trust.



NOTES

KEY

- DEVELOPMENT SITE BOUNDARY
- DORMICE TUBE
- DORMICE FOOTPRINT TUNNEL

NOT PROTECTIVELY MARKED

COPYRIGHT
Reproduced from Ordnance Survey map with the permission of Ordnance Survey on behalf of the controller of Her Majesty's Stationary Office © Crown Copyright (2021). All Rights reserved. NNB GenCo 0100060408.



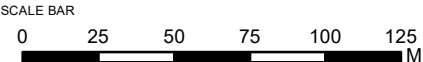
DOCUMENT:
SIZEWELL C 2021 HAZEL DORMOUSE
SURVEY REPORT

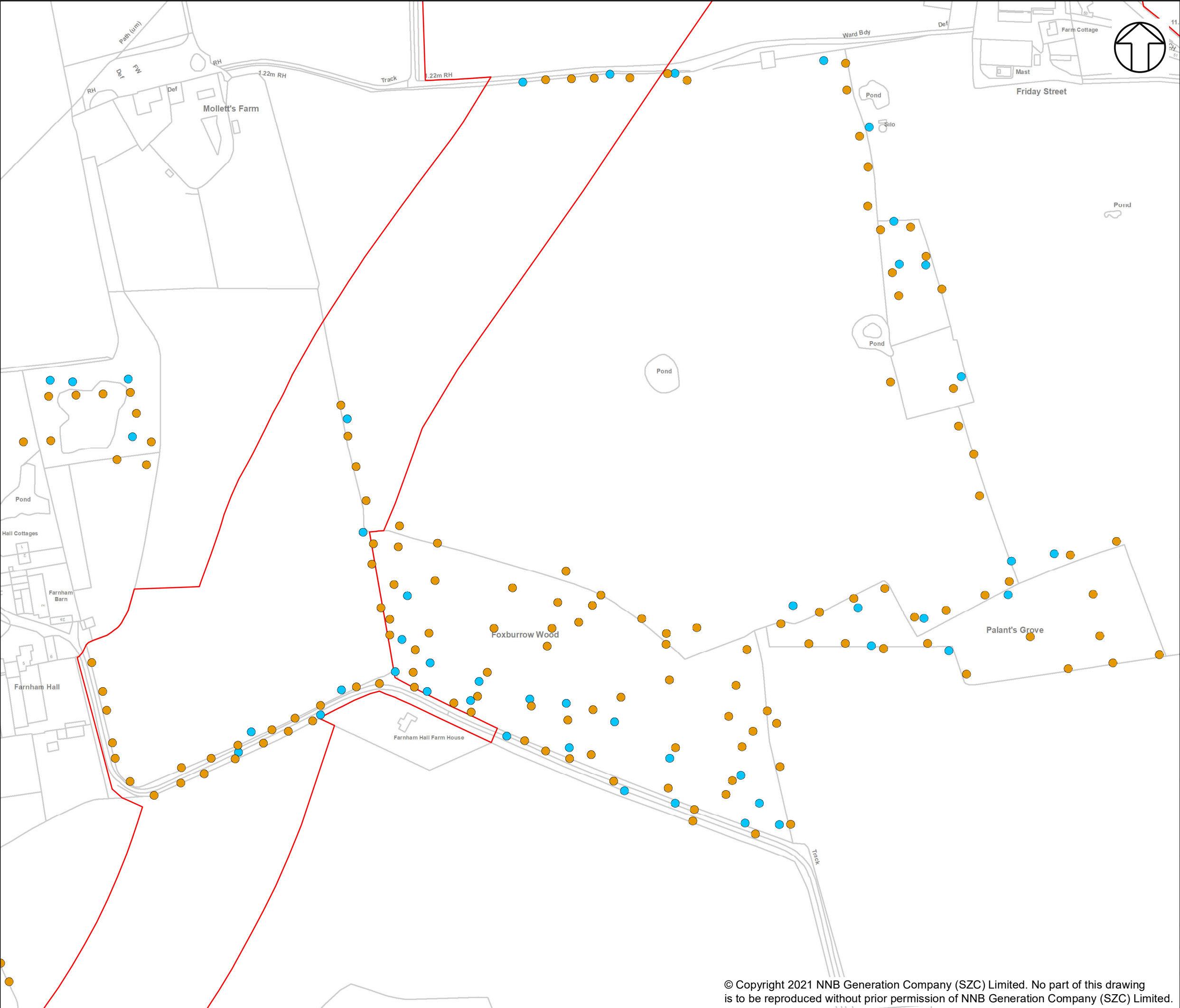
DRAWING TITLE:
DORMICE TUBE AND FOOTPRINT TUNNEL
LOCATIONS

PAGE 1 OF 2

DRAWING NO:
FIGURE 1

DATE: AUG 2021	DRAWN: R.C.	SCALE: 1:2,500 @A3	REV: 01
-------------------	----------------	-----------------------	------------





NOTES

KEY

- DEVELOPMENT SITE BOUNDARY
- DORMICE TUBE
- DORMICE FOOTPRINT TUNNEL

NOT PROTECTIVELY MARKED

COPYRIGHT
Reproduced from Ordnance Survey map with the permission of Ordnance Survey on behalf of the controller of Her Majesty's Stationary Office © Crown Copyright (2021). All Rights reserved. NNB GenCo 0100060408.



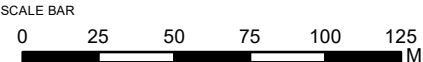
DOCUMENT:
SIZEWELL C 2021 HAZEL DORMOUSE
SURVEY REPORT

DRAWING TITLE:
DORMICE TUBE AND FOOTPRINT TUNNEL
LOCATIONS

PAGE 2 OF 2

DRAWING NO:
FIGURE 1

DATE: AUG 2021 DRAWN: R.C. SCALE: 1:2,500 @A3 REV: 01



APPENDIX C: 2021 OTTER HOLT SURVEY REPORT (CONFIDENTIAL)

APPENDIX D: SSSI TRIANGLE TREE ASSESSMENT SURVEY REPORT – 2021

CONTENTS

1.	SUMMARY	1
2	OVERVIEW	1
2.1	The Aims of the 2021 Surveys	1
3	METHODS	2
4	LIMITATIONS.....	3
5	RESULTS.....	5
5.2	Extrapolated results from SSSI	5
6	DISCUSSION	6
7	CONCLUSION	8
	REFERENCES.....	9

TABLES

Table 3-1: Potential bat roost suitability criteria	2
Table 4-1: Photographs of access limitations	4
Table 5-1: Summary of results of ground-level tree assessments in the SSSI conducted in 2021.....	5
Table 5-2: Summary of tree roost potential in 2021	6
Table 6-1: Estimated required provision of bat roosting features to mitigate for tree loss in the SSSI triangle	7

FIGURES

- Figure 1: Main Development Site ‘SSSI Triangle’ Bat Tree Roost Inspection Results 2021
- Figure 2: Main Development Site ‘SSSI Triangle’ Bat Tree Roost Inspection Results 2021 – survey access areas
- Figure 3: Main Development Site ‘SSSI Triangle’ Bat Tree Roost Inspection Results 2021 – extrapolation of survey results

APPENDICES

APPENDIX A: FIGURES.....	10
--------------------------	----

1. SUMMARY

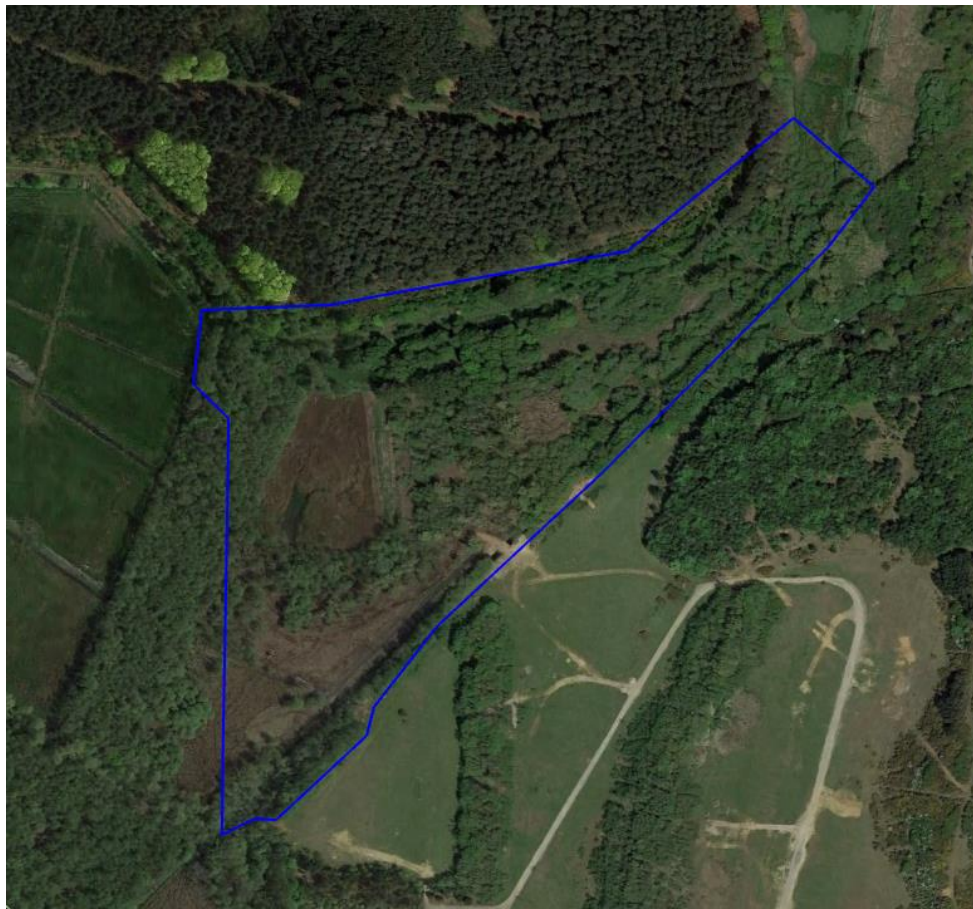
- 1.1.1 This document provides the results of the 2021 bat tree inspection surveys, hereafter referred to as the 2021 bat surveys, conducted on the Sizewell C main development site in the SSSI Triangle area in 2021 (**Figure 2**).

2 OVERVIEW

2.1 The Aims of the 2021 Surveys

- 2.1.1 The aim of the 2021 bat surveys was to inform the required European Protected Species Licence (EPSL) to permit development to proceed. The surveys reported in this document were conducted on the 'SSSI Triangle' a frequently flooded area within the main development site. The survey area included areas of the SSSI that are within the main development site redline. The indicative Survey area is presented in Image 1 below.

Image 1: Indicative Survey Area



- 2.1.2 Detailed bat tree roost inspection surveys were also undertaken at the main development site between January and April 2021 [REP3-035] and the associated development sites in January and February 2021 [REP2-121].

3 METHODS

- 3.1.1 Trees located within the survey area were assessed in August and September 2021 from ground level for their potential to support roosting bats, using a pair of binoculars. Any Potential Roosting Features (PRFs) were recorded. These included but were not limited to:

- knot holes (cavities with a collar resulting from natural branch loss and fungal infection); woodpecker holes and cavities created by fungal infection;
- tear outs (cavities within an inverted tear shape wound created when a limb was torn from the main stem or other major limb);
- impact shatters (cavities extending longitudinally into limb originating from a break along its length typically caused by impact with part of another tree);
- butt rot (hollow section of main stem resulting from fungal infection); and
- lifted bark (substantial areas of lifted bark typically resulting from fungal infection).

- 3.1.2 Each tree was assigned a category which relates to the value of the features identified during the ground level tree inspection. In accordance with standard bat survey methodology (Ref. 1) trees were assigned a level of roost suitability as set out in **Table 3-1** below.

Table 3-1: Potential bat roost suitability criteria

Suitability	Description
Negligible	Negligible habitat features on site likely to be used by roosting bats.
Low	A structure with one or more potential roost sites that could be used by individual bats opportunistically. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats (i.e. unlikely to be suitable for maternity or hibernation).

Suitability	Description
	A tree of sufficient size and age to contain potential roost features but with none seen from the ground or features seen with only very limited roosting potential.
Moderate	A structure or tree with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions and surrounding habitat but unlikely to support a roost of high conservation status (with respect to roost type only – the assessments in this table are made irrespective of species conservation status, which is established after presence is confirmed).
High	A structure or tree with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions and surrounding habitat.

4 LIMITATIONS

- 4.1.1 The most significant limitation of the survey was the persistent flooding of the SSSI area. The surveys in this area have been delayed on multiple occasions previously (hence why this area was not surveyed with the other areas in January to April 2021). It was hoped that the water levels would fall in late summer to allow full access. However, throughout August and September 2021, it was found that water levels in this area remained too high to permit safe access. Photographs illustrating the water levels are presented in **Areas identified** from aerial imagery as having a similar composition as the areas which could be surveyed are identified. The proportion of trees with roosting potential can then be estimated. This is an estimate only, but allows the approximate roosting value of the areas to be identified.
- 4.1.2 Table 4-1 below.
- 4.1.3 As a result of the flooding, only trees around the periphery of the area and within the infrequent dry areas could be assessed. The areas which were accessible are identified on **Figure 1 in Appendix A**.
- 4.1.4 Accordingly, it was necessary to extrapolate the findings of the areas where access was permitted to the wider SSSI triangle site. Areas identified from aerial imagery as having a similar composition as the areas which could be

surveyed are identified. The proportion of trees with roosting potential can then be estimated. This is an estimate only, but allows the approximate roosting value of the areas to be identified.

Table 4-1: Photographs of access limitations

Flooding – August 2021	Flooding – August 2021
	
Flooding – September 2021	Flooding – September 2021
	

- 4.1.5 Due to the transitional nature of bat roosts, surveys undertaken to establish the nature of use by bats at any point in time do not exclude the potential for trees to be occupied in the future.
- 4.1.6 The survey results presented here document the findings at the time the individual surveys, however, any tree may gain/lose potential to tree-roosting bats as trees are dynamic living organisms and may change as a result of weather conditions, decay, disease etc.
- 4.1.7 The surveys were undertaken in August and September 2021, when water levels were considered to be likely to be at their lowest. This is during the

time when broadleaved tree foliage is present, however it is considered that a robust inspection of the trees could be conducted as most of the trees were small willow, alder and birch, which were not of a size where it is considered likely that foliage will have obscured visibility of any notable features within the trees.

5 RESULTS

- 5.1.1 Forty-six trees surveyed in 2021 contained PRFs. The results of the ground level tree assessments are summarised in **Table 5-1** below. Of these, 31 trees were considered to be of high or moderate potential.

Table 5-1: Summary of results of ground-level tree assessments in the SSSI conducted in 2021.

Woodland	Tree Roost Potential			Total
	Low	Moderate	High	
SSSI Triangle – areas surveyed	15	21	10	46
Total	15	21	10	46

5.2 Extrapolated results from SSSI

- 5.2.1 In 2021 a total of 46 trees were identified as having bat roost potential in the areas that could be surveyed. Most of the trees were around the periphery of the survey area. However, two areas that are indicative of the wider SSSI site were accessible. These were approximately 0.7ha and 0.6ha respectively.
- 5.2.2 These areas are used as examples of the wider SSSI area to infer the number of potential roost features that the roost resource within the survey area may provide. This is an indicative assessment only to inform the organisational licence, and will be updated as access to the survey area permits a more accurate assessment to be made.
- 5.2.3 As shown in **Table 5-2** below, once extrapolated, it is estimated that the entire survey area (including areas that could not be accessed) is likely to provide roosting opportunities of c.109 PRFs, with approximately 40 low, 39 moderate and 30 high roosting potential features.

Table 5-2: Summary of tree roost potential in 2021

Area of SSSI	Tree Roost Potential			Total
	Low	Moderate	High	
Area A (0.68ha)	4	9	0	13
Trees Extrapolated from Area A (0.18ha)	c.1	c.2	0	13
Area B (0.58ha)	6	4	5	15
Trees Extrapolated from Area B (2.29ha)	c.24	c.16	c.20	60
Total (areas A and B extrapolated)	35	31	25	91
Trees not in Area A or B identified in the survey	5	8	5	18
OVERALL ROOST VALUE (number of PRFs) (Extrapolated)	40	39	30	109

6 DISCUSSION

- 6.1.1 Trees of high, moderate and low potential have the potential to support the following tree roosting species, which have been recorded within the main development site through activity and static detector surveys; common pipistrelle (*Pipistrellus pipistrellus*), soprano pipistrelle, Nathusius' pipistrelle (*Pipistrellus nathusii*), serotine (*Eptesicus serotinus*), barbastelle (*Barbastella barbastellus*), *Myotis* sp., and *Nyctalus* sp.

6.1.2 The surveys conducted to date are considered sufficient to inform an estimate of the status of the roost resource within the woodland and trees surveyed. This information will inform a proposed Organisational Licence in relation to impacts to bats, an approach that has previously been discussed with Natural England, and is provided in the **draft Sizewell C Project Bat Method Statement** (Doc Ref. 9.92(A)). However, it will be necessary to safeguard individual bats during vegetation removal through further targeted survey to be completed during the enabling and construction phase.

6.1.3 Within the operational licence, a required ratio of bat box provision to potential roost features is defined. In addition, an increased ratio of bat boxes is specified where roosts are found (during the inspections etc). As such, it is possible to define the minimum number of replacement bat boxes that may be required. **Table 6-1** below provides information on the calculation of the number of replacement bat boxes estimated to be required (this will be modified as access is permitted to update the assessment).

Table 6-1: Estimated required provision of bat roosting features to mitigate for tree loss in the SSSI triangle

	Tree Roost Potential			
	Low	Moderate	High	Total
OVERALL ROOST VALUE (Extrapolated number of PRFs)	40	39	30	109
Bat boxes required (Indicative)	1:1	1:1	1:1	109 (+ additional boxes at the agreed ratio for roosts confirmed by additional surveys including radio tracking)

-
- 6.1.4 Surveys must be undertaken prior to removal of trees, these surveys will be secured in the Organisational Licence and are detailed in the **draft Sizewell C Project Bat Method Statement** (Doc Ref. 9.92(A)).
- 6.1.5 The timing of these surveys will be dependent on the phasing of the construction works and the surveys must be conducted according to the prescriptions of the applicable bat licence, and as close to tree removal for each phase as is practicable.
- 6.1.6 A suite of monitoring before during and after the construction phase is also proposed as outlined in the **Terrestrial Ecology Mitigation and Monitoring Plan** (Doc Ref. 9.4(C)). This includes bat radio tracking, which has the potential to identify the locations of roosts in the SSSI woodland (if present).
- 6.1.7 Surveys undertaken to establish the nature of use at any point in time do not exclude the potential for trees to be occupied in the future. In the event that a tree to be felled is found to be occupied by a roosting bat, licensing and mitigation procedures as specified in the organisational licence would be followed.

7 CONCLUSION

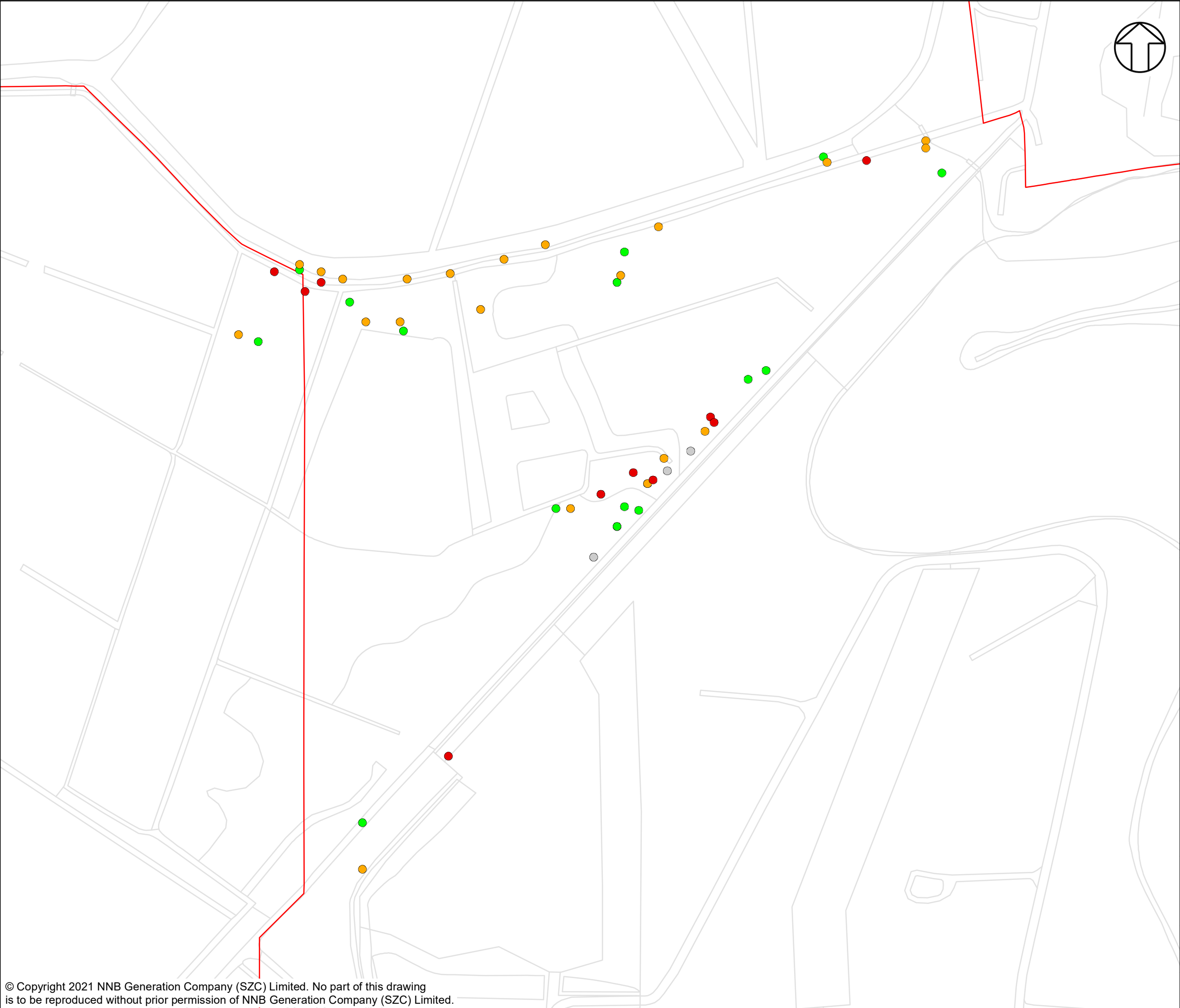
- 7.1.1 Trees within the SSSI triangle, which are currently proposed for removal, were, where possible, surveyed in 2021 for their bat roost potential. These data in addition to information on further surveys and mitigation will be incorporated into the mitigation approach and the Organisational Licence for bats to ensure no direct mortality and to maintain the favourable conservation status of these species.

REFERENCES

1. Collins. 2016. Bat Surveys for Professional Ecologists: Good Practice Guidelines. 3rd edition. London: The Bat Conservation Trust.

APPENDIX A: FIGURES

Figure 1: Main Development Site ‘SSSI Triangle’ Bat Tree Roost Inspection Results 2021



NOTES

KEY

DEVELOPMENT SITE BOUNDARY

ROOSTPOTENTIAL

- HIGH
- MODERATE
- LOW
- NEGLIGIBLE

NOT PROTECTIVELY MARKED

COPYRIGHT
Reproduced from Ordnance Survey map with the permission of Ordnance Survey on behalf of the controller of Her Majesty's Stationery Office © Crown Copyright (2021). All Rights reserved. NNB GenCo 0100060408.



DOCUMENT:
SSSI TRIANGLE TREE INSPECTION 2021

DRAWING TITLE:
SSSI TRIANGLE TREE INSPECTION 2021

DRAWING NO:
Figure 1

DATE: SEPT 2021 **DRAWN:** R.C. **SCALE:** 1:2,000 @A3 **REV:** 01

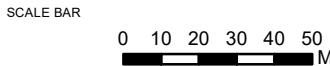
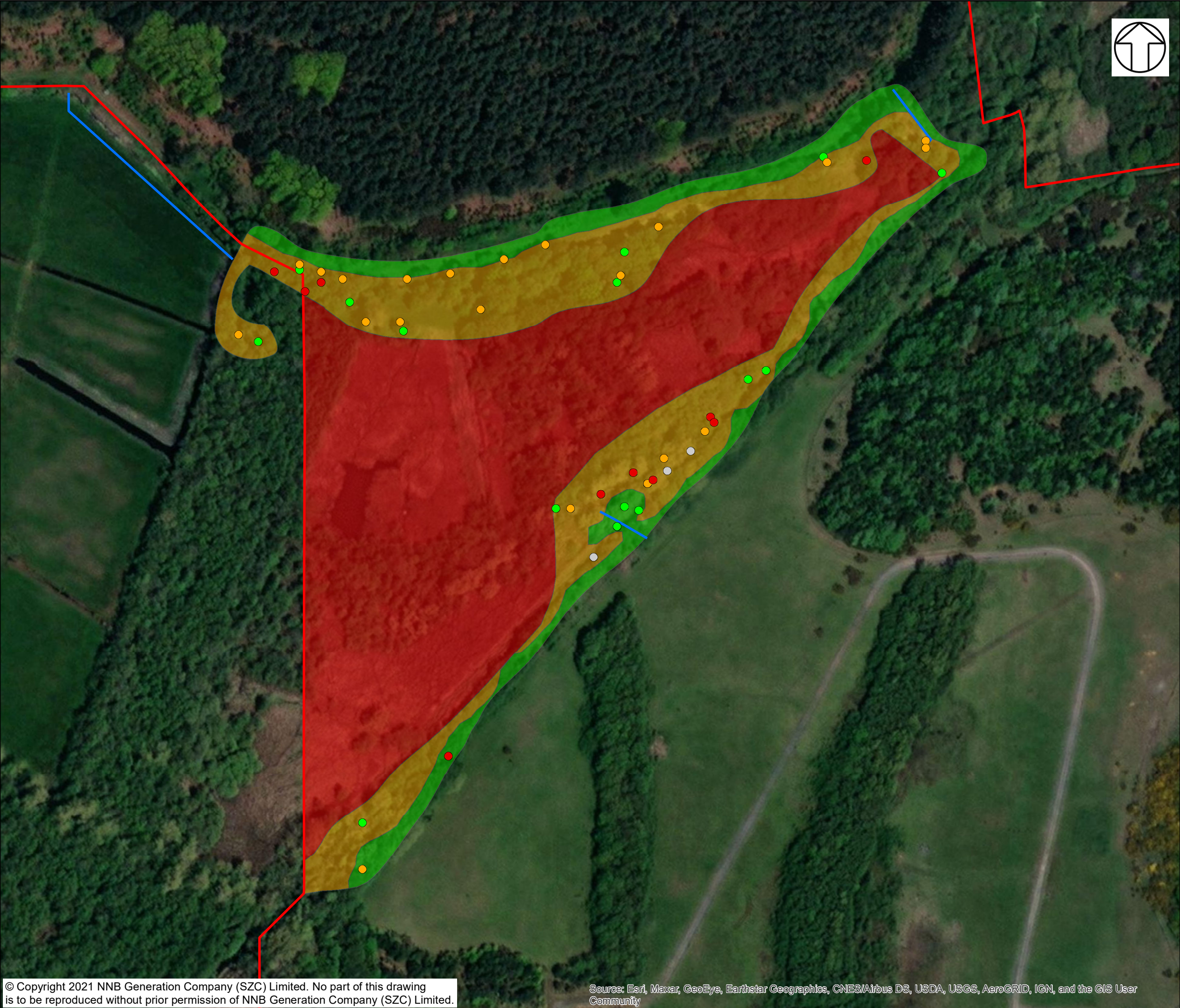


Figure 2: Main Development Site ‘SSSI Triangle’ Bat Tree Roost Inspection Results 2021 – survey access areas



- NOTES
- KEY
- DEVELOPMENT SITE BOUNDARY
- ROOST POTENTIAL
- HIGH
 - MODERATE
 - LOW
 - NEGLIGIBLE
- ACCESS ROUTE
- ACCESS POSSIBLE
 - NO ACCESS BUT AREA VISIBLE
 - NO ACCESS

NOT PROTECTIVELY MARKED

COPYRIGHT
Reproduced from Ordnance Survey map with the permission of Ordnance Survey on behalf of the controller of Her Majesty's Stationary Office © Crown Copyright (2021). All Rights reserved. NNB GenCo 0100060408.



DOCUMENT:
SSSI TRIANGLE TREE INSPECTION 2021

DRAWING TITLE:
SSSI TRIANGLE TREE INSPECTION ACCESS 2021

DRAWING NO:
Figure 2

DATE:	DRAWN:	SCALE:	REV:
SEPT 2021	R.C.	1:2,000 @A3	01

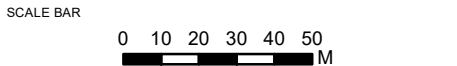
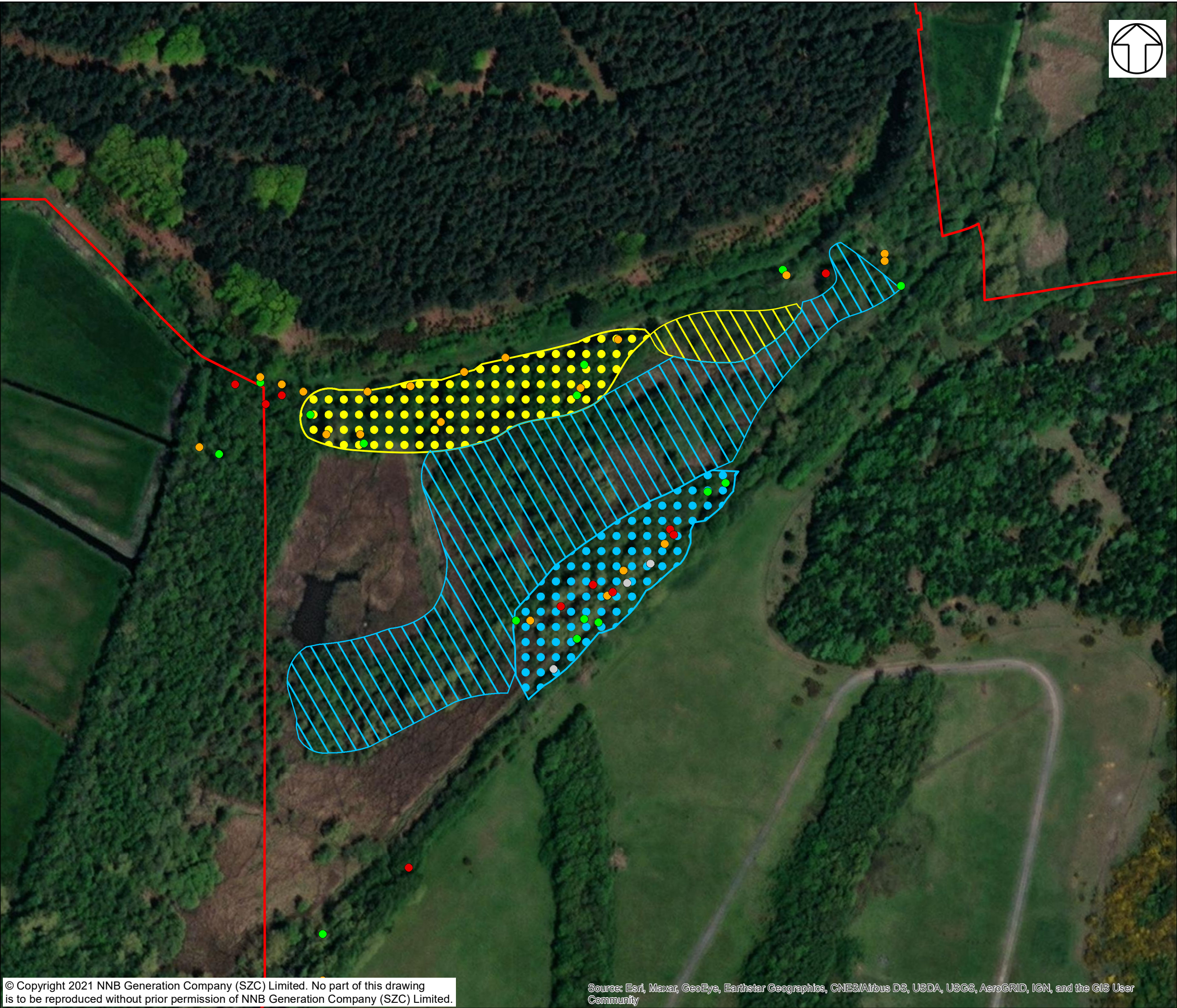


Figure 3: Main Development Site ‘SSSI Triangle’ Bat Tree Roost Inspection Results 2021 – extrapolation of survey results



NOTES

KEY

- DEVELOPMENT SITE BOUNDARY
- ROOST POTENTIAL**
 - HIGH
 - MODERATE
 - LOW
 - NEGLIGIBLE
- SURVEYED AREA A
- AREA EXTRAPOLATED FROM SURVEYED AREA A
- SURVEYED AREA B
- AREA EXTRAPOLATED FROM SURVEYED AREA B

NOT PROTECTIVELY MARKED

COPYRIGHT
Reproduced from Ordnance Survey map with the permission of Ordnance Survey on behalf of the controller of Her Majesty's Stationery Office © Crown Copyright (2021). All Rights reserved. NNB GenCo 0100060408.



DOCUMENT:
SSSI TRIANGLE TREE INSPECTION 2021

DRAWING TITLE:
BASIS OF EXTRAPOLATED ROOST NUMBERS FOR ROOST RESOURCE ASSESSMENT

DRAWING NO:
Figure 3

DATE: SEPT 2021	DRAWN: R.C.	SCALE: 1:2,000 @A3	REV: 01
--------------------	----------------	-----------------------	------------

SCALE BAR
0 10 20 30 40 50 M

APPENDIX E: 2021 TERRESTRIAL INVERTEBRATE SURVEY REPORT

CONTENTS

EXECUTIVE SUMMARY	1
1 INTRODUCTION	2
1.1 Overview	2
1.2 Aims and objectives	2
2 METHODOLOGY	3
2.1 Timing	3
2.2 Sampling	3
2.3 Limitations	6
3 RESULTS.....	6
3.1 Habitats	6
3.2 Invertebrate Species	9
4 PANTHEON ANALYSIS.....	15
5 DISCUSSION.....	24
5.1 Analysis.....	24
6 CONCLUSIONS	25
REFERENCES.....	26

TABLES

Table 4.1 Habitats & Resources - Broad Biotores	16
Table 4.2: Habitats and Resources - Habitats	18
Table 4.3 Habitats and Resources - Specific Assemblage Types	21

PLATES

Plate 1 Aerial of the site (Google earth)	2
Plate 2 2021 Survey Areas (Google Earth)	4

APPENDICES

APPENDIX A: SPECIES LIST FOR THIS SURVEY	27
APPENDIX B: PHOTOGRAPHS	73

EXECUTIVE SUMMARY

The Sizewell C Project main development site lies within an area of high landscape and ecological sensitivity, within an Area of Outstanding Natural Beauty (AONB) and adjacent to and/or within the Minsmere to Walberswick Heaths and Marshes Special Area of Conservation (SAC), the Sandlings Special Protection Area (SPA) and the Outer Thames Estuary SPA. A small part lies within the Sizewell Marshes Site of Special Scientific Interest (SSSI).

Three general terrestrial invertebrate sampling events and two moth trapping events were conducted during the Summer of 2021 from May until August. Standardised sampling methods and protocols were used to sample the invertebrate fauna of the site, with subsequent identification of material. Two areas were sampled: the Coastal Strip and the proposed Sizewell C Platform.

778 terrestrial invertebrate species were recorded, of which 76 have some manner of conservation status. A further 14 species of Lepidoptera are ‘*S41 Priority Species – research only*’. The survey areas support a large number and important assemblage of terrestrial invertebrates. Some of the more notable species recorded during the surveys include the Norfolk Hawker *Aeshna isosceles*, the spider hunting wasp *Evagetes pectinipes*, the Tawny Wave moth *Scopula rubiginata*, the Rest Harrow moth *Aplasta ononaria*, the Agate Knot-Horn moth *Nyctegretis lineana*, the moth *Monopis monachella*, the spiders *Zelotes petrensis*, *Zelotes electus*, *Sitticus saltator*, the beetles *Amara strenua*, *Bembidion nigropiceum*, *Cymindis axillaris*, *Harpalus servus* and the Greater Streaked Shieldbug *Odontoscelis fuliginosa*. Larvae of the European Antlion *Euoleon nostras* were also recorded.

The survey areas, with their mosaic of habitats and proximity to other habitats in the broader landscape means they are of high value to terrestrial invertebrates. This survey is consistent with results of previous surveys in this area, which recorded invertebrate assemblages of national importance. The composition of the assemblages recorded in 2021 and 2020 are similar and does not change the findings upon which the assessment was based. Therefore the findings of this report do not change the assessment of impacts on terrestrial invertebrates or the proposed mitigation presented in **Volume 2, Chapter 14** of the **Environment Statement** [[AS-033](#)] and subsequent **ES Addenda** [[AS-181](#), [REP5-064](#) and [REP7-030](#)].

1 INTRODUCTION

1.1 Overview

- 1.1.1 Sizewell C Co has submitted an application for a Development Consent Order (DCO) to construct and operate a new nuclear power station, Sizewell C, near the town of Leiston in Suffolk (**Plate 1**). The main development site lies within an area of high landscape and ecological sensitivity, within an Area of Outstanding Natural Beauty (AONB) and adjacent to and/or within the Minsmere to Walberswick Heaths and Marshes Special Area of Conservation (SAC), the Sandlings Special Protection Area (SPA) and the Outer Thames Estuary SPA. A small part lies within the Sizewell Marshes Site of Special Scientific Interest (SSSI).

Plate 1 Aerial of the site (Google earth)



1.2 Aims and objectives

a) Aim

- 1.2.2 The main aim of the surveys was to undertake further sampling to form part of on-going monitoring and mitigation design. The 2021 survey data complements previous surveys and continues to identified the terrestrial invertebrate assemblages that are to be found in the area, including the monitoring of any species of conservation concern.

b) Objectives

1.2.3 The objectives of the 2021 survey were to:

- Provide an assessment of the areas of interest to confirm appropriate survey techniques.
- Conduct terrestrial invertebrate surveys using Common Standards Monitoring (CSM)-compatible techniques building on, and complementary to, information derived from previous survey and desk study work;
- Record, delineate and describe key invertebrate habitats present on site in terms of broad vegetation type, habitat structure and current management;
- Evaluate invertebrate species and assemblages recorded using CSM-compatible indices, e.g. Pantheon; and
- Produce a report including findings/species lists, an evaluation of key habitat and species assemblages and appraisal of the conservation value of the site for invertebrates.

2 METHODOLOGY

2.1 Timing

2.1.1 To assess the invertebrate diversity of the survey areas, sampling visits were conducted in the summer of 2021 as follows:

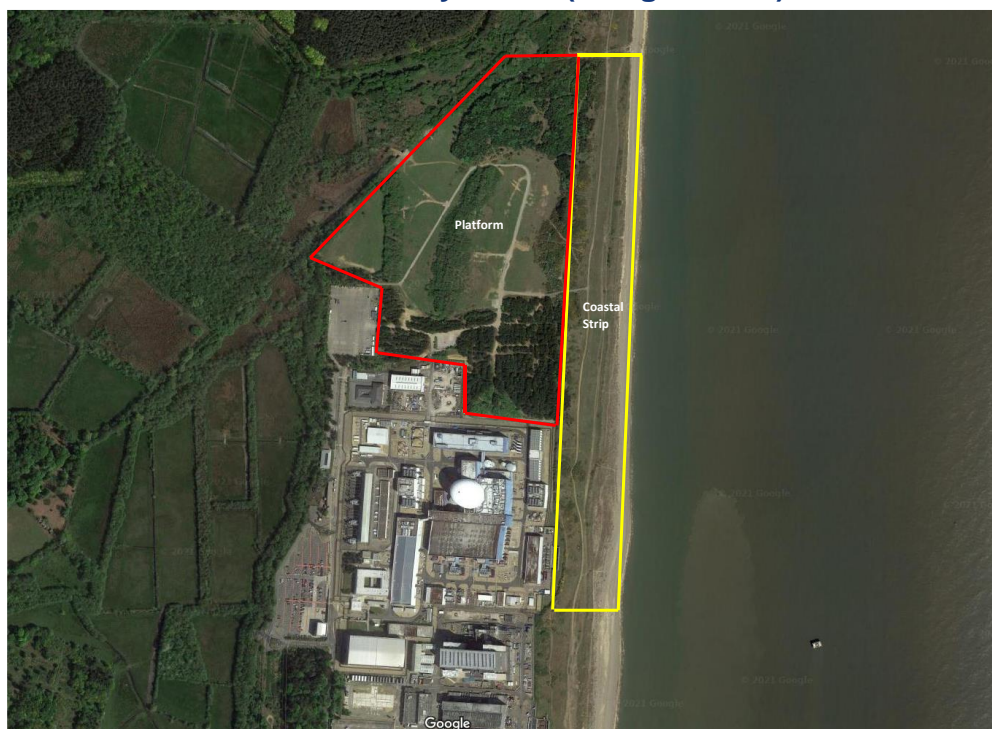
- 17th and 18th of May (general terrestrial invertebrate sampling);
- 15th and 16th of June (general terrestrial invertebrate sampling);
- 30th of June and 1st of July (moth trapping);
- 15th and 16th of July (general terrestrial invertebrate sampling); and
- 3rd and 4th of August (moth trapping).

2.2 Sampling

2.2.1 In accordance with Drake et al (Ref 1), sampling for terrestrial invertebrates was undertaken using a combination of standard capture methods recommended for CSM of different habitat types in the two survey areas

(Plate 2): The Coastal Strip and proposed Sizewell C Platform (from hereon, referred to as the “Platform”).

Plate 2 2021 Survey Areas (Google Earth)



2.2.2 During each visit, the following protocol was used in each of the two survey areas:

- 1 x 10 minutes transects with a sweep net where vegetation is vigorously swept;
- 1 x 2 min suction samples with vacuum sampler;
- 20 mins of beating trees, woodland edges, scrub and taller vegetation with a beating tray;
- Pitfall traps (2 rows of 10 traps in each of the sampling areas);
- Pan traps (2 rows of 10 traps in each of the sampling areas);
- Direct searching and direct observation;
- Moth trapping (2 x 125w mercury vapour Robinson trap; 1 x 8W actinic Heath trap).

- 2.2.3 Sweep sampling allows the capture of terrestrial invertebrates in the sward and dense vegetation, including very mobile species. Vacuum sampling allows the capture of ground-dwelling species, including leaf-litter and tussock dwelling invertebrates. Two types of passive trap were used during this survey: pitfall traps and pan traps. Passive traps are an effective way of sampling invertebrates as they can be left in situ for extended periods and will catch species that are missed by direct techniques during discrete sampling events.
- 2.2.4 Pitfall traps were deployed, part filled with preservative and left for two weeks at a time. Some of the pitfall traps were flooded and others were disturbed by deer or dogs. Pan traps are yellow plastic bowls, part-filled with water and a few drops of detergent. They were left in place for the duration of each visit and are an effective means of sampling Diptera and Hymenoptera. Some of these were also disturbed by deer or dogs.
- 2.2.5 Direct methods of catching invertebrates include spot sampling, where a net is used to catch large, conspicuous or fast-moving insects and ground searching, e.g. grubbing around the base of vegetation and in/under dead wood. Direct observation is where easily identifiable, usually charismatic macro-invertebrates observed on site should be identified and recorded in the field. This is normally done whilst undertaking other survey techniques.
- 2.2.6 The pitfall traps were dug and prepared on the first visit in May. They were left in these positions for the duration of the sampling. For all of the other sampling techniques, different areas were targeted on each visit to assess the terrestrial invertebrate diversity throughout the Coastal Strip and the Platform.
- 2.2.7 Two visits were made to the site for the purposes of moth trapping. The timing of the visits was dictated by site access and weather conditions. The dates in June and August correspond with high moth diversity and thus maximise the number of species recorded during these visits.
- 2.2.8 For each moth trapping visit in July, two 125W MV Robinson traps were deployed, powered by a portable petrol generator, and left running all night. Moths were recorded the following morning at dawn. In August surveys an additional 8W actinic Heath trap was deployed alongside the two MV traps, powered by a 12V sealed lead-acid scooter battery. The traps were positioned to maximise coverage of the site and its different habitats within the limitations of accessibility and the equipment.

2.3 Limitations

- 2.3.1 Local record centre species data provides positive records of species recorded; however, the species records within a given area are dependent on the recording effort of individuals and are often biased towards certain well-recorded groups e.g. butterflies and moths, dragonflies and damselflies etc. and the paucity of recording of less easily recognised species cannot be proof of a lack or absence of such species.
- 2.3.2 Every effort was made to record habitat features of potential conservation value for invertebrates however, the recognition of key habitat features with potential to support important invertebrate species or species assemblages is based on knowledge and experience. It cannot be guaranteed that habitats considered to have high conservation potential would be confirmed as such if surveyed in detail, or conversely, some habitat features supporting uncommon species or species assemblages may have been overlooked during the survey.
- 2.3.3 As noted above, some of the traps at times were subject to disturbance potentially by deer or dogs.

3 RESULTS

3.1 Habitats

- 3.1.1 Photographs of habitats on site can be found in **Appendix B**.

a) Coastal Strip

- 3.1.2 **General:** Habitat surveyed included upper shore vegetated shingle, vegetated dune and flatter area of short sward sandy grassland and scattered scrub inland of dune.
- 3.1.3 **Upper shore shingle and sand:** Upper shore habitat immediately seaward of vegetated dune comprised a flattish, partially vegetated expanse of sand and shingle. The habitat was characterised by typical maritime shingle and dune vegetation with graminoids including Marram Grass *Ammophila arenaria*, Sand Sedge *Carex arenaria*, Red Fescue *Festuca rubra*, Sand Cat's-tail *Phleum arenaria* and herbs including Sea Campion *Silene maritima*, Sea Kale *Crambe maritima*, Yellow-horned Poppy *Glaucium flavum*, Sea Sandwort *Honkenya peploides*, Hoary Ragwort *Senecio erucifolius*, Common Cat's-ear *Hypochaeris radicata* and other species. Extensive bare-ground sandier at the dune foot, gradating into shingle to seaward.

3.1.4 Vegetated dune: The vegetated dune provided topographical variation providing slopes of a variety of aspects. To the seaward, east facing side, dune vegetation gradated into more sparsely vegetated shingle, the habitat was increasingly vegetated on the western slopes. The habitat was generally well vegetated, with friable bare sand patches, persisting to a varying extent. Vegetation included graminoids such as Marram Grass *Ammophila arenaria*, Sand Sedge *Carex arenaria*, Red Fescue *Festuca rubra*, Common Bent Grass *Agrostis capillaris*, Cock's-foot *Dactylis glomerata*, Sand Cat's-tail *Phleum arenaria* and a *Vulpia* sp. with herbs including Restharrow *Ononis repens*, Sea Campion *Silene maritima*, Hop Trefoil *Trifolium campestre*, Lady's Bedstraw *Galium verum*, Wild Carrot *Daucus carota*, Harebell *Campanula rotundifolia*, Common Ragwort *Senecio jacobaea*, Hare's-foot Clover *Trifolium arvense*, Sheep's-bit *Jasione montana*, Ribwort Plantain *Plantago lanceolata*, Mouse-eared Hawkweed *Pilosella officinarum*, Black Medick *Medicago lupulina*, Rough Hawksbeard *Crepis biennis* and various other typical dune plants. Sward height varied with short sward areas due to rabbit grazing alongside taller, more scrubby growth.

3.1.5 Sandy grassland: A flattish expanse of sandy grassland occupied a broad strip between the seaward vegetated dune and the existing boundary fence of the Sizewell nuclear power-station. This habitat was largely vegetated with fairly dense, short, herb-rich grassland of similar composition to the vegetated dune. There was some microtopographical variation with localised depressions and sand and shingle exposures, in part due to the presence of rabbits. Abundant graminoids recorded included Red Fescue *Festuca rubra*, Sweet Vernal Grass *Anthoxanthum odoratum* and Common Bent Grass *Agrostis capillaris*, with herbs including Lady's Bedstraw *Galium verum*, Common Cat's-ear *Hypochaeris radicata*, Ribwort Plantain *Plantago lanceolata*, Sheep's Sorrel *Rumex acetosella*, Restharrow *Ononis repens*, Hare's-foot Clover *Trifolium arvense*, Mouse-eared Hawkweed *Pilosella officinarum*, Common Bird's-foot Trefoil *Lotus corniculatus*, Common Ragwort *Senecio jacobaea*, Common Vetch *Vicia sativa*, Sheep's-bit *Jasione montana*, Thyme-leaved Speedwell *Veronica serpyllifolia*, English Stonecrop *Sedum anglicum*, Common Mouse-ear *Cerastium fontanum* and a range of other species. The composition and structure of the grassland varied locally in terms of composition within the survey area, but was consistent in terms of structure throughout.

b) Sizewell C Platform

3.1.6 General: The C-Platform survey area supported extensive open wet and dry grassland habitat, buffered on all sides with dense stands of mixed, planted woodland. The grassland area was partially bisected by a strip of Alder *Alnus glutinosa* wet woodland. There was a small area of seasonally

inundated swamp habitat at the southeast boundary of the wet woodland and grassland habitats and the eastern perimeter shared a boundary with the inner, sandy grassland of the coastal strip.

3.1.7 Dry grassland: Drier grassland habitat occupied the greater area of the C-Platform survey area, comprising an extensive, generally flat expanse within the central area of the site and occupying an east-facing slope, the base of which was contiguous with the fenced-delineated sandy grassland of the Coastal Strip. Within the central area of the site, the drier, sandy grassland, gradated into more drainage impeded, wet grassland over clay soil, particularly in the area immediately bordering the largish central island strip of wet woodland. The grassland was generally short, with sward height ranging from 2 to 20cm tall, (typically 5cm) and there was evidence of grazing by rabbit and Red Deer, which were present at the time of survey. There were localised bare ground patches, including sand on tracks and at margins and there was greater topographic and microtopographic variation within the more raised areas to the seaward side of the site. The grassland was generally herb-rich, with graminoids including Red Fescue *Festuca rubra*, Sweet Vernal Grass *Anthoxanthum odoratum*, Common Bent Grass *Agrostis stolonifera*, Yorkshire Fog *Holcus lanatus*, Smooth-stalked Meadow Grass *Poa pratensis* and Cock's-foot *Dactylis glomerata* and herbs variously included Common Cat's-ear *Hypochaeris radicata*, Ribwort Plantain *Plantago lanceolata*, Creeping Buttercup *Ranunculus repens*, White Clover *Trifolium repens*, Common Centaury *Centaureum erythraea*, Hare's-foot Clover *Trifolium arvense*, Hop Trefoil *T. campestre*, Black Medick *Medicago lupulina*, Lesser Trefoil *Trifolium dubium*, Oxeye Daisy *Chrysanthemum leucanthemum*, Spear Thistle *Cirsium vulgare*, Creeping Thistle *C. vulgare*, Scarlet Pimpernel *Anagallis arvensis*, Rough Hawk's-beard *Crepis biennis*, Lady's Bedstraw *Galium verum*, Common Bird's-foot Trefoil *Lotus corniculatus*, Common Ragwort *Senecio jacobaea*, Hoary Ragwort *S. erusifolius*, Yellow Wort *Blackstonia perfoliata*, Common Mouse-ear *Cerastium fontanum* and Pyramidal Orchid *Anacamptis pyramidalis*.

3.1.8 Slope grassland: The slope grassland at the eastern boundary of the site, supported a sheltered, grassland/scrub mosaic with Red Fescue *Festuca rubra*, Sweet Vernal Grass *Anthoxanthum odoratum* and herbs including Wild Carrot *Daucus carota*, Common Ragwort *Senecio jacobaea*, Lady's Bedstraw *Galium verum*, Common Restharrow *Ononis repens*, *Hypochaeris radicata*, Hop Trefoil *Trifolium arvense*, Ribwort Plantain *Plantago lanceolata* and other herbs and scrub species. Taller sward edge habitat throughout the site supported taller herbs including Common Nettle *Urtica dioica*, Fennel *Foeniculum vulgare* and other species with graminoids including Tall Fescue *Festuca arundinacea* and False Oat Grass *Arrhenatherum elatius*.

- 3.1.9 Woodland and Scrub:** Much of the wooded habitat on the site comprised relatively young, even aged stands, which were densely planted and formed continuous screening around the boundary of the C-Platform compound. The ground layer was frequently heavily shaded and supported little vegetation. The blocks comprised species including Blackthorn *Prunus spinosa*, White Poplar *Populus alba*, Scots Pine *Pinus sylvestris*, willows *Salix* spp. and Common Gorse *Ulex europaeus*.
- 3.1.10 Wet grassland:** Wetter grassland occurred primarily at the margins of the wet woodland block within the extensive central grassland area. This peripheral zone gradated into drier grassland within approximately 10 to 20 metres of the woodland edge. The grassland was generally not as herb-rich as the drier grassland components and variously comprised graminoids such as Creeping Bent Grass *Agrostis stolonifera*, Yorkshire Fog *Holcus lanatus* and Smooth-stalked Meadow Grass *Poa pratensis*, with localised aggregations of Hard Rush *Juncus inflexus* and Soft Rush *J. effusus*, sedges *Carex* spp., herbs including Creeping Buttercup *Ranunculus repens*, Silverweed *Potentilla anserina*, Cuckoo-flower *Cardamine pratensis*, Greater Bird's-foot Trefoil *Lotus pedunculatus* and Skullcap *Scutellaria galericulata* and bryophytes.
- 3.1.11 Swamp:** A small area of partially inundated swamp habitat occurred at the southeast boundary of the wet woodland. This area was more diverse than the general wet grassland and supported a similar composition to the aforementioned habitat with wetland macrophytes including Jointed Rush *Juncus articulatus*, Sea Club-rush *Bolboschoenus maritimus*, Common Reed *Phragmites australis* and a spike-rush *Eleocharis* sp. The central area of the swamp was shallowly inundated for much of the survey season.
- 3.1.12 Wet woodland:** The wet woodland block (predominantly Alder *Alnus glutinosa*) was generally densely planted with little light reaching the ground layer for the most part. There were ruts and ditches within the woodland, creating heavily-shaded, silted and inundated wetter areas. There was little ground vegetation within this area, due to shading. There was a resource of fallen wood decay habitat, some of which was saturated, or partially saturated. Alder sucker-growth graded into the wet grassland and swamp at the woodland periphery, providing a more structurally-dynamic, mosaic habitat. Red Deer were frequently observed within the wet woodland during the surveys.

3.2 Invertebrate Species

- 3.2.1** 778 terrestrial invertebrate species were recorded (see **Appendix A** for full list). Of these, 76 have some degree of conservation status and a further

14 are S41 Priority Species – Research Only (see **Appendix A**). Some of the more significant species are detailed below:

Norfolk Hawker Dragonfly *Anaciaeschna isoceles* (Endangered; Legally Protected; Nationally Scarce; Section 41 Priority Species)

- 3.2.2 The Norfolk Hawker is currently restricted to the fens and grazing marshes that are relatively isolated from polluted water in the Broadlands of Norfolk and Northeast Suffolk. The optimum conditions for breeding appear to be unspoilt grazing marsh dyke systems with clean, non-saline water, rushy margins, preferably with an abundance of water soldier as well as other aquatic plants. Adults were seen in flight in the Sizewell C Platform in June and July 2021.

A spider hunting wasp *Evagetes pectinipes* (RDB 1)

- 3.2.3 This rarely recorded species is almost certainly a cleptoparasite of the pompilid *Episyron rufipes*, and possibly other pompilids. Most records are from the Deal-Sandwich sand-dunes in East Kent and dunes in Jersey and Guernsey in the Channel Islands. It has previously been recorded from the Coastal Strip. In 2021 it was found in a pan trap on the Coastal Strip.

A jewel wasp *Hedychrum niemalai* (proposed RDB 3)

- 3.2.4 This is a cuckoo of *Cerceris ruficornis*, *C. arenaria*, *C. rybyensis* and *C. quinquefasciata* and its current status might need to be revised in light of a recent range expansion. Individuals were observed in the Platform.

A solitary wasp *Passaloecus clypealis* (proposed RDB 3)

- 3.2.5 This small black wasp provisions a nest with paralysed aphids. Nests have been found in the galls of *Lipara lucens* (Diptera, Chloropidae) in common reed and also from the cut, hollow stems of the reed itself. A single individual was found in a pan trap in the small swamp area of the Platform.

The Beewolf *Philanthus triangulum* (RDB 2)

- 3.2.6 This large solitary wasp is a predator of honeybees. It was once considered to a great rarity, but has experienced considerable populations in recent decades and its RDB2 status should be reviewed. Individuals were observed excavating nests and foraging in the Coastal Strip and Platform.

The cuckoo bee *Nomada fulvicornis* (RDB 3)

- 3.2.7 This is a cuckoo of various *Andrena* species and the habitats in which it is found varies with the host *Andrena*. In the main, the bee is often encountered on sandy soils, coastal cliffs and landslips and, more rarely, chalk grassland. A single individual was found in one of the pan traps on the Coastal Strip.

Rest Harrow moth *Aplasta ononaria* (RDB3; S41 Priority Species)

- 3.2.8 A locally distributed species in coastal areas of the south and south-east of England, and also occasionally appears elsewhere as a suspected migrant. The larval foodplant is retharrow *Ononis repens*. Several individuals were found during the second moth trapping visit in both the Coastal Strip and the Platform.

Tawny Wave moth *Scopula rubiginata* (RDB 3)

- 3.2.9 Confined as a breeding species to parts of East Anglia, this species is also noted occasionally as a migrant, mainly to the south and east coasts. It prefers sandy terrain, such as sand dunes, and that found in the Breckland district, and the larvae feed on dandelion *Taraxacum* and knotgrass *Polygonum*. Individuals were found during the second moth trapping visit in the Coastal Strip and Platform.

White-blotched Clothes Moth *Monopis monachella* (proposed RDB3)

- 3.2.10 Apart from a small resident population on the Suffolk coastline, and possibly also in Norfolk, this species is a rare visitor to these shores with only a handful of records in recent years. The larva remains undescribed, but it is believed to feed on owl pellets and dead animals in wetland habitats. A single individual was found during the second moth-trapping visit in the Platform.

Agate Knot-Horn Moth *Nyctegretis lineana* (proposed RDB3)

- 3.2.11 A scarce and local species, occupying shingle beaches and coastal sandhills in the south and south-east of England. The larvae feed on retharrow *Ononis* spp., and sometimes clover *Trifolium*, living in silken tubes beneath the foodplant. A single individual was found during the second moth trapping visit to the Platform.

Grayling Butterfly *Hipparchia semele* (Vulnerable; S41 Priority Species)

- 3.2.12 This butterfly is widespread on the coast and southern heaths but is declining in many areas, particularly inland. The larvae feed on various grasses: Sheep's-fescue *Festuca ovina*, Red Fescue *F. rubra*, Bristle Bent *Agrostis curtisii*, and Early Hair-grass *Aira praecox*. Coarser grasses such as Tufted Hair-grass *Deschampsia cespitosa* and Marram *Ammophila arenaria* are occasionally used. Individuals were observed in both areas.

Small Heath Butterfly *Coenonympha pamphilus* (Near Threatened: S41 Priority Species)

- 3.2.13 This relatively widespread butterfly can occupy a range of habitat types and, although its range has changed little, many colonies have disappeared in recent decades. The larvae feed on fine grasses, especially fescues (*Festuca* spp.), meadow-grasses (*Poa* spp.), and bents (*Agrostis* spp.). Individuals were observed in both the Coastal Strip and Platform.

A ground beetle *Amara strenua* (Nationally Rare; Near Threatened)

- 3.2.14 This species is found only in the extreme south-east of England, East Anglia and around the Bristol Channel, typically in coastal grasslands. Two individuals were found in pitfall traps in the Coastal Strip.

A ground beetle *Bembidion nigropiceum* (Nationally Rare; Near Threatened)

- 3.2.15 This small ground beetle has been rarely recorded from coastal shingle and under stones on the coast. Little is known of its ecology, although it is thought to be subterranean. Several individuals were found in pitfall traps on the Coastal Strip.

A ground beetle *Harpalus servus* (Nationally Rare; Near Threatened)

- 3.2.16 This beetle is known from dunes and sandy, inland heaths. Little is known about its ecology, but thought to be a seed feeder. Two individuals were found in pitfall traps in the Platform.

A darkling beetle *Pseudocistela ceramboides* (Nationally Scarce)

- 3.2.17 The larvae of this distinctive species live in wood-mould of hollow decayed oaks *Quercus*, also beech *Fagus*, etc and generally beneath bird nests. Adults generally in small numbers and typically found on blossom of hawthorn *Crataegus*. A single individual was found during the first moth trapping visit in the Platform. It was also recorded from the SSSI Triangle in 2020.

Greater Streaked Shieldbug *Odonotscelis fuliginosa* (Nationally Rare; Vulnerable)

- 3.2.18 A very scarce species of coastal sand dunes with recent records from Kent and Pembrokeshire. The nymphs probably feed on Storksbill *Erodium cicutarium* and overwinter, becoming adult in the spring and mating in June-July. Individuals were found in the suction samples from the Platform.

The ground spider *Zelotes petrensis* (Nationally Rare; Least Concern)

- 3.2.19 The species has been recorded only from a few southern counties. The species appears to occur in a fairly wide range of dry open habitats, such as fairly open areas on dry heathland and chalk grassland, but also on coastal shingle and among grass and under stones on dry hillsides. Individuals were found via suction sampling and pitfall trapping in both the Coastal Strip and Platform.

The Antlion *Euroleon nostras* (no formal status at present)

- 3.2.20 The larvae of this species predate ants and ground-active insects that fall into their conical burrows in sand. No conservation status at present, but RDB2 has been suggested. The insect was selected as a priority species within the Suffolk Local Biodiversity Action Plan (LBAP). The species is found through a large part of the Sandlings, although the population fluctuates markedly from one year to the next. Larval pits were found in the southern part of the Coastal Strip.

4 PANTHEON ANALYSIS

- 4.1.1 The species lists obtained for the site were analysed with Pantheon. Pantheon is an online resource for recording and analysis of invertebrate assemblages developed jointly by the Centre for Ecology and Hydrology (CEH) and Natural England became available. The resource includes a modified version of Invertebrate Species-habitat Information System (ISIS) which was formerly available in spreadsheet form and then as trial versions. However, these versions were used extensively both for common standards monitoring of entomological features of SSSIs and for EcIA purposes.
- 4.1.2 The Species Quality Indices (SQIs) reflect the proportion of rarities attributed to an assemblage and scores of around 100 generally indicate assemblages comprised of a high proportion of common species. In broad terms, scores of around 140 indicate the presence of assemblages of some conservation value. However, it is important to note that Species Quality Indices (SQIs) calculated from less than 15 species may not be reliable.

Table 4.1 Habitats & Resources - Broad Biotores

Broad biotope	No. of species	% representation	SQI	Species with conservation status	Conservation status
open habitats	438	10	150	59	[Na] Section 41 Priority Species - research only Section 41 Priority Species - research only [RDB 3] NS [Notable] Nb NS NS NS RDB 1 pNS Nb NR NT Nb Section 41 Priority Species - research only Nb New to Britain NT Section 41 Priority Species Section 41 Priority Species - research only Nb RDB 3 NS Nb NR Nb Nb Section 41 Priority Species - research only Nb [Nb] Na NS [Nb] RDB 3 RDB 3 VU Section 41 Priority Species NR VU Section 41 Priority Species - research only Nb NS NS NR VU Section 41 Priority Species - research only [Nb] NS Nb NS NS [Nb] Nb Section 41 Priority Species - research only [RDB 2] NS NS NR NT NR NT Section 41 Priority Species - research only [RDB K] RDB 3 Section 41 Priority Species Nb NS Section 41 Priority Species - research only
tree-associated	146	4	125	6	[RDB K] Na DD [Nb] Nb NS
wetland	85	3	170	10	[Nb] Legal Protection NS Notable Section 41 Priority Species EN NS [RDB 3] Notable Section 41 Priority Species - research only NS NS Notable
coastal	9	2	278	4	NT NS NS NS NR

NOT PROTECTIVELY MARKED

Broad biotope	No. of species	% representation	SQI	Species with conservation status	Conservation status
shaded woodland floor	1	33	100		

NOT PROTECTIVELY MARKED

Table 4.2: Habitats and Resources - Habitats

Broad biotope	Habitat	No. of species	% representation	SQI	Species with conservation status	Conservation status
open habitats	tall sward & scrub	261	10	120	17	pNS Section 41 Priority Species - research only Section 41 Priority Species - research only Nb Section 41 Priority Species - research only [Nb] Section 41 Priority Species - research only NR NT Section 41 Priority Species - research only NS Section 41 Priority Species - research only Section 41 Priority Species - research only New to Britain Section 41 Priority Species - research only Nb Section 41 Priority Species - research only [Nb] NR VU
open habitats	short sward & bare ground	165	13	195	41	Nb RDB 1 NS NS Nb [RDB 3] NT Section 41 Priority Species NT NR Nb [Notable] RDB 3 Section 41 Priority Species - research only NS NS NR Nb [RDB 3] Nb [Na] RDB 3 NT NR Nb VU NS [RDB 2] RDB 3 Section 41 Priority Species Nb Section 41 Priority Species Nb NS [Nb] NS NS NS NS Nb NS [Nb] Na Nb NS VU NR Nb NS NS NS

Broad biotope	Habitat	No. of species	% representation	SQI	Species with conservation status	Conservation status
tree-associated	Arboreal	100	8	119	1	[Na]
wetland	acid & sedge peats	45	4	202	6	Notable NS EN Section 41 Priority Species Legal Protection [Nb] [RDB 3] Notable Notable
wetland	marshland	32	4	144	3	NS Notable NS
tree-associated	shaded woodland floor	25	2	113	1	[Nb]
tree-associated	decaying wood	22	2	157	4	[RDB K] [Nb] DD NS
wetland	running water	13	1	146	1	NS
wetland	wet woodland	7	3	143		

Broad biotope	Habitat	No. of species	% representation	SQI	Species with conservation status	Conservation status
tree-associated	wet woodland	7	3	143		
coastal	saltmarsh	5	2	220	2	NS NS
coastal	sandy beach	3	3	333	1	NT NR
coastal	brackish pools & ditches	3	3	300	2	NS NS
coastal	sea cliff	1	2	100		

Table 4.3 Habitats and Resources - Specific Assemblage Types

Broad biotope	Habitat	SAT	No. of species	% representation	SQI	Species with conservation status	Conservation status	Code	Reported condition
open habitats	short sward & bare ground	bare sand & chalk	54	12	288	21	NS NS NS NS Nb Nb VU NS Section 41 Priority Species NR NT NS NT Nb NR NS NS RDB 3 RDB 1 NR NS NS NS NR VU NS NS Nb NS NS NS NS	F111	Favourable
open habitats		rich flower resource	35	14	126	4	[Nb] RDB 3 [RDB 3] [Nb] [RDB K]	F002	Favourable
open habitats	short sward & bare ground	open short sward	22	11	145	3	NS RDB 3 Section 41 Priority Species NT Section 41 Priority Species	F112	Favourable
open habitats		scrub edge	20	9	130	3	NS [Nb] pNS	F001	Favourable
tree-associated	decaying wood	bark & sapwood decay	18	4	133	2	[RDB K] [Nb]	A212	Unfavourable (18 of 19 species)

Broad biotope	Habitat	SAT	No. of species	% representation	SQI	Species with conservation status	Conservation status	Code	Reported condition
open habitats		scrub-heath & moorland	12	3	125	1	NS	F003	Favourable
wetland	acid & sedge peats	reed-fen & pools	9	8	367	3	[RDB 3] NS EN Section 41 Priority Species Notable Legal Protection	W314	Unfavourable (9 of 11 species)
		epiphyte fauna	5	25	100			A215	Favourable
coastal	saltmarsh	saltmarsh & transitional brackish marsh	3	3	300	2	NS NS	M311	Unfavourable (3 of 9 species)
coastal	sandy beach	sandy beaches	2	5	450	1	NR NT	M211	Unfavourable (2 of 7 species)
open habitats	short sward & bare ground	exposed sea-cliff	1	2	100			F113	

Broad biotope	Habitat	SAT	No. of species	% representation	SQI	Species with conservation status	Conservation status	Code	Reported condition
tree-associated	decaying wood	epiphyte fauna	1	5	100			A215	Unfavourable (1 of 3 species)
wetland	marshland	undisturbed fluctuating marsh	1	3	400	1	NS	W221	Unfavourable (1 of 4 species)
wetland	acid & sedge peats	Sphagnum bog	1	<1	100			W312	Unfavourable (1 of 8 species)
tree-associated	decaying wood	heartwood decay	1	<1	400	1	NS	A211	Unfavourable (1 of 6 species)

5 DISCUSSION

5.1 Analysis

5.1.1 A large number of species with a conservation status have been recorded from the site during previous surveys. The areas surveyed for this report support significant assemblages of terrestrial invertebrates. In terms of habitat, the two areas are characteristic of the Suffolk Sandlings, which is a scarce habitat in the UK as a whole. Even though both areas have been subject to extensive groundworks during previous phases of development of the Sizewell site, they support a diverse terrestrial invertebrate fauna. Indeed, it seems as though the Platform was created as mitigation habitat during the construction of Sizewell B.

5.1.2 Predominantly short swards over sandy soil grading into coastal shingle, the survey areas benefit from the mosaic of habitats in the surrounding landscape. Just to the west of the Platform is the much wetter SSSI Triangle. Within the Platform there is considerable variation in the hydrology, which is reflected in the overlying vegetation. The small area of swamp and the strip of wet woodland that runs through the Platform provide an interesting range of habitats that is further enhanced by the surrounding woodland, albeit plantation.

5.1.3 On a landscape (broad biotope) level, the greatest number of recorded species by far was attributed to the 'Open habitats' classification, with 438 recognised species. 146, 85 and 9 species were 'tree-associated', 'wetland-associated' and 'coastal-associated', respectively. Proportionately, these four classifications support 10%, 4%, 3% and 2% of species, respectively, in terms of the national pool of species attributed in the Pantheon database. These findings would be largely expected in consideration of the habitats available, although only a small number of 'coastal' species were sampled. A possible explanation for this may be the extensive groundworks in earlier construction phases. From aerial photos it appears that most of the coastal strip (prior to the construction of Sizewell B) was largely obliterated. In place of the true coastal habitat, such as natural dunes and slacks, there appears to be predominantly Sandlings habitat. Over time, the current coastal strip habitats may revert to more typical coastal habitats.

5.1.4 On the Pantheon 'habitat' level tier, there were seven assemblages attributed with a sufficient number of species recognised in ISIS to be considered robust. 261 species were attributed to the 'tall sward and scrub' habitat, which basically includes species associated with taller grassland, scrub and scrub edge habitats. 165, 100, 45, 32, 25 and 22 species were attributed to the 'short sward and bare ground' 'arboreal', 'acid and sedge peats', 'marshland', 'shaded woodland floor', and 'decaying wood' habitats,

respectively. In terms of the specific assemblage types (SATs) within these habitats, the 'bare sand and chalk', 'rich flower resource', 'open short sward' and 'scrub edge' are all reported to be in a favourable condition from the data collected during this survey.

- 5.1.5 In conservation assessments, SATs are generally regarded as the most valuable metrics for assessing site quality. This is because SATs are made up of species with a high degree of habitat specialisation. Such species tend to be both uncommon and representative of sites supporting habitat of quality in terms of conservation value. However, SATs often require targeted sampling of specific habitat features and are not always well represented in broad-brushstroke surveys designed to gain an overall, or baseline assessment of a site's value.

6 CONCLUSIONS

- 6.1.1 Three general terrestrial invertebrate sampling events and two moth trapping events were conducted during the Summer of 2021 from May until August. Standardised sampling methods and protocols were used to sample the invertebrate fauna of the site, with subsequent identification of material. Two areas were sampled: the Coastal Strip and the proposed Sizewell C Platform.
- 6.1.2 During these surveys 778 terrestrial invertebrate species were recorded, of which 76 have some manner of conservation status. The principal value of these survey areas for terrestrial invertebrates lies in the short sward and bare ground habitats.
- 6.1.3 This survey is consistent with results of previous surveys in this area, which recorded invertebrate assemblages of national importance. This does not change the assessment of impacts on terrestrial invertebrates or the proposed mitigation presented in **Volume 2, Chapter 14** of the **Environment Statement** [[AS-033](#)] and subsequent **ES Addenda** [[AS-181](#), [REP5-064](#) and [REP7-030](#)].

REFERENCES

1. Drake CM et al. (2007). Surveying terrestrial and freshwater invertebrates for conservation evaluation. Natural England Research Report NERR005.
2. Stubbs & Drake (2001) British Soldierflies and their Allies. BENHS. ISBN 1899935045.
3. Stubbs. A., Falk. F., J. British Hoverflies An Illustrated Identification Guide. British Entomological and Natural History Society (2002) ISBN 10: 1899935053 ISBN 13: 9781899935055
4. Foster G., N. 2010 A review of the scarce and threatened Coleoptera of Great Britain. JNCC
5. Sutton, P., 2008. The larger water beetles of the British Isles. Amateur Entomologists' Society, Orpington.
6. Waring, Paul, Martin Townsend and Richard Lewington (2003) Field Guide to the Moths of Great Britain and Ireland. British Wildlife Publishing, Hook, UK. ISBN 0-9531399-1-3.
7. Webb J et al. (2018). Pantheon - database version 3.7.6. Available at <http://www.brc.ac.uk/pantheon/>

APPENDIX A: SPECIES LIST FOR THIS SURVEY

Area Key

CS = Coastal Strip; P = Sizewell C Platform

Status key

DD= Data deficient; Na= Notable A; Nb= Notable B; NR= Nationally Rare; NS= Nationally Scarce; NT= Near Threatened; p*status*= proposed status; RDB1= Endangered; RDB2= Vulnerable; RDB3= Rare; S41= Section 41 priority species; [*status*]= Status considered out of date, use with caution; VU= Vulnerable

The conservation statuses listed below are taken from the Pantheon database.

Species	Common name	Survey area	
Hymenoptera			
<i>Ammophila sabulosa</i>	A solitary wasp	CS, P	
<i>Ancistrocerus scoticus</i>	A solitary wasp	P	
<i>Argogorytes mystaceus</i>	A solitary wasp	P	
<i>Astata boops</i>	A solitary wasp	CS, P	
<i>Cerceris rybyensis</i>	A solitary wasp	P	
<i>Crabro scutellatus</i>	A solitary wasp	CS	[Na]
<i>Crossocerus megacephalus</i>	A solitary wasp	P	
<i>Diodontus luperus</i>	A solitary wasp	P	
<i>Diodontus minutus</i>	A solitary wasp	P	
<i>Dryudella pinguis</i>	A solitary wasp	CS	
<i>Ectemnius continuus</i>	A solitary wasp	P	
<i>Ectemnius lapidarius</i>	A solitary wasp	P	
<i>Entomognathus brevis</i>	A solitary wasp	P	

Species	Common name	Survey area	
<i>Gorytes quadrifasciatus</i>	A solitary wasp	P	
<i>Lestiphorus bicinctus</i>	A solitary wasp	CS	Nb
<i>Mimumesa dahlbomi</i>	A solitary wasp	P	
<i>Nysson trimaculatus</i>	A solitary wasp	CS	[Nb]
<i>Oxybelus uniglumis</i>	A solitary wasp	P	
<i>Passaloecus clypealis</i>	A solitary wasp	P	[RDB 3]
<i>Passaloecus gracilis</i>	A solitary wasp	P	
<i>Philanthus triangulum</i>	A solitary wasp	CS, P	[RDB 2]
<i>Podalonia hirsuta</i>	A solitary wasp	CS	Nb
<i>Smicromyrme rufipes</i>	A solitary wasp	CS, P	Nb
<i>Tachysphex pompiliformis</i>	A solitary wasp	CS, P	
<i>Trypoxylon attenuatum</i>	A solitary wasp	P	
<i>Trypoxylon medium</i>	A solitary wasp	P	
<i>Anoplius viaticus</i>	A spider-hunting wasp	CS	
<i>Arachnospila minutula</i>	A spider-hunting wasp	CS	Nb
<i>Arachnospila trivialis</i>	A spider-hunting wasp	P	
<i>Dipogon variegatus</i>	A spider-hunting wasp	P	
<i>Episyron rufipes</i>	A spider-hunting wasp	CS, P	

Species	Common name	Survey area	
<i>Evagetes crassicornis</i>	A spider-hunting wasp	CS, P	
<i>Evagetes pectinipes</i>	A spider-hunting wasp	CS	RDB 1
<i>Pompilus cinereus</i>	A spider-hunting wasp	P	
<i>Priocnemis exaltata</i>	A spider-hunting wasp	CS	
<i>Priocnemis fennica</i>	A spider-hunting wasp	CS	
<i>Chrysis illigeri</i>	A jewel wasp	P	Nb
<i>Hedychridium roseum</i>	A jewel wasp	P	
<i>Hedychrum niemalai</i>	A jewel wasp	P	[RDB 3]
<i>Macroteleia bicolor</i>	A parasitoid wasp	P	
<i>Vespula germanica</i>	A social wasp	CS, P	
<i>Vespula vulgaris</i>	A social wasp	CS, P	
<i>Coelioxys conoidea</i>	A cuckoo bee	P	
<i>Megachile maritima</i>	A leafcutter bee	P	
<i>Megachile willughbiella</i>	A leafcutter bee	P	
<i>Melecta albifrons</i>	Mourning Bee		
<i>Andrena argentata</i>	A solitary bee	CS	Na
<i>Andrena barbilabris</i>	A solitary bee	P	
<i>Andrena bimaculata</i>	A solitary bee	P	[Nb]

Species	Common name	Survey area	
<i>Andrena dorsata</i>	A solitary bee	CS	
<i>Andrena nigroaenea</i>	A solitary bee	CS, P	
<i>Andrena minutula</i>	A solitary bee	P	
<i>Andrena ovatula</i>	A solitary bee	CS, P	
<i>Andrena trimmerana</i>	A solitary bee	CS	[Nb]
<i>Anthophora bimaculata</i>	A solitary bee	CS	
<i>Anthophora furcata</i>	A solitary bee	CS	
<i>Halictus rubicundus</i>	A solitary bee	CS, P	
<i>Halictus tumulorum</i>	A solitary bee	P	
<i>Heriades truncorum</i>	A solitary bee	P	[RDB K]
<i>Hylaeus brevicornis</i>	A solitary bee	CS	
<i>Hylaeus hyalinatus</i>	A solitary bee	P	
<i>Hylaeus pectoralis</i>	A solitary bee	P	
<i>Lasioglossum calceatum</i>	A solitary bee	CS, P	
<i>Lasioglossum leucopus</i>	A solitary bee	P	
<i>Lasioglossum leucozonium</i>	A solitary bee	CS	
<i>Lasioglossum morio</i>	A solitary bee	P	
<i>Lasioglossum parvulum</i>	A solitary bee	P	
<i>Lasioglossum smeathmanellum</i>	A solitary bee	CS, P	

Species	Common name	Survey area	
<i>Osmia spinulosa</i>	A solitary bee	CS	
<i>Sphecodes ephippius</i>	A blood bee	P	
<i>Sphecodes monilicornis</i>	A blood bee	P	
<i>Sphecodes reticulatus</i>	A blood bee	P	[Na]
<i>Nomada fulvicornis</i>	A cuckoo bee	CS	[RDB 3]
<i>Nomada goodeniana</i>	A cuckoo bee	CS, P	
<i>Nomada marshamella</i>	A cuckoo bee	P	
<i>Nomada ruficornis</i>	A cuckoo bee	CS	
<i>Apis mellifera</i>	Honey Bee	CS, P	
<i>Bombus lapidarius</i>	Large Red-tailed Bumblebee	CS	
<i>Bombus pascuorum</i>	Common Carder Bee	CS	
<i>Bombus terrestris</i>	Buff-tailed Bumblebee	CS	
<i>Bombus vestalis</i>	Vestal cuckoo bee	P	
<i>Formica fusca</i>	A formicine ant	CS, P	
<i>Lasius psammophilus</i>	A formicine ant	CS, P	
<i>Lasius flavus</i>	A formicine ant	CS, P	
<i>Lasius niger</i>	A formicine ant	CS, P	
<i>Myrmica scabrinodis</i>	A myrmicine ant	CS, P	
<i>Tetramorium caespitum</i>	A myrmicine ant	P	

Species	Common name	Survey area	
Lepidoptera			
<i>Acleris variegana</i>	Garden Rose Tortrix	CS	
<i>Acrobasis suavella</i>	Thicket Knot-horn	CS	
<i>Acrocercops brongniardella</i>	Brown Oak Slender	CS	
<i>Acronicta leporina</i>	Miller	P	
<i>Acronicta psi/tridens</i>	Grey/Dark Dagger	P	
<i>Acronicta rumicis</i>	Knot Grass	P	Section 41 Priority Species - research only
<i>Aethes beatricella</i>	Hemlock Yellow Conch	P	
<i>Agapeta hamana</i>	Common Yellow Conch	P	
<i>Agriphila straminella</i>	Straw Grass-veneer	CS	
<i>Agrotis clavis</i>	Heart & Club	CS, P	
<i>Agrotis exclamationis</i>	Heart & Dart	CS, P	
<i>Agrotis puta</i>	Shuttle-shaped Dart	P	
<i>Agrotis vestigialis</i>	Archer's Dart	CS	
<i>Alcis repandata</i>	Mottled Beauty	CS, P	
<i>Aleimma loeflingiana</i>	Yellow Oak Button	P	
<i>Amphipoea fucosa</i>	Saltern Ear	P	

Species	Common name	Survey area	
<i>Amphipoea oculea</i>	Ear Moth	P	Section 41 Priority Species - research only
<i>Anacamptis populella</i>	Poplar Sober	CS	
<i>Anania lancealis</i>	Long-winged Pearl	P	
<i>Anarsia spartiella</i>	Small Crest	CS	
<i>Ancylis laetana</i>	Aspen Roller	P	
<i>Anerastia lotella</i>	Sandhill Knot-horn	CS	
<i>Apamea monoglypha</i>	Dark Arches	CS, P	
<i>Aphelia paleana</i>	Timothy Tortrix	CS, P	
<i>Aphomia sociella</i>	Bee Moth	CS, P	
<i>Aplasta ononaria</i>	Rest Harrow	CS, P	RDB 3; Section 41 Priority Species
<i>Apotomis betuletana</i>	Birch Marble	P	
<i>Apotomis turbidana</i>	White-shouldered Marble	P	
<i>Aproaerema anthyllidella</i>	Vetch Sober	CS	
<i>Archana dissoluta</i>	Brown-veined Wainscot	P	
<i>Arctia caja</i>	Garden Tiger	P	Section 41 Priority Species - research only
<i>Arctia villica</i>	Cream-spot Tiger	CS	

Species	Common name	Survey area	
<i>Argyresthia brockeella</i>	Gold-ribbon Argent	P	
<i>Aroga velocella</i>	Dusky Groundling	CS, P	
<i>Aspilapteryx tringipennella</i>	Ribwort Slender	CS, P	
<i>Aspitates ochrearia</i>	Yellow Belle	P	
<i>Asthenia albulata</i>	Small White Wave	CS	
<i>Atolmis rubricollis</i>	Red-necked Footman	P	
<i>Autographa gamma</i>	Silver Y	CS, P	
<i>Axylia putris</i>	Flame	CS, P	
<i>Batia lambdella</i>	Greater Tawny Tubic	CS, P	
<i>Batia lunaris</i>	Lesser Tawny Tubic	P	
<i>Biston betularia</i>	Peppered Moth	CS, P	
<i>Blastobasis adustella</i>	Furness Dowd	CS, P	
<i>Blastobasis lacticolella</i>	Wakely's Dowd	CS, P	
<i>Blastodacna hellerella</i>	Hawthorn Cosmet	CS	
<i>Brachmia blandella</i>	Gorse Crest	CS	
<i>Brachmia inornatella</i>	Fen Crest	P	[Nb]
<i>Bryotropha basaltinella</i>	Thatch Groundling	CS	

Species	Common name	Survey area	
<i>Bryotropha terrella</i>	Cinereous Groundling	CS, P	[Notable]
<i>Bupalus piniaria</i>	Bordered White	CS	
<i>Cabera exanthemata</i>	Common Wave	CS, P	
<i>Cabera pusaria</i>	Common White Wave	CS, P	
<i>Campaea margaritaria</i>	Light Emerald	P	
<i>Camptogramma bilineata</i>	Yellow Shell	CS	
<i>Caradrina morpheus</i>	Mottled Rustic	CS	Section 41 Priority Species - research only
<i>Cataclysta lemnata</i>	Small China-mark	P	
<i>Catoptria pinella</i>	Pearl Grass-veneer	P	
<i>Catoptria verellus</i>	Marbled Grass-veneer	P	
<i>Cedestis subfasciella</i>	Brown Pine Ermel	P	
<i>Celypha lacunana</i>	Common Marble	CS	
<i>Celypha striana</i>	Barred Marble	CS	
<i>Cerapteryx graminis</i>	Antler Moth	CS	
<i>Cerura vinula</i>	Puss Moth	CS	
<i>Chiasmia clathrata</i>	Latticed Heath	P	Section 41 Priority Species - research only
<i>Chilo phragmitella</i>	Reed Veneer	P	

Species	Common name	Survey area	
<i>Chrysoteuchia culmella</i>	Garden Grass-veneer	CS, P	
<i>Cidaria fulvata</i>	Barred Yellow	CS, P	
<i>Clostera curtula</i>	Chocolate-tip	P	
<i>Cnephasia longana</i>	Long-winged Shade	CS	
<i>Cochylis atricapitana</i>	Black-headed Conch	CS, P	
<i>Cochylis hybridella</i>	White-bodied Conch	P	
<i>Cosmia trapezina</i>	Dun-bar	P	
<i>Cosmorhoe ocellata</i>	Purple Bar	CS	
<i>Crambus lathoniellus</i>	Hook-streak Grass-veneer	CS, P	
<i>Crambus perlella</i>	Satin Grass-veneer	CS, P	
<i>Craniophora ligustri</i>	Coronet	P	
<i>Crassa unitella</i>	Golden-brown Tubic	P	
<i>Crocallis elinguaris</i>	Scalloped Oak	P	
<i>Crombrughia distans</i>	Breckland Plume	CS	
<i>Cryphia algae</i>	Tree-lichen Beauty	P	
<i>Cydia fagiglandana</i>	Large Beech Piercer	CS	
<i>Cydia microgrammana</i>	Rest-harrow Piercer	CS	

Species	Common name	Survey area	
<i>Cydia splendana</i>	Marbled Piercer	P	
<i>Deilephila elpenor</i>	Elephant Hawk-moth	CS, P	
<i>Deilephila porcellus</i>	Small Elephant Hawk-moth	CS	
<i>Deltote pygarga</i>	Marbled White Spot	CS, P	
<i>Dioryctria sylvestrella</i>	New Pine Knot-horn	P	
<i>Ditula angustiorana</i>	Red-barred Tortrix	P	
<i>Donacaula forficella</i>	Pale Water-veneer	P	
<i>Drepana falcataria</i>	Pebble Hook-tip	CS, P	
<i>Drymonia dodonaea</i>	Marbled Brown	CS, P	
<i>Dypterygia scabriuscula</i>	Bird's Wing	CS, P	
<i>Earias clorana</i>	Cream-bordered Green Pea	P	
<i>Ectoedemia heringella</i>		CS	
<i>Eilema complana</i>	Scarce Footman	CS, P	
<i>Eilema depressa</i>	Buff Footman	P	
<i>Eilema griseola</i>	Dingy Footman	P	
<i>Eilema lurideola</i>	Common Footman	CS, P	
<i>Eilema sororcula</i>	Orange Footman	CS, P	

Species	Common name	Survey area	
<i>Elachista argentella</i>	Swan-feather Dwarf	CS, P	
<i>Elophila nymphaeata</i>	Brown China-mark	P	
<i>Endotricha flammealis</i>	Rosy Tabby	CS, P	
<i>Ennomos alniaria</i>	Canary-shouldered Thorn	P	
<i>Epione repandaria</i>	Bordered Beauty	P	
<i>Epiphyas postvittana</i>	Light Brown Apple Moth	CS	
<i>Eremobia ochroleuca</i>	Dusky Sallow	P	
<i>Eucosma cana</i>	Hoary Belle	CS, P	
<i>Eudonia mercurella</i>	Small Grey	CS, P	
<i>Eupithecia centaureata</i>	Lime-speck Pug	CS	
<i>Euproctis chrysorrhoea</i>	Brown-tail	P	
<i>Euproctis similis</i>	Yellow-tail	P	
<i>Euthrix potatoria</i>	Drinker	CS, P	
<i>Euxoa tritici</i>	White-line Dart	CS, P	Section 41 Priority Species - research only
<i>Evergestis limbata</i>	Dark Bordered Pearl	P	
<i>Falcaria lacertinaria</i>	Scalloped Hook-tip	P	
<i>Furcula furcula</i>	Sallow Kitten	P	

Species	Common name	Survey area	
<i>Gandaritis pyraliata</i>	Barred Straw	CS	
<i>Geometra papilionaria</i>	Large Emerald	P	
<i>Graphiphora augur</i>	Double Dart	P	Section 41 Priority Species - research only
<i>Gypsonoma dealbana</i>	Common Cloaked Shoot	P	
<i>Gypsonoma oppressana</i>	Poplar Shoot	P	
<i>Gypsonoma sociana</i>	White Cloaked Shoot	P	
<i>Hada plebeja</i>	Shears	CS	
<i>Hadena perplexa</i>	Tawny Shears	CS	
<i>Hedya nubiferana</i>	Marbled Orchard Tortrix	CS	
<i>Hedya pruniana</i>	Plum Tortrix	CS, P	
<i>Hedya salicella</i>	White-backed Marble	P	
<i>Helcystogramma rufescens</i>	Orange Crest	CS, P	
<i>Helotropha leucostigma</i>	Crescent	P	Section 41 Priority Species - research only
<i>Hemithea aestivaria</i>	Common Emerald	P	
<i>Herminia tarsipennalis</i>	Fan-foot	P	
<i>Homoeosoma sinuella</i>	Twin-barred Knot-horn	CS, P	

Species	Common name	Survey area	
<i>Hoplodrina blanda</i>	Rustic	CS, P	Section 41 Priority Species - research only
<i>Hoplodrina octogenaria</i>	Uncertain	CS, P	
<i>Hydriomena impluviata</i>	May Highflyer	CS, P	
<i>Hypena proboscidalis</i>	Snout	CS	
<i>Hypsopygia costalis</i>	Gold Triangle	P	
<i>Idaea biselata</i>	Small Fan-footed Wave	P	
<i>Idaea dimidiata</i>	Single-dotted Wave	P	
<i>Idaea fuscovenosa</i>	Dwarf Cream Wave	CS	
<i>Idaea seriata</i>	Small Dusty Wave	CS, P	
<i>Idaea subsericeata</i>	Satin Wave	CS	
<i>Lacanobia oleracea</i>	Bright-line Brown-eye	P	
<i>Lacanobia thalassina</i>	Pale-shouldered Brocade	CS	
<i>Laothoe populi</i>	Poplar Hawk-moth	CS, P	
<i>Lasiocampa quercus</i>	Oak Eggar	CS	
<i>Leucoma salicis</i>	White Satin Moth	CS, P	
<i>Limnaecia phragmitella</i>	Bulrush Cosmet	P	
<i>Lobesia reliquana</i>	Oak Marble	P	

Species	Common name	Survey area	
<i>Lomaspilis marginata</i>	Clouded Border	P	
<i>Lomographa temerata</i>	Clouded Silver	CS, P	
<i>Luquetia lobella</i>	Sloe Flat-body	CS	
<i>Lycophotia porphyrea</i>	True Lover's Knot	CS, P	
<i>Lygephila pastinum</i>	Blackneck	P	
<i>Lymantria monacha</i>	Black Arches	P	
<i>Macaria alternata</i>	Sharp-angled Peacock	CS, P	
<i>Macaria liturata</i>	Tawny-barred Angle	CS, P	
<i>Marasmarcha lunaedactyla</i>	Crescent Plume	CS	
<i>Meganola albula</i>	Kent Black Arches	CS, P	
<i>Mesapamea secalis</i>	Common Rustic	P	
<i>Mesoligia furuncula</i>	Cloaked Minor	CS, P	
<i>Miltochrista miniata</i>	Rosy Footman	P	
<i>Mirificarma mulinella</i>	Gorse Groundling	P	
<i>Monopis monachella</i>	White-blotched Clothes	P	pRDB 3
<i>Mythimna conigera</i>	Brown-line Bright-eye	P	
<i>Mythimna ferrago</i>	Clay	CS, P	
<i>Mythimna impura</i>	Smoky Wainscot	CS, P	

Species	Common name	Survey area	
<i>Mythimna straminea</i>	Southern Wainscot	P	
<i>Noctua comes</i>	Lesser Yellow Underwing	P	
<i>Noctua fimbriata</i>	Broad-bordered Yellow Underwing	P	
<i>Noctua interjecta</i>	Least Yellow Underwing	CS, P	
<i>Noctua janthina</i>	Langmaid's Yellow Underwing	P	
<i>Noctua pronuba</i>	Large Yellow Underwing	CS, P	
<i>Notocelia roborana</i>	Summer Rose Bell	P	
<i>Notocelia trimaculana</i>	Triple-blotched Bell	P	
<i>Notocelia uddmanniana</i>	Bramble Shoot Moth	CS	
<i>Notodonta ziczac</i>	Pebble Prominent	CS, P	
<i>Nyctegretis lineana</i>	Agate Knot-horn	P	pRDB 3
<i>Ochropleura plecta</i>	Flame Shoulder	P	
<i>Oligia latruncula</i>	Tawny Marbled Minor	CS	
<i>Oncocera semirubella</i>	Rosy-striped Knot-horn	CS, P	Nb

Species	Common name	Survey area	
<i>Opisthograptis luteolata</i>	Brimstone Moth	CS, P	
<i>Orgyia antiqua</i>	Vapourer	CS	
<i>Oxypteryx wilkella</i>	Painted Neb	CS, P	Nb
<i>Pandemis cerasana</i>	Barred Fruit-tree Tortrix	P	
<i>Parapoynx stratiotata</i>	Ringed China-mark	CS, P	
<i>Pasiphila rectangulata</i>	Green Pug	P	
<i>Pediasia contaminella</i>	Waste Grass-veneer	CS, P	Nb
<i>Pelurga comitata</i>	Dark Spinach	P	Section 41 Priority Species - research only
<i>Pempelia genistella</i>	Gorse Knot-horn	CS, P	[Na]
<i>Pennithera firmata</i>	Pine Carpet	CS, P	
<i>Peribatodes rhomboidaria</i>	Willow Beauty	CS, P	
<i>Perizoma alchemillata</i>	Small Rivulet	P	
<i>Petrophora chlorosata</i>	Brown Silver-line	P	
<i>Pexicopia malvella</i>	Hollyhock Seed Moth	CS	Nb
<i>Phalera bucephala</i>	Buff-tip	CS, P	
<i>Pheosia gnoma</i>	Lesser Swallow Prominent	CS	
<i>Pheosia tremula</i>	Swallow Prominent	CS, P	

Species	Common name	Survey area	
<i>Phlogophora meticulosa</i>	Angle Shades	CS	
<i>Phragmatobia fuliginosa</i>	Ruby Tiger	P	
<i>Phycita roborella</i>	Dotted Oak Knot-horn	CS	
<i>Phyllocnistis xenia</i>	Kent Bent-wing	Sizewell Beach	
<i>Pima boisduvaliella</i>	Silver-edged Knot-horn	CS	Na
<i>Piniphila bifasciana</i>	Pine Marble	P	
<i>Plagodis dolabraria</i>	Scorched Wing	P	
<i>Platytes alpinella</i>	Hook-tipped Grass-veneer	P	
<i>Platytes cerussella</i>	Little Grass-veneer	CS, P	
<i>Pleuroptya ruralis</i>	Mother of Pearl	P	
<i>Plusia festucae</i>	Gold Spot	P	
<i>Plutella xylostella</i>	Diamond-back Moth	CS, P	
<i>Pterophorus pentadactyla</i>	White Plume Moth	CS	
<i>Pterostoma palpina</i>	Pale Prominent	CS, P	
<i>Ptilodon capucina</i>	Coxcomb Prominent	P	
<i>Pyrausta despicata</i>	Straw-barred Pearl	CS, P	

Species	Common name	Survey area	
<i>Pyrrhia umbra</i>	Bordered Sallow	CS	
<i>Rhyacionia pinicolana</i>	Orange-spotted Shoot	P	
<i>Rhyacionia pinivorana</i>	Spotted Shoot Moth	P	
<i>Rivula sericealis</i>	Straw Dot	CS, P	
<i>Rusina ferruginea</i>	Brown Rustic	CS, P	
<i>Schoenobius gigantella</i>	Giant Water-veneer	P	
<i>Scoparia ambigualis</i>	Common Grey	CS	
<i>Scoparia basistrigalis</i>	Base-lined Grey	P	
<i>Scoparia pyralella</i>	Meadow Grey	CS	
<i>Scopula imitaria</i>	Small Blood-vein	CS	
<i>Scopula rubiginata</i>	Tawny Wave	CS, P	RDB 3
<i>Scotopteryx chenopodiata</i>	Shaded Broad-bar	CS, P	Section 41 Priority Species - research only
<i>Selenia tetralunaria</i>	Purple Thorn	P	
<i>Smerinthus ocellata</i>	Eyed Hawk-moth	P	
<i>Sphinx pinastri</i>	Pine Hawk-moth	CS, P	
<i>Spilonota ocellana</i>	Bud Moth	CS, P	
<i>Spilosoma lubricipeda</i>	White Ermine	CS	Section 41 Priority Species - research only
<i>Spilosoma lutea</i>	Buff Ermine	CS	Section 41 Priority Species - research only

Species	Common name	Survey area	
<i>Subacronicta megacephala</i>	Poplar Grey	CS, P	
<i>Synaphe punctalis</i>	Long-legged Tabby	CS, P	
<i>Tethea ocularis</i>	Figure of Eighty	P	
<i>Thera obeliscata</i>	Grey Pine Carpet	CS, P	
<i>Thumatha senex</i>	Round-winged Muslin	P	
<i>Tinea trinotella</i>	Bird's-nest Moth	CS, P	
<i>Tortrix viridana</i>	Green Oak Tortrix	CS	
<i>Tyria jacobaeae</i>	Cinnabar	CS	Section 41 Priority Species - research only
<i>Udea olivalis</i>	Olive Pearl	P	
<i>Xanthorhoe spadicearia</i>	Red Twin-spot Carpet	P	
<i>Xestia c-nigrum</i>	Setaceous Hebrew Character	P	
<i>Yponomeuta</i>		P	
<i>Yponomeuta evonymella</i>	Bird-cherry Ermine	P	
<i>Yponomeuta rorella</i>	Willow Ermine	P	
<i>Zeiraphera insertana</i>	Cock's-head Bell	CS	
<i>Zygaena filipendulae</i>	Six-spot Burnet	CS	
<i>Ochlodes sylvanus</i>	Large Skipper	CS, P	

Species	Common name	Survey area	
<i>Thymelicus sylvestris</i>	Small Skipper	CS, P	
<i>Aricia agestis</i>	Brown Argus	CS, P	
<i>Lycaena phlaeas</i>	Small Copper	CS, P	
<i>Polyommatus icarus</i>	Common Blue	CS, P	
<i>Aglais io</i>	Peacock Butterfly	CS, P	
<i>Aglais urticae</i>	Small Tortoiseshell	CS, P	
<i>Vanessa atalanta</i>	Red Admiral	CS, P	
<i>Vanessa cardui</i>	Painted Lady	CS, P	
<i>Coenonympha pamphilus</i>	Small Heath	CS	Near threatened; Section 41 Priority Species
<i>Hipparchia semele</i>	Grayling	CS, P	Vulnerable; Section 41 Priority Species
<i>Maniola jurtina</i>	Meadow Brown	CS, P	
<i>Pyronia tithonus</i>	Gatekeeper	CS	
<i>Pararge aegeria</i>	Speckled Wood	P	
<i>Pieris brassicae</i>	Large White Butterfly	CS, P	
<i>Pieris rapae</i>	Small White Butterfly	CS, P	
<i>Anthocharis cardamines</i>	Orange Tip	CS, P	
Coleoptera			
<i>Cicindela campestris</i>	Green Tiger Beetle	CS, P	

Species	Common name	Survey area	
<i>Agapanthia villosoviridescens</i>	A longhorn beetle	P	
<i>Arhopalus rusticus</i>	A longhorn beetle	P	
<i>Grammoptera ruficornis</i>	A longhorn beetle	P	
<i>Pseudovadonia livida</i>	Fairy-ring Longhorn	P	
<i>Rutpela maculata</i>	A Longhorn Beetle	CS, P	
<i>Stenurella melanura</i>	A longhorn beetle	P	
<i>Chrysolina banksii</i>	A leaf beetle	P	
<i>Cryptocephalus fulvus</i>	A pot beetle	CS, P	
<i>Oulema obscura</i>	A leaf beetle	CS, P	
<i>Sermylassa halensis</i>	A leaf beetle	CS	
<i>Aphthona euphorbiae</i>	A flea beetle	P	
<i>Aphthona nonstriata</i>	A flea beetle	P	
<i>Chaetocnema concinna</i>	A flea beetle	CS, P	
<i>Crepidodera aurata</i>	A flea beetle	P	
<i>Crepidodera fulvicornis</i>	A flea beetle	P	
<i>Longitarsus gracilis</i>	A flea beetle	CS, P	
<i>Longitarsus jacobaeae</i>	A flea beetle	CS, P	
<i>Longitarsus luridus</i>	A flea beetle	CS	

Species	Common name	Survey area	
<i>Neocrepidodera ferruginea</i>	A flea beetle	CS	
<i>Phyllotreta atra</i>	A flea beetle	CS, P	
<i>Psylliodes chrysocephala</i>	Cabbage Stem Flea Beetle	CS, P	
<i>Sphaeroderma testaceum</i>	A flea beetle	CS	
<i>Aphanisticus pusillus</i>	A jewel beetle	CS	NS
<i>Adalia decempunctata</i>	10-spot ladybird	CS, P	
<i>Calvia quatuordecimguttata</i>	Cream spot ladybird	P	
<i>Chilocorus renipustulatus</i>	Kidney spot ladybird	P	
<i>Coccinella septempunctata</i>	7-spot Ladybird	CS, P	
<i>Coccinella undecimpunctata</i>	11-spot ladybird	P	
<i>Harmonia axyridis</i>	Harlequin ladybird	CS, P	
<i>Hippodamia variegata</i>	Adonis Ladybird	CS	[Nb]
<i>Propylea quatuordecimpunctata</i>	14-spot ladybird	P	
<i>Psyllobora vigintiduopunctata</i>	22-spot ladybird	P	
<i>Rhyzobius litura</i>	A ladybird beetle	CS, P	
<i>Tytthaspis sedecimpunctata</i>	16-spot Ladybird	P	

Species	Common name	Survey area	
<i>Apion frumentarium</i>	An apionid weevil	CS, P	
<i>Ischnopterapion loti</i>	An apionid weevil	CS	
<i>Perapion marchicum</i>	An apionid weevil	CS	
<i>Protapion difforme</i>	An apionid weevil	CS	Nb
<i>Protapion dissimile</i>	An apionid weevil	CS, P	Nb
<i>Holotrichapion ononis</i>	An apionid weevil	CS	
<i>Exapion ulicis</i>	An apionid weevil	P	
<i>Sitona hispidulus</i>	A pea weevil	P	
<i>Sitona lineatus</i>	A pea weevil	CS	LC
<i>Otiorhynchus ovatus</i>	A broad-nosed weevil	CS	
<i>Polydrusus cervinus</i>	A broad-nosed weevil	P	
<i>Polydrusus formosus</i>	A broad-nosed weevil	P	[Na]
<i>Trachyploeus angustisetulus</i>	A broad-nosed weevil	CS	
<i>Ceutorhynchus obstrictus</i>	Cabbage Seed Pod Weevil	CS, P	
<i>Ceutorhynchus pallidactylis</i>	Cabbage Stem Weevil	CS, P	

Species	Common name	Survey area	
<i>Glocianus distinctus</i>	A true weevil	CS	
<i>Hypera nigrirostris</i>	A true weevil	CS	
<i>Mecinus pascuorum</i>	A true weevil	CS, P	
<i>Mecinus pyraeter</i>	A true weevil	CS	
<i>Orthochaetes setiger</i>	A true weevil	P	[Nb]
<i>Philopodon plagiatum</i>	A true weevil	CS	
<i>Rhinoncus castor</i>	A true weevil	P	
<i>Trichosirocalus troglodytes</i>	A true weevil	CS, P	
<i>Magdalis cerasi</i>	A true weevil	P	[Nb]
<i>Neocoenorrhinus aequatus</i>	A rhynchitid weevil	P	
<i>Temnocerus nanus</i>	A rhynchitid weevil	P	
<i>Psilothrix viridicoerulea</i>	A soft-winged flower beetle	CS	
<i>Lampyrus noctiluca</i>	Glow worm	CS	
<i>Athous haemorrhoidalis</i>	A click-beetle	CS, P	
<i>Dalopius marginatus</i>	A click-beetle	P	
<i>Agrypnus murinus</i>	A click-beetle	CS, P	
<i>Cardiophorus asellus</i>	A click-beetle	CS	Nb
<i>Anthocomus rufus</i>	A malachite beetle	CS	

Species	Common name	Survey area	
<i>Malachius bipustulatus</i>	A malachite beetle	CS	
<i>Oedemera lurida</i>	Lurid Flower Beetle	P	
<i>Oedemera nobilis</i>	Thick-kneed Flower Beetle	P	
<i>Anaspis frontalis</i>	A false flower beetle	P	
<i>Pyrochroa serraticornis</i>	Red-headed Cardinal Beetle	CS	
<i>Cteniopus sulphureus</i>	Sulphur Beetle	CS, P	
<i>Meligethes aeneus</i>	Common Pollen Beetle	CS, P	
<i>Crypticus quisquilius</i>	A darkling beetle	CS	NS
<i>Isomira murina</i>	A darkling beetle	P	
<i>Lagria hirta</i>	A darkling beetle	CS, P	
<i>Phylan gibbus</i>	A darkling beetle	CS	
<i>Pseudocistela ceramboides</i>	A darkling beetle	P	NS
<i>Amphimallon solstitiale</i>	Summer Chafer	CS, P	
<i>Onthophagus coenobita</i>	A dung beetle	P	
<i>Onthophagus joannae</i>	A dung beetle	P	
<i>Onthophagus similis</i>	A dung beetle	P	
<i>Abax parallelepipedus</i>	A ground beetle	P	
<i>Agonum muelleri</i>	A ground beetle	CS	

Species	Common name	Survey area	
<i>Amara aenea</i>	A ground beetle	CS, P	
<i>Amara apricaria</i>	A ground beetle	P	
<i>Amara familiaris</i>	A ground beetle	CS	
<i>Amara ovata</i>	A ground beetle	P	
<i>Amara plebeja</i>	A ground beetle	P	
<i>Amara strenua</i>	A ground beetle	CS	NR;NT
<i>Bembidion bruxellense</i>	A ground beetle	P	
<i>Bembidion femoratum</i>	A ground beetle	P	
<i>Bembidion genei</i>	A ground beetle	CS, P	
<i>Bembidion guttula</i>	A ground beetle	P	
<i>Bembidion lampros</i>	A ground beetle	CS, P	
<i>Bembidion nigropiceum</i>	A ground beetle	CS	NR;NT
<i>Bembidion quadrimaculatum</i>	A ground beetle	P	
<i>Bradycellus harpalinus</i>	A ground beetle	CS, P	
<i>Carabus granulatus</i>	A ground beetle	P	
<i>Calathus cinctus</i>	A ground beetle	CS	
<i>Calathus mollis</i>	A ground beetle	P	
<i>Clivina fossor</i>	A ground beetle	CS, P	
<i>Cymindis axillaris</i>	A ground beetle	CS	
<i>Demetrias atricapillus</i>	A ground beetle	CS, P	
<i>Dyschirius globosus</i>	A ground beetle	P	

Species	Common name	Survey area	
<i>Elaphropus parvulus</i>	A ground beetle	P	NS
<i>Harpalus affinis</i>	A ground beetle	CS, P	
<i>Harpalus rufipes</i>	A ground beetle	P	
<i>Harpalus servus</i>	A ground beetle	P	NR;NT
<i>Harpalus tardus</i>	A ground beetle	P	
<i>Leistus ferrugineus</i>	A ground beetle	P	
<i>Leistus spinibarbis</i>	A ground beetle	CS	
<i>Licinus depressus</i>	A ground beetle	P	NS
<i>Loricera pilicornis</i>	A ground beetle	P	
<i>Nebria brevicollis</i>	A ground beetle	CS, P	
<i>Notiophilus aquaticus</i>	A ground beetle	P	
<i>Notiophilus biguttatus</i>	A ground beetle	CS, P	
<i>Notiophilus substriatus</i>	A ground beetle	CS, P	
<i>Paradromius linearis</i>	A ground beetle	CS, P	
<i>Philorhizus melanocephalus</i>	A ground beetle	CS	
<i>Poecilus cupreus</i>	A ground beetle	CS, P	
<i>Poecilus versicolor</i>	A ground beetle	CS, P	
<i>Pterostichus gracilis</i>	A ground beetle	P	NS
<i>Pterostichus madidus</i>	A ground beetle	CS, P	
<i>Pterostichus melanarius</i>	A ground beetle	CS, P	
<i>Pterostichus vernalis</i>	A ground beetle	P	

Species	Common name	Survey area	
<i>Stomis pumicatus</i>	A ground beetle	P	
<i>Trechus obtusus</i>	A ground beetle	P	
<i>Trechus quadristriatus</i>	A ground beetle	P	
<i>Astenus lyonessius</i>	A rove beetle	CS, P	
<i>Bisnius fimetarius</i>	A rove beetle	P	
<i>Bisnius puella</i>	A rove beetle	P	
<i>Cafius xantholoma</i>	A rove beetle	CS	
<i>Creophilus maxillosus</i>	A rove beetle	CS, P	
<i>Drusilla canaliculata</i>	A rove beetle	P	
<i>Gabrius nigritulus</i>	A rove beetle	CS	
<i>Gyrohypnus angustatus</i>	A rove beetle	CS, P	
<i>Lathrobium brunnipes</i>	A rove beetle	P	
<i>Lathrobium elongatum</i>	A rove beetle	P	
<i>Leptacinus pusillus</i>	A rove beetle	CS, P	
<i>Megalinus glabratus</i>	A rove beetle	P	
<i>Ocypus aeneocephalus</i>	A rove beetle	CS	
<i>Ocypus olens</i>	A rove beetle	P	
<i>Ontholestes tessellatus</i>	A rove beetle	P	
<i>Othius laeviusculus</i>	A rove beetle	P	
<i>Paederus littoralis</i>	A rove beetle	CS, P	

Species	Common name	Survey area	
<i>Philonthus carbonarius</i>	A rove beetle	P	
<i>Philonthus cognatus</i>	A rove beetle	P	
<i>Philonthus laminatus</i>	A rove beetle	P	
<i>Platydracus stercorarius</i>	A rove beetle	P	
<i>Quedius boops</i>	A rove beetle	P	
<i>Rugilus orbiculatus</i>	A rove beetle	CS, P	
<i>Stenus bimaculatus</i>	A rove beetle	P	
<i>Stenus brunnipes</i>	A rove beetle	P	
<i>Stenus circularis</i>	A rove beetle	CS, P	Nb
<i>Stenus clavicornis</i>	A rove beetle	P	
<i>Stenus impressus</i>	A rove beetle	CS, P	
<i>Stenus junco</i>	A rove beetle	P	
<i>Stenus nanus</i>	A rove beetle	CS, p	
<i>Stenus picipes</i>	A rove beetle	P	
<i>Stenus providus</i>	A rove beetle	P	
<i>Sepedophilus nigripennis</i>	A rove beetle	P	
<i>Sunius propinquus</i>	A rove beetle	P	
<i>Tachyporus chrysomelinus</i>	A rove beetle	CS	
<i>Tachyporus hypnorum</i>	A rove beetle	CS, P	
<i>Tachyporus nitidulus</i>	A rove beetle	CS, P	

Species	Common name	Survey area	
<i>Tachyporus pusillus</i>	A rove beetle	CS	
<i>Tasgius globulifer</i>	A rove beetle	P	
<i>Tasgius morsitans</i>	A rove beetle	P	
<i>Xantholinus linearis</i>	A rove beetle	P	
<i>Necrodes littoralis</i>	A carrion beetle	CS, P	
<i>Nicrophorus humator</i>	A carrion beetle	P	
<i>Nicrophorus interruptus</i>	A carrion beetle	P	Nb
<i>Nicrophorus vespilloides</i>	A carrion beetle	CS, P	
<i>Oiceoptoma thoracicum</i>	A carrion beetle	P	
<i>Phosphuga atrata</i>	A carrion beetle	CS, P	
<i>Silpha tristis</i>	A carrion beetle	P	
<i>Thanatophilus rugosus</i>	A carrion beetle	CS, P	
<i>Thanatophilus sinuatus</i>	A carrion beetle	P	
<i>Anthicus antherinus</i>	An anthicid beetle	P	
<i>Notoxus monoceros</i>	An anthicid beetle	CS, P	
<i>Byrrhus pilula</i>	A pill beetle	CS, P	
<i>Cytilus sericeus</i>	A pill beetle	P	
<i>Simplocaria semistriata</i>	A pill beetle	CS, P	

Species	Common name	Survey area	
Diptera			
<i>Dioctria atricapilla</i>	Violet Black-legged Robberfly	CS	
<i>Dioctria rufipes</i>	Common Red-legged Robberfly	P	
<i>Dysmachus trignonus</i>	Fan-bristled Robberfly	CS	
<i>Eutolmus rufibarbis</i>	Golden-tabbed Robberfly	CS	NS
<i>Leptogaster cylindrica</i>	Striped Slender Robberfly	CS, P	
<i>Machimus atricapillus</i>	Kite-tailed Robberfly	CS, P	
<i>Philonicus albiceps</i>	Dune Robberfly	CS	
<i>Machimus cingulatus</i>	Brown Heath Robberfly	CS, P	
<i>Haematopota grandis</i>	A cleg fly	P	NS
<i>Haematopota pluvialis</i>	A cleg fly	P	
<i>Episyrphus balteatus</i>	Marmalade Hoverfly	CS, P	
<i>Eristalis pertinax</i>	A hoverfly	CS, P	
<i>Eristalis tenax</i>	A hoverfly	CS, P	
<i>Eupeodes luniger</i>	A hoverfly	P	
<i>Helophilus pendulus</i>	A hoverfly	P	
<i>Helophilus trivittatus</i>	A hoverfly	P	
<i>Melanogaster hirtella</i>	A hoverfly	P	

Species	Common name	Survey area	
<i>Melanostoma mellinum</i>	A hoverfly	P	
<i>Neoascia tenur</i>	A hoverfly	P	
<i>Sericomyia silentis</i>	A hoverfly	CS	
<i>Sphaerophoria scripta</i>	A hoverfly	CS	
<i>Scaeva pyrastris</i>	A hoverfly	CS, P	
<i>Syrphus ribesii</i>	A hoverfly	CS, P	
<i>Tephritis vespertina</i>	A tephritid fly	P	
<i>Villa modesta</i>	A bee fly	CS	NS
<i>Sicus ferrugineus</i>	A conopid fly	CS, P	
<i>Beris vallata</i>	A soldier fly	P	
<i>Chloromyia formosa</i>	A soldier fly	P	
<i>Nemotelus pantherinus</i>	A soldier fly	CS, P	
<i>Oplodontha viridula</i>	A soldier fly	P	
<i>Pachygaster atra</i>	A soldier fly	P	
<i>Pachygaster leachii</i>	A soldier fly	P	
<i>Sargus bipunctatus</i>	A soldier fly	P	
<i>Meiosimyza decempunctata</i>	A lauxaniid Fly	P	
<i>Tricholauxania praeusta</i>	A lauxaniid Fly	P	
<i>Bicellaria simplicipes</i>	A dance fly	P	
<i>Empis concolor</i>	A dance fly	P	

Species	Common name	Survey area	
<i>Empis stercorea</i>	A dance fly	CS, P	
<i>Platypalpus annulipes</i>	A dance fly	P	
<i>Lonchoptera furcata</i>	A lonchopterid fly	P	
<i>Lonchoptera lutea</i>	A lonchopterid fly	CS, P	
<i>Sepsis cynipsea</i>	An ensign fly	P	
<i>Sepsis fulgens</i>	An ensign fly	CS, P	
<i>Thereva bipunctata</i>	A stiletto fly	CS	
<i>Thereva nobilitata</i>	A stiletto fly	CS	
<i>Thereva plebeja</i>	A stiletto fly	CS	
<i>Chrysopilus cristatus</i>	A snipe fly	P	
<i>Rhagio scolopaceus</i>	A snipe fly	P	
<i>Achalcus flavicollis</i>	A long-legged fly	P	
<i>Campsicnemus scambus</i>	A long-legged fly	P	
<i>Dolichopus atratus</i>	A long-legged fly	P	
<i>Dolichopus nubilus</i>	A long-legged fly	P	
<i>Hercostomus chalybeus</i>	A long-legged fly	P	
<i>Hercostomus nigripennis</i>	A long-legged fly	P	
<i>Medetera micacea</i>	A long-legged fly	P	DD
<i>Syntormon bicolorellum</i>	A long-legged fly	P	
<i>Xanthochlorus ornatus</i>	A long-legged fly	P	

Species	Common name	Survey area	
<i>Chlorops hypostigma</i>	A grass fly	CS, P	
<i>Dicraeus raptus</i>	A grass fly	CS, P	pNS
<i>Meromyza ornata</i>	A grass fly	CS	
<i>Meromyza zachvatkini</i>	A grass fly	CS	
<i>Neohaplegis tarsata</i>	A grass fly	CS	
<i>Platycephala planifrons</i>	A grass fly	CS	
<i>Hydromya dorsalis</i>	A snail-killing fly	P	
<i>Pherbellia brunnipes</i>	A snail-killing fly	P	Notable
<i>Pherbellia griseola</i>	A snail-killing fly	P	Notable
<i>Pherbellia nana</i>	A snail-killing fly	P	Notable
<i>Tetanocera ferruginea</i>	A snail-killing fly	P	
<i>Rhinophora lepida</i>	A woodlouse fly	P	
<i>Botanophila fugax</i>	An anthomyiid Fly	P	
<i>Pollenia rudis</i>	A polleniid fly	P	
<i>Coenosia pumila</i>	A house fly	CS, P	
<i>Coenosia tigrina</i>	A house fly	P	
<i>Fannia serena</i>	A faniid fly	P	
<i>Leptocera nigra</i>	A lesser dung fly	P	
<i>Rachispoda lutosoidea</i>	A lesser dung fly	P	
<i>Scathophaga stercoraria</i>	A dung fly	CS, P	

Species	Common name	Survey area	
<i>Ditrichophora calceata</i>	A shore fly	CS	
<i>Parydra coarctata</i>	A shore fly	CS	
<i>Sciara humeralis</i>	A dark-winged fungus gnat	P	
<i>Helius longirostris</i>	A limoniid crane fly	P	
<i>Molophilus serpentiger</i>	A limoniid crane fly	P	
<i>Pseudolimnophila lucorum</i>	A limoniid crane fly	P	
<i>Ptychoptera albimana</i>	A phantom crane fly	P	
<i>Ptychoptera minuta</i>	A phantom crane fly	P	
Neuroptera			
<i>Euroleon nostras</i>	An Antlion	CS	New to Britain
Hemiptera			
<i>Aelia acuminata</i>	Bishop's Mitre Shieldbug	CS, P	
<i>Dolycoris baccarum</i>	Hairy Shieldbug	CS	
<i>Legnotus picipes</i>	Heath Shieldbug	CS, P	NS
<i>Palomena prasina</i>	Common Green Shieldbug	CS	
<i>Podops inuncta</i>	Turtle Shieldbug	CS	
<i>Pentatoma rufipes</i>	Red-legged shieldbug	P	

Species	Common name	Survey area	
<i>Elasmotethus interstinctus</i>	Birch Shieldbug	P	
<i>Odontoscelis fuliginosa</i>	Greater streaked shieldbug	P	NR;VU
<i>Eurygaster testudinaria</i>	A Tortoise Bug	CS, P	
<i>Gampsocoris punctipes</i>	A stiltbug	CS, P	
<i>Kelisia sabulicola</i>	A planthopper	P	
<i>Oncopsis subangulata</i>	A leafhopper	P	
<i>Agallia ribauti</i>	A leafhopper	CS	
<i>Aphrodes bicinctus</i>	A leafhopper	CS	
<i>Macropsis scotti</i>	A leafhopper	CS, P	
<i>Adelphocoris lineolatus</i>	Lucerne Bug	CS, P	
<i>Neophilaenus campestris</i>	A froghopper	CS, P	
<i>Neophilaenus lineatus</i>	A froghopper	CS, P	
<i>Philaenus spumarius</i>	Common Froghopper	CS, P	
<i>Alydus calcaratus</i>	An alydid bug	CS, P	NS
<i>Himacerus major</i>	Grey damselbug	CS, P	
<i>Himacerus mirmicoides</i>	Ant damselbug	P	
<i>Orius minutus</i>	A pirate bug	P	
<i>Anthocoris nemoralis</i>	A flower bug	P	

Species	Common name	Survey area	
<i>Cardiastethus fasciiventris</i>	A flower bug		
<i>Aphanus rolandri</i>	A ground bug	CS, P	Na
<i>Cymus glandicolor</i>	A ground bug		
<i>Ischnodemus sabuleti</i>	European Clinch Bug	P	LC
<i>Kleidocerys resedae</i>	Birch Catkin Bug	P	
<i>Megalonotus praetextatus</i>	A ground bug	P	Nb
<i>Megalonotus sabulicola</i>	A ground bug	P	Nb
<i>Plinthisus brevipennis</i>	A ground bug	CS	
<i>Trapezonotus desertus</i>	A ground bug	CS, P	
<i>Capsus ater</i>	A mirid bug	P	
<i>Dicyphus annulatus</i>	A mirid bug	CS, P	
<i>Heterotoma merioptera</i>	A mirid bug	P	
<i>Lygus maritimus</i>	A mirid bug	CS, P	
<i>Lygus rugulipennis</i>	A mirid bug	CS, P	
<i>Macrotylus paykulli</i>	A mirid bug	P	
<i>Notostira elongata</i>	A mirid bug	CS, P	
<i>Orthocephalus coriaceus</i>	A mirid bug	CS	
<i>Phytocoris varipes</i>	A mirid bug	CS	LC

Species	Common name	Survey area	
<i>Plagiognathus chrysanthemi</i>	A mirid bug	P	
<i>Polymerus unifasciatus</i>	A mirid bug	CS	
<i>Psallus salicis</i>	A mirid bug	P	
<i>Stenodema calcarata</i>	A grass bug	P	
<i>Stenodema laevigata</i>	A grass bug	P	
<i>Chorosoma schillingi</i>	A rhopalid bug	CS, P	
<i>Myrmus miriformis</i>	A rhopalid bug	P	
<i>Acalypta parvula</i>	A lacebug	CS, P	
<i>Kalama tricornis</i>	A lacebug	CS, P	
Dermaptera			
<i>Forficula auricularia</i>	Common Earwig	CS, P	
Blattodea			
<i>Ectobius panzeri</i>	Lesser Cockroach	CS, P	NS
Odonata			
<i>Aeshna isosceles</i>	Norfolk Hawker	P	EN;Legal Protection;NS;Section 41 Priority Species
<i>Aeshna cyanea</i>	Southern Hawker	P	
<i>Aeshna mixta</i>	Migrant Hawker	P	
<i>Calopteryx splendens</i>	Banded Demoiselle	P	

Species	Common name	Survey area	
<i>Libellula depressa</i>	Broad-bodied Chaser	P	
<i>Libellula quadrimaculata</i>	Four-spotted Chaser	P	
<i>Orthetrum cancellatum</i>	Black-tailed Skimmer	P	
<i>Sympetrum sanguineum</i>	Ruddy Darter	P	
<i>Sympetrum striolatum</i>	Common Darter	CS	
<i>Coenagrion puella</i>	Azure Damselfly	P	
<i>Ischnura elegans</i>	Common Blue-tailed Damselfly	P	
<i>Pyrrhosoma nymphula</i>	Large Red Damselfly	P	
Orthoptera			
<i>Chorthippus albomarginatus</i>	Lesser Marsh Grasshopper	CS, P	
<i>Chorthippus brunneus</i>	Common Grasshopper	CS, P	
<i>Chorthippus parallelus</i>	Meadow Grasshopper	CS, P	
<i>Myrmeleotettix maculatus</i>	Mottled Grasshopper	CS, P	
<i>Omocestus viridulus</i>	Common Green Grasshopper	CS, P	
<i>Stenobothrus lineatus</i>	Stripe-winged Grasshopper	CS, P	

Species	Common name	Survey area	
<i>Conocephalus fuscus</i>	Long-winged Conehead	CS, P	
<i>Leptophyes punctatissima</i>	Speckled Bush-cricket	P	
<i>Tetrix subulata</i>	Slender Groundhopper	P	
<i>Tetrix undulata</i>	Common Groundhopper	P	
<i>Metrioptera roeselii</i>	Roesel's Bush-cricket	CS, P	
<i>Pholidoptera griseoaptera</i>	Dark Bush-cricket	CS, P	
<i>Platycleis albopunctata</i>	Grey Bush-cricket	CS	NS
<i>Tettigonia viridissima</i>	Great Green Bush-cricket	CS, P	
Psocoptera			
<i>Ectopsocus briggsi</i>	A barkfly	P	
<i>Ectopsocus petersi</i>	A barkfly	P	
<i>Mesopsocus unipunctatus</i>	A barkfly	P	
Isopoda			
<i>Armadillidium vulgare</i>	Common Pill Woodlouse	CS	
<i>Cylisticus convexus</i>	A woodlouse	CS, P	
<i>Philoscia muscorum</i>	Common Striped Woodlouse	CS, P	

Species	Common name	Survey area	
<i>Porcellio scaber</i>	Common Rough Woodlouse	CS, P	
Pseudoscorpiones			
<i>Dactylochelifer latreillei</i>	A pseudoscorpion	CS	
Opiliones			
<i>Phalangium opilio</i>	A harvestman	CS, P	
<i>Platybunus triangularis</i>	A harvestman	CS, P	
Araneae			
<i>Pisaura mirabilis</i>	Nursery Web Spider	CS, P	
<i>Neoscona adianta</i>	An orb-web spider	CS, P	
<i>Agalenatea redii</i>	An orb-web spider	CS, P	
<i>Araneus diadematus</i>	An orb-web spider	P	
<i>Araneus triguttatus</i>	An orb-web spider	P	
<i>Araniella cucurbitina</i>	An orb-web spider	P	
<i>Araniella opisthographa</i>	An orb-web spider	P	
<i>Hypsosinga pygmaea</i>	An orb-web spider	P	
<i>Larinioides cornutus</i>	An orb-web spider	P	

Species	Common name	Survey area	
<i>Mangora acalypha</i>	An orb-web spider	CS, P	
<i>Clubiona comta</i>	A clubionid spider	P	
<i>Clubiona phragmitis</i>	A clubionid spider	P	
<i>Clubiona reclusa</i>	A clubionid spider	P	
<i>Clubiona subtilis</i>	A clubionid spider	CS	
<i>Dictyna latens</i>	A dictynid spider	CS, P	
<i>Dysdera crocata</i>	A woodlouse spider	P	
<i>Drassodes cupreus</i>	A gnaphosid spider	P	
<i>Drassodes lapidosus</i>	A gnaphosid spider	P	
<i>Drassyllus pusillus</i>	A gnaphosid spider	CS, P	
<i>Haplodrassus signifer</i>	A gnaphosid spider	CS, P	
<i>Micaria pulicaria</i>	A gnaphosid spider	CS	
<i>Trachyzelotes pedestris</i>	A gnaphosid spider	CS, P	
<i>Zelotes electus</i>	A gnaphosid spider	P	NS

Species	Common name	Survey area	
<i>Zelotes latreillei</i>	A gnaphosid spider	CS, P	NR
<i>Zelotes petrensis</i>	A gnaphosid spider	CS, P	NR
<i>Bathyphantes gracilis</i>	A linyphiid spider	P	
<i>Erigone atra</i>	A linyphiid spider	CS	
<i>Microlinyphia pusilla</i>	A linyphiid spider	P	
<i>Tenuiphantes tenuis</i>	A linyphiid spider	P	
<i>Alopecosa cuneata</i>	A wolf spider	CS, P	NS
<i>Arctosa leopardus</i>	A wolf spider	CS, P	
<i>Pardosa agrestis</i> (group)	A wolf spider	CS, P	NS
<i>Pardosa agricola</i>	A wolf spider	CS, P	
<i>Pardosa monticola</i>	A wolf spider	CS, P	
<i>Pardosa nigriceps</i>	A wolf spider	P	
<i>Pardosa palustris</i>	A wolf spider	CS, P	
<i>Pardosa prativaga</i>	A wolf spider	CS, P	
<i>Pardosa proxima</i>	A wolf spider	P	NS
<i>Pardosa pullata</i>	A wolf spider	CS, P	
<i>Pirata piraticus</i>	A wolf spider	P	
<i>Piratula latitans</i>	A wolf spider	P	
<i>Trochosa ruricola</i>	A wolf spider	P	
<i>Phrurolithus festivus</i>	A phrurolithid spider	P	

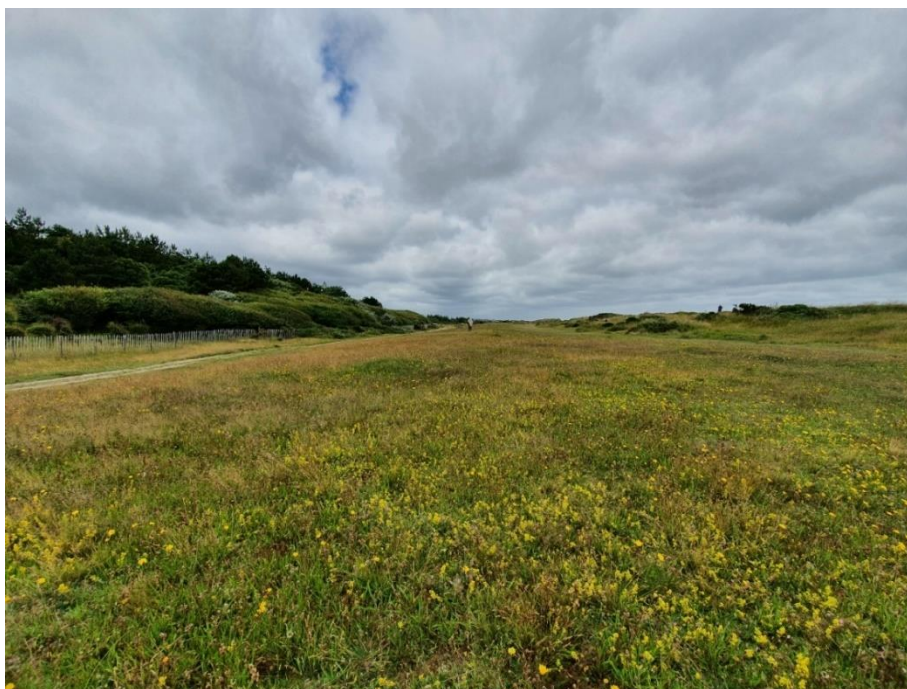
Species	Common name	Survey area	
<i>Euophrys frontalis</i>	A jumping spider	CS, P	
<i>Heliophanus flavipes</i>	A jumping spider	CS, P	
<i>Salticus scenicus</i>	A jumping spider	P	
<i>Sitticus saltator</i>	A jumping spider	CS	NS
<i>Metellina menzei</i>	A tetragnathid spider	P	
<i>Pachygnatha degeeri</i>	A tetragnathid spider	P	
<i>Tetragnatha extensa</i>	A tetragnathid spider	CS, P	
<i>Tetragnatha montana</i>	A tetragnathid spider	P	
<i>Tetragnatha nigrita</i>	A tetragnathid spider	P	
<i>Tetragnatha pinicola</i>	A tetragnathid spider	P	
<i>Enoplognatha mordax</i>	A comb-footed spider	P	NS
<i>Enoplognatha thoracica</i>	A comb-footed spider	P	
<i>Kochiura aulica</i>	A comb-footed spider	CS, P	NS
<i>Platnickina tinctoria</i>	A comb-footed spider	P	
<i>Steatoda phalerata</i>	A comb-footed spider	CS, P	
<i>Ozyptila atomaria</i>	A crab spider	CS	

Species	Common name	Survey area	
<i>Ozyptila simplex</i>	A crab spider	P	
<i>Xysticus audax</i>	A crab spider	P	
<i>Xysticus cristatus</i>	A crab spider	P	
<i>Xysticus erraticus</i>	A crab spider	CS	
<i>Xysticus kochi</i>	A crab spider	CS	

APPENDIX B: PHOTOGRAPHS



Coastal strip. Looking north. Typical grassland habitat, showing short, botanically diverse sward



Coastal strip. Looking north. Typical grassland habitat, showing short, botanically diverse sward. Dunes to the right.



Coastal strip. Looking north. Dunes with botanically diverse sward and an abundance of bare ground.



Coastal strip. Looking north. Typical grassland habitat, showing short, botanically diverse sward.



Coastal strip. Looking north. Dunes with botanically diverse sward and an abundance of bare ground. To the right of the fence is shingle habitat.



Coastal strip. Looking NW towards bund of platform with planted conifers in the background.



Coastal strip bund, looking south. East facing slope with short sward and abundant bare ground.



Coastal strip bund, looking NE. East facing slope with short sward, abundant bare ground, deer browsed hawthorn and planted conifers.



Platform. Looking towards SSSI Triangle. Typical acid grassland habitat with short sward and some gorse.



Platform. Looking towards Sizewell B. Typical acid grassland habitat with short sward, gorse and planted conifers and white poplar.



Platform. Looking towards Sizewell B. Typical acid grassland habitat with short sward and a strip of alder carr woodland.



Platform. Sandy tracks running through planted conifers at north of this area. Botanically diverse margins and very warm, sheltered microhabitats.



Platform. Tracks running through planted conifers at north of this area. Botanically diverse margins and very warm, sheltered microhabitats.



Platform. Tracks running through planted conifers at north of this area. Botanically diverse margins and very warm, sheltered microhabitats.



Platform. Looking west. Tracks and bare ground among sparse sward sheltered by planted conifers.



Platform. Looking south. Strip of alder carr woodland with alder scrub extending out into the acid grassland.

APPENDIX F: BAT STATIC MONITORING SURVEY REPORT 2021

CONTENTS

1	SUMMARY	1
2	OVERVIEW	1
2.1	The Aims of the 2021 Survey Updates	1
2.2	Site Description	1
2.3	Submitted Baseline (2013-2019)	1
2.4	Updated surveys in 2020	5
3	METHODS.....	7
3.1	Static Monitoring.....	7
4	RESULTS	21
5	DISCUSSION	47
5.1	Activity Levels.....	47
5.2	Summary	51
	REFERENCES	52

TABLES

Table 2-1: Summary of the importance of ecological receptors as assessed in the Main Development Site Environmental Statement.....	4
Table 3-1: Rationale behind the selection of different detector deployment locations	10
Table 3-2: Dates of Bat Static Monitoring	15
Table 3-3: Categorisation of Bats according to Wray 2010 (Ref. 7).....	17
Table 3-4: Monitoring Location Deployment Subsets	19
Table 4-1: Number of Bat Passes per Month by Species	22
Table 4-2: Median Bat Passes per Hour by Monitoring Location of each Species	23
Table 4-3: Total Bat Passes by Month / Monitoring Location and Total Median Bat Passes per Hour by Monitoring Location.....	26
Table 4-4: Species and Number of Bat Passes	30
Table 4-5: Percentage of passes of 'common' and 'rarer' species of bats.....	31

Table 4-6: Median passes per hour of barbastelle and Natterer’s bat	33
Table 4-7: Median passes per hour of barbastelle (by month).....	34
Table 4-8: Median passes per hour of Natterer’s bat (by month).....	35

FIGURES

Figure 1: Static Monitoring Locations 2021

Figure 2: Bat Activity Levels at each Monitoring Location 2021

1 SUMMARY

- 1.1.1 This interim report document outlines the methodology, schedule and results to date of the ongoing 2021 bat static surveys conducted in the Main Development Site (MDS) area between April and July. This report presents the key findings of the April – July data and outlines how this data and remaining data will be assessed (in light of consultee comments), with the full data analysis to be provided once all of the 2021 surveys are completed.
- 1.1.2 The ongoing surveys (including August and September deployments) build on the previous static detector surveys completed in 2020 and will provide a robust baseline for proposed future monitoring.

2 OVERVIEW

2.1 The Aims of the 2021 Survey Updates

- 2.1.1 The overall aims of the 2021 bat survey update were to:
- Provide a baseline for future monitoring (the focus of the bat static survey). The 2021 surveys include a number of static detector positions which were removed in 2020, as a response to consultee comments.
 - In response to consultee comments, provide additional assessment of the activity of ‘rare’ and ‘rarest’ bat species activity present on the main development site, again to inform mitigation.
- 2.1.2 This report provides interim information, with the full baseline data to be provided once the surveys are completed.

2.2 Site Description

- 2.2.1 The main development site is located on the Suffolk coast, approximately halfway between Felixstowe and Lowestoft; to the north-east of the town of Leiston and within the administrative boundary of East Suffolk Council (ESC). Once constructed, the Sizewell C nuclear power station would be located directly to the north of the existing Sizewell A and B power station complex.

2.3 Submitted Baseline (2013-2019)

- 2.3.1 This section of the report provides a summary of the baseline status of the bats within the main development site as presented within the DCO submission. The full results of the surveys to date can be found in the Sizewell C Project ES [[APP-242](#), [APP-243](#), [APP-244](#), [APP-245](#) and [APP-](#)

[246](#)], the bat method statement [[APP-252](#)] and bat mitigation strategy [[APP-252](#)].

2.3.2 At least ten species of bat have been recorded within the main development site boundary: barbastelle (*Barbastella barbastellus*); serotine (*Eptesicus serotinus*); Daubenton's bat (*Myotis daubentonii*); Natterer's bat (*Myotis nattereri*); Leisler's bat (*Nyctalus leisleri*); noctule (*Nyctalus noctula*); Nathusius' pipistrelle (*Pipistrellus nathusii*); common pipistrelle (*Pipistrellus pipistrellus*); soprano pipistrelle (*Pipistrellus pygmaeus*); and brown long-eared bat (*Plecotus auritus*).

2.3.3 The main development site supports: maternity colonies of barbastelle, Natterer's bat, brown long-eared bat, and soprano pipistrelle; non-breeding roosts of the breeding species and also noctule and common pipistrelle; and hibernation roosts for the majority of these species. The main development site boundary and Zol consists of a mosaic of habitats suitable for commuting and foraging bats.

2.3.4 A number of roosts have been identified at:

- Upper Abbey Farm including a brown long-eared bat maternity roost, a Natterer's bat mating roost, hibernating barbastelle, Daubenton's bat, Natterer's bat and probable brown long-eared bat, as well as occasional common pipistrelle, soprano pipistrelle and barbastelle roosts.
- Brown long-eared bat roosts have also been identified at Ash Wood Cottages.
- Brown long-eared bat roosts have also been identified at Lower Abbey Farm, with occasional roosting by common pipistrelle also identified.
- A high proportion of bat boxes installed in Kenton Hills have shown signs of use by bats, including Natterer's bat, noctule and soprano pipistrelle roosts.
- A Natterer's bat roost is present within Leiston Old Abbey, immediately adjacent to the main development site boundary.
- Additional bat roost potential has been identified within Lower Abbey Farm, Plantation Cottage, and the Laboratory, off Lover's Lane.
- Activity suggests serotine and Leisler's bat are unlikely to be roosting within the main development site.

- Potential roosts have been noted for barbastelle in Goose Hill and Broom Covert.
- For noctule in The Grove, the eastern end of Goose Hill and Leiston Old Abbey.
- There is potential roosting for Myotis spp. at The Grove, Leiston Abbey and within bat boxes in Kenton Hills.

2.3.5 Several locations on and close to the main development site boundary have significant numbers of trees with roosting potential for bats, including Fiscal Policy woodland, Ash Wood, the northern edge of Kenton Hills, Goose Hill, and The Grove. In addition, Minsmere and Ash Wood are considered to be key roost areas for barbastelle due to the high number of potential tree roosts present, as well as the presence of a number of identified roosts.

2.3.6 Activity surveys found barbastelle to be widespread and the species has been recorded within almost all habitats present within the main development site boundary, while common and soprano pipistrelle were the most frequently recorded species. Activity levels in open areas were low while higher levels of activity were recorded at Goose Hill, Upper Abbey Farm bridleway, Leiston Old Abbey woodland, Ash Wood, Nursery Covert, Fiscal Policy woodland and the northern edge of Kenton Hills.

2.3.7 Radio-tracking surveys have identified an interchange of bats between Minsmere and the EDF Energy estate as well as the use of the EDF Energy estate by bats throughout the bat active season.

2.3.8 All bat species in the UK are protected under Schedule 5 of the W&CA (Ref. 1) and Schedule 2 of the Conservation of Habitats and Species Regulations (Ref. 2). Five species (barbastelle, brown long-eared, lesser horseshoe, noctule and soprano pipistrelle bat) are listed as priority species on the Suffolk BAP (Ref. 3); these and two species not normally present in Suffolk (greater horseshoe and Bechstein's bat) are priority species in England under Section 41 of the NERC Act (Ref. 4).

a) Ecological Receptor Status

2.3.9 **Table 2-1** provides a summary of the value of the receptors present within the proposed development site boundary as assessed in the]. Sizewell C Project ES [[AS-033](#), [APP-243](#), [APP-244](#), [APP-245](#) and [APP-246](#)].

Table 2-1: Summary of the importance of ecological receptors as assessed in the Main Development Site Environmental Statement

Species	Importance under CIEEM guidelines (Ref. 5)	Importance under EIA-specific methodology
Barbastelle	National	High
Natterer's	County	Medium
Leisler's bat and Nathusius' pipistrelle	Local (District)	Low
Noctule and serotine	Local (Zol)	Low
Daubenton's bat, brown long-eared bat, common pipistrelle, and soprano pipistrelle	Local (Zol)	Low

2.4 Updated surveys in 2020

2.4.1 Bat Static Monitoring surveys were undertaken of land associated with the proposed Sizewell C main development site in 2020 [\[AS-037\]](#). The surveys confirmed the continued presence of the bat assemblage within the proposed development site along with the continued presence of important foraging and commuting routes.

2.4.2 The analysis of the results suggests that certain areas (and habitats) present on the main development site have higher levels of activity for bats. The areas of highest activity appeared to be the following:

- The North-east edge of Goose Hill woodland (MS12)
- The Bridleway adjacent to Upper Abbey Farm (MS14)
- The Northern edge of Kenton Hills woodland (MS15)
- The southern edge of Goose Hill woodland adjacent to the SSSI triangle (MS20)
- The Bridleway adjacent to Fiscal Policy woodland (MS22)
- The Western edge of the existing Sizewell A and B power stations (MS27)
- The Western edge of Reckham Pits Wood (MS33)

2.4.3 Other areas with high levels of activity were the middle of Kenton Hills woodland (MS18) and the Southern edge of the EDF Energy Estate at the Sizewell gap (MS28).

2.4.4 The assessment of activity from the static detectors was reviewed alongside the habitats within which detector was placed to determine the habitats which support the highest levels of bat activity. It was assessed that the most important areas around the main development site for foraging bats are:

- Woodlands throughout the EDF Energy Estate; and
- The tree lined bridleway (Bridleway 19) from Lover's Lane to the north.

2.4.5 In addition to reviewing the activity levels at each detector position, the proportion of 'rarer' bats (i.e. not common pipistrelle or soprano pipistrelle) at each location was assessed. These locations may not have the highest level of activity but may support the populations of rarer bats on the site. Two

monitoring locations had a notable higher proportion of the rarer bat species. These locations were:

- MS03 – In a small patch of woodland south of Lower Abbey Farm
- MS06 – North-east corner of Ash Wood

2.4.6 In these areas, calls by ‘rarer’ bats made up more than 10% of the overall calls. This suggests that these areas have importance for rarer bats. These areas were of particular value for *Nathusius pipistrelle* and *Barbastelle* bats.

2.4.7 The results of the 2020 bat static monitoring survey supported the DCO assessment based on the previous baseline survey data submitted in the Sizewell C Project ES [[AS-033](#), [APP-243](#), [APP-244](#), [APP-245](#) and [APP-246](#)]. The proposed mitigation submitted for the Sizewell C Main Development Site DCO in the bat method statement [[APP-252](#)] and bat mitigation strategy [[APP-252](#)] and the residual effects would remain the same as that submitted in Sizewell C Project ES [[AS-033](#)].

3 METHODS

3.1 Static Monitoring

a) Survey Methodology

3.1.1 The deployment of static detectors was based upon the prescriptions present within the relevant Bat Survey Guidelines (Ref. 6). The survey was conducted between April and July 2021 and August – September 2021 surveys are ongoing. This period was selected as it is a period of high bat activity and can be utilised to compare the 2021 results against the static results utilised to inform the ES and the application for development consent. At each static detector position, five nights of data were analysed for each deployment. Static detector positions were selected according to the following criteria:

- Where static data collected would allow comparison with data collected previously to identify changes in the baseline status;
- Areas where impacts are foreseen and which have not previously been subject to static monitoring;
- Where requested by stakeholders; and
- Where static data collected in 2021 could be used to inform monitoring throughout the construction of the proposed development.

3.1.2 Further details of the rationale behind the detector positioning in 2020 and 2021 is provided below and in **Table 3-1**. The 2020 positioning information is included here to demonstrate the evolution of the baseline data collection approach in response to consultee comments.

b) Static Detector Positioning and Placement

3.1.3 The initial placements (from previous surveys), from which the 2021 survey locations were based were positioned according to judgemental positioning employed the following assessment considerations:

- Distributed across the main development site to gain maximum area coverage;
- Positioned where static data could be utilised to infer the presence of roosting bats;

- Positioned within or adjacent to a range of habitats present on and around the main development site, ensuring that all broad habitats received coverage from the detectors; and
- Positioned where information on bats moving between key locations could be obtained.

3.1.4 A subset of the detectors was positioned on linear features considered likely to be of value for bats (in particular where fragmentation may arise during construction of Sizewell C) and within proposed mitigation areas;

3.1.5 The detector microphones were positioned at 1 - 2m above the ground where possible, attached to landscape features (fence posts, trees, structures) with the microphones in a 45 degree downwards position. Where the microphones were positioned in linear features, the microphones were positioned at 90 degrees to the direction of the feature (where possible). Positioning of the microphones was selected to be in areas where vegetation etc would not interfere with the microphone.

Image 1: Previous Monitoring Locations 2015 - 2019

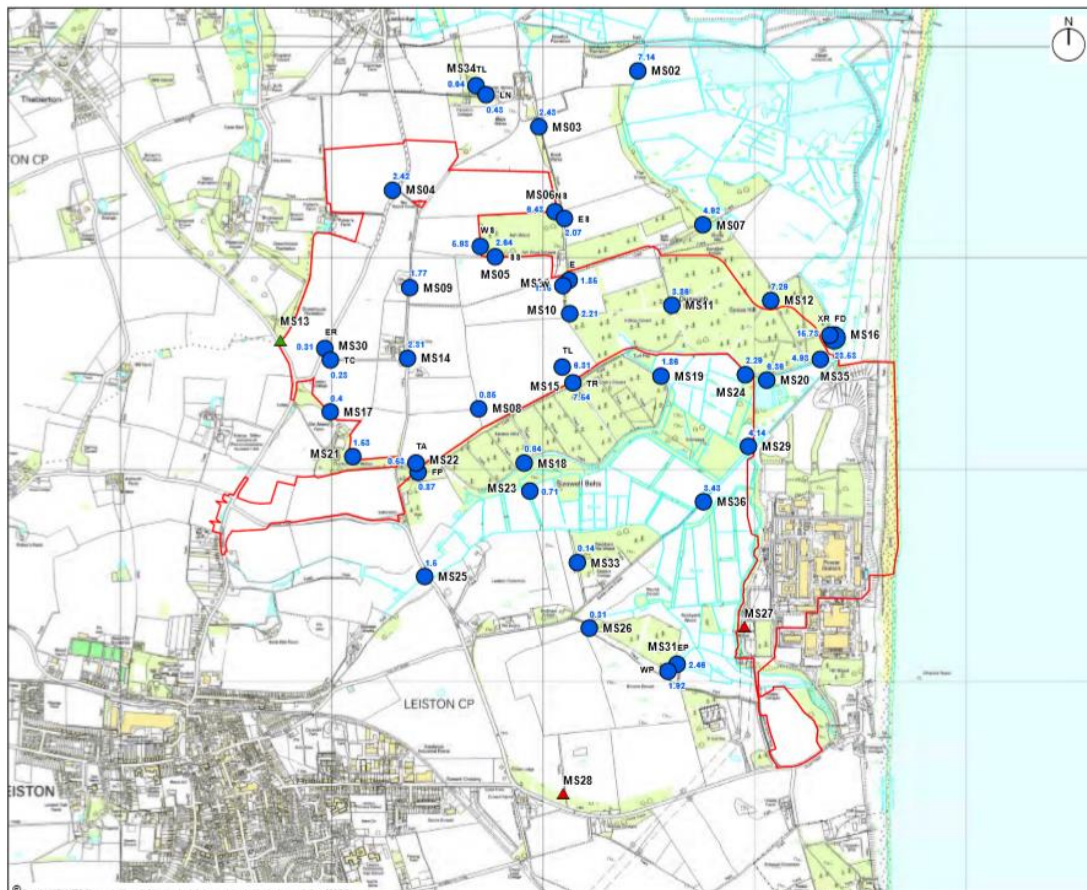
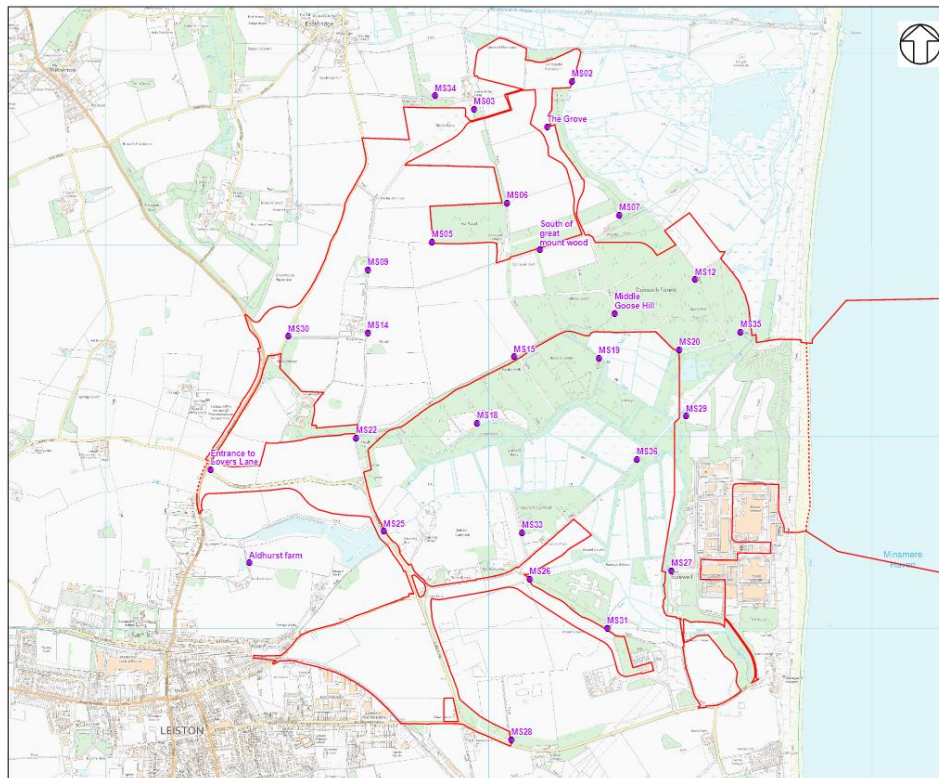


Image 2: Previous Monitoring Locations 2020



3.1.6 The monitoring locations used in previous surveys are shown on Image 1 and Image 2 above and the rationale behind their inclusion / exclusion (where previous monitoring locations were omitted from the 2020 surveys) from the 2020 monitoring is detailed in **Table 3-1** below. The 2021 static detector survey locations are presented in **Figure 1**.

Table 3-1: Rationale behind the selection of different detector deployment locations

Monitoring Station utilised to inform the DCO submission and new submissions	Reason for inclusion in previous surveys	Reason for inclusion / exclusion in surveys 2020	Reason for inclusion / exclusion in surveys 2021
MS01, MS2; MS3	Potential commuting routes north (based on a concern raised by RSPB)	MS2, MS3 – to monitor effect on Minsmere MS01 – was not surveyed in 2016 so there is no baseline for comparison	MS2, MS3 – to monitor effect on Minsmere MS01 – was not surveyed in 2016 so there is no baseline for

Monitoring Station utilised to inform the DCO submission and new submissions	Reason for inclusion in previous surveys	Reason for inclusion / exclusion in surveys 2020	Reason for inclusion / exclusion in surveys 2021
			comparison
MS4; MS9; MS14	Upper Abbey track: north-south bridleway (important commuting route; location of proposed environmental corridor/buffer)	MS9, MS14 – to monitor important commuting route MS4 – further away from the impact area since scheme design changes.	MS9, MS14 – to monitor important commuting route MS4 – to monitor the connection with the AD sites.
MS5; MS6; MS10	On the edge of Ash Wood and on commuting route south from here	MS6, MS5 – To monitor commuting and activity within woodland. MS10 – will be lost beneath construction footprint therefore this is not an appropriate location to assess against future construction impacts	MS6, MS5 – To monitor commuting and activity within woodland. MS10 – to provide a baseline for the proposed green corridor along central belt
MS7	Track between the Grove and Goose Hill; potential north-south and east-west corridor (subject of concern raised by NE)	MS7 – Monitor corridor between Grove and Goose Hill	MS7 – Monitor corridor between Grove and Goose Hill
MS8; MS15	On tree-line / hedge leading into arable fields north of Kenton Hills	MS15 – Monitor tree line MS8 – will be lost beneath construction footprint therefore this is not an appropriate location to assess against future construction impacts	MS15 – Monitor tree line MS8 – To Monitor commuting along top of woodland
MS11; MS12; MS16	Crossroads within	MS12 – Monitor	MS11, MS12

Monitoring Station utilised to inform the DCO submission and new submissions	Reason for inclusion in previous surveys	Reason for inclusion / exclusion in surveys 2020	Reason for inclusion / exclusion in surveys 2021
	Goose Hill (subject of concern raised by NE); M16 north of new site access bridge	crossroads within goose hill MS11 and 16 – will be lost beneath construction footprint therefore this is not an appropriate location to assess against future construction impacts	and MS16 – Monitor crossroads within goose hill
MS13; MS17	Potential commuting route adjacent to southern boundary of Campus Option 1 [Access restrictions currently prevent deployment at M13 further to the west; replaced by M30]	MS13 and MS17 – No important commuting route identified	MS13 and MS17 – Monitor the western extent of the development
MS21; MS22	Strong east-west commuting corridor, both west and east of Upper Abbey track. Focus on bats arising from Leiston Old Abbey / Fiscal Policy and crossing proposed rail/ road junction (concern raised by several consultees)	MS22 – Monitor crossing point of important commuting routes (Fiscal Policy) M21 – Low levels of activity recorded previously	MS22 – Monitor crossing point of important commuting routes (Fiscal Policy) M21 – Monitor the commuting route
MS18; MS19	Commuting corridor along peripheral ride	MS18, MS19 – Monitor commuting corridor	MS18, MS19 – Monitor commuting corridor
MS20; MS24	Junction between northern Sizewell Belts and Goose Hill	MS20 – Monitor junction between Sizewell Belts and Goose Hill	MS20 – Monitor junction between Sizewell Belts

Monitoring Station utilised to inform the DCO submission and new submissions	Reason for inclusion in previous surveys	Reason for inclusion / exclusion in surveys 2020	Reason for inclusion / exclusion in surveys 2021
		MS24 – Duplication of M20	and Goose Hill MS24 – Monitor the SSSI triangle
MS23	Edge of Sizewell Belts (area used for foraging)	MS23 – Duplication of M18	MS23 – Monitor Sizewell Belts
MS25; MS26; MS28; MS31	Fields to the south (less intensively surveyed previously); M28 will also monitor use of new reptile habitat by bats as it develops	MS25, MS26, MS28; MS31 – Fields to the south including reptile mitigation area	MS25, MS26, MS28; MS31 – Fields to the south including reptile mitigation area
MS27	On the edge of Coronation Wood, which may be affected by the proposals	MS27 – Monitor Coronation Wood	MS27 – Monitor Coronation Wood
MS29	Junction between SSSI and Grimsey's; corner of SSSI to be lost, but bat movement corridor to be maintained under proposed bridges	MS29 – Monitor junction between SSSI and Grimsey's Corner	MS29 – Monitor junction between SSSI and Grimsey's Corner
MS30	Eastbridge Road and lane to Upper Abbey Farm	MS30 – Monitor Eastbridge Road and lane to Upper Abbey Farm	MS30 – Monitor Eastbridge Road and lane to Upper Abbey Farm
MS32	Stonewall Belt, running south from Ash Woods.	MS32 – will be lost beneath construction footprint therefore this is not an appropriate location to assess against future construction impacts	MS32 – to monitor the proposed green corridor along central belt
MS33	Consultees requested	MS33 – Monitor	MS33 – Monitor

Monitoring Station utilised to inform the DCO submission and new submissions	Reason for inclusion in previous surveys	Reason for inclusion / exclusion in surveys 2020	Reason for inclusion / exclusion in surveys 2021
	monitoring at Reckham Pits.	Reckham Pits	Reckham Pits
MS34	Replaced MS1 due to access restrictions	MS34 – Monitor activity at Lower Abbey Farm	MS34 – Monitor activity at Lower Abbey Farm
MS35	Proposed SSSI bridge location.	MS35 – Monitor proposed SSSI bridge location	MS35 – Monitor proposed SSSI bridge location
MS36	SSSI	MS36 – To monitor SSSI	MS36 – To monitor SSSI
N/A new position Aldhurst Farm	N/A	To monitor the mitigation area	To monitor the mitigation area
N/A new position Lover's Lane Entrance	N/A	To monitor the Aldhurst farm mitigation area and the new rail crossing	To monitor the Aldhurst farm mitigation area and the new rail crossing
N/A new position The Grove	N/A	To monitor the woodland and commuting route	To monitor the woodland and commuting route
N/A new position South of Great Mount Wood	N/A	To monitor the woodland and commuting route	To monitor the woodland and commuting route
N/A Middle of Goose Hill	N/A	Requested during consultation with Natural England in August	Requested during consultation with Natural England in August

c) Static Detector Programming

- 3.1.7 The 2021 surveys used SM4 detectors. The detectors were programmed to commence recording 30 minutes prior to sunset and continue recording throughout the night until 30 minutes after sunrise, in line with good practice guidelines. Details of the programming of the detectors is presented in **Appendix A**.

Table 3-2: Dates of Bat Static Monitoring

Month	Subset	Deployment Dates
April	1	7th – 20th April
	2	21st – 27th April
May	1	5th – 18th May
	2	18th May – 2nd June
June	1	8th – 22nd June
	2	24th – 29th June
July	1	6th – 20th July
	2	22nd – 27th July
August	1	24th August – 6th September*
	2	13th – 20th September*
September	1	27th September – 4th October*
	2	4th – 11th October*

* these deployments were unavoidably delayed through a combination of factors, COVID 19 contraction or being legally required to self-isolate (for COVID 19) and equipment and access issues. This is discussed in the limitations section below.

d) Data Analysis Methodology

- 3.1.8** All recordings were stored on memory cards and analysed using an automated analysis process, Kaleidoscope Pro. This was due to the large amount of data to be analysed.
- 3.1.9** Previous analysis for the SZC project had used Sonochiro software, however the data analysis in 2021 using an updated Sonochiro package produced results that suggested an issue with the accuracy of this Auto identification software. As such, a decision was made to analyse the 2021 surveys using Kaleidoscope Pro. This will also allow future surveys during the monitoring period to use this software for comparison.
- 3.1.10** Kaleidoscope Pro analysis software produces an output which presents the automated identification of each recording. When the recordings show bats

to be present, Kaleidoscope Pro identifies the echolocation call down to species level. Kaleidoscope Pro is able to look at individual pulses and the overall bat sequence of pulses and make a classification.

- 3.1.11 The data assessed over the season was utilised to determine the likelihood of a roost of a given species being in close proximity to the detector location. Information upon the average emergence / re-entry time of various species recorded on the main development site was used alongside this information to make a qualitative assessment of the potential for bat roosts to be present around the static detector positions.

e) Activity Normalisation

- 3.1.12 Prior to each set of static data being analysed, the data was 'normalised' to allow activity levels between positions to be compared. This was conducted by dividing the number of calls recorded by the number of hours that a detector was recording.

f) Valuation of 'bat activity'

- 3.1.13 There is no accepted banding for assessing bat activity. However, in order to assess the intra-site activity levels (i.e. the variation between the locations within the site) broad bandings of activity level have been applied in order to assess the variation in bat activity level. Within this report, the following activity bandings are utilised:

- Median passes of <10 per hour – low activity
- Median passes of 10-49 per hour – moderate activity
- Median passes of >50 per hour – high activity.

g) Valuation of 'bat rarity'

- 3.1.14 Within the main development site in order to subdivide the bats into meaningful subsets, it was necessary to categorise the 'rarity' of species present (after Wray 2010, Ref. 7). This categorisation is based upon the rarity of each species within its range. **Table 3-3** lists the three bandings of rarity utilised within the assessment.

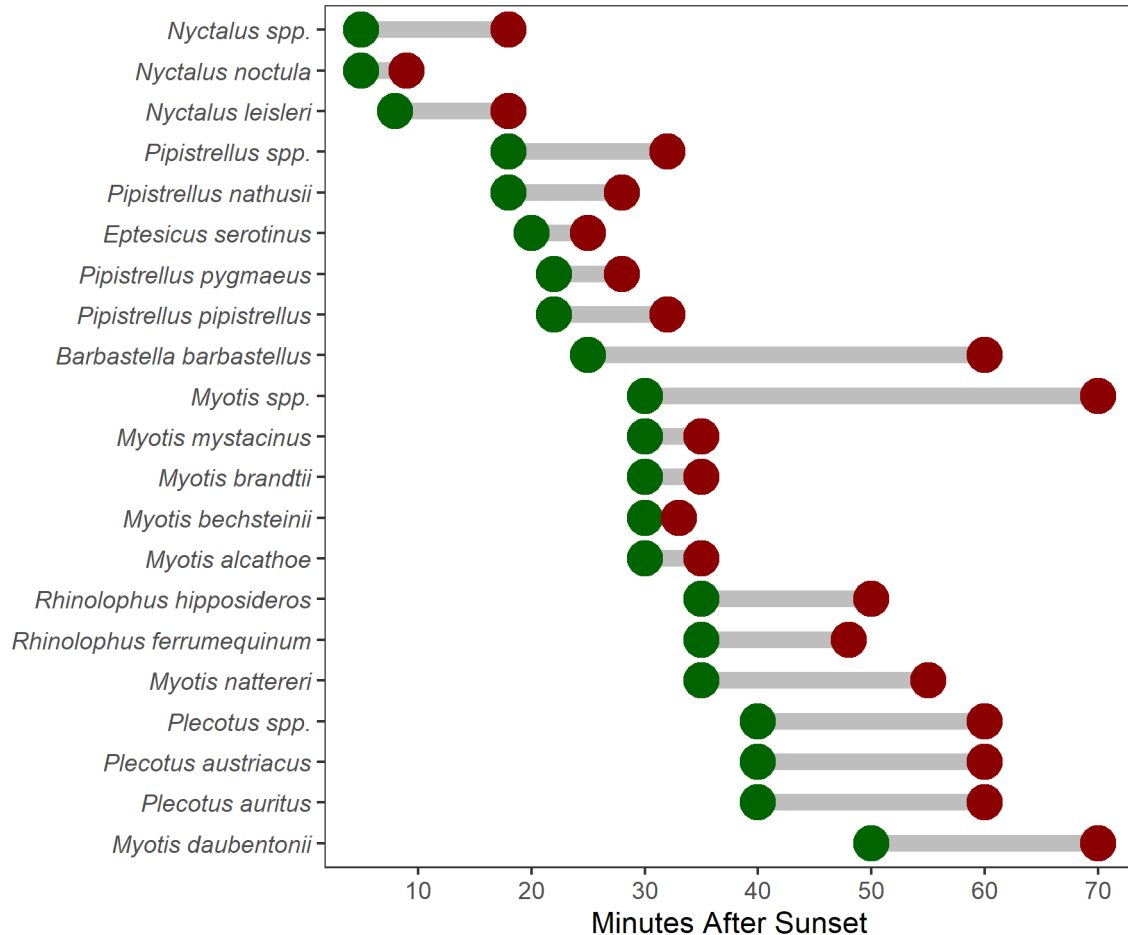
Table 3-3: Categorisation of Bats according to Wray 2010 (Ref. 7)

Rarity within range	Species	Notes on presence on main development site
Rarest (population under 10,000)	Greater horseshoe, Bechstein's, alcahove, greater mouse-eared, barbastelle, grey long-eared.	Barbastelle recorded on the main development site.
Rarer (population 10,000 – 100,000)	Lesser horseshoe, whiskered, Brandt's, Daubenton's, Natterer's, Leisler's, noctule, Nathusius' pipistrelle, serotine.	Myotis bats, Leisler's, noctule, Nathusius' pipistrelle and serotine recorded on the main development site.
Common (population over 100,000)	Common pipistrelle, soprano pipistrelle, brown long-eared.	All of these species are present within the main development site

h) Assessment of likelihood of nearby roosts at each detector location

- 3.1.15** The static detector data were utilised to provide a quantitative assessment of the likelihood of a nearby roost being present. This assessment was able to identify where roosts were likely to be present but was not used to exclude the possible presence of nearby roosts (as bats may have left roosts and not passed the detector).
- 3.1.16** In order to conduct this assessment, the first and last bats recorded of each species were investigated. As bats emerge to forage etc around sunset, the amount of time after sunset that bats tend to emerge differs between species. The graph below (**Plot 1**) shows the average emergence time after sunset for each bat species recorded / likely to be present on the Main Development Site.

Plot 1: Bat Emergence Times



3.1.17 The time after sunset and / or before sunrise that the first and last bat of each species was recorded was assessed. Where this was close to or before the average emergence / re-entry time of a species this was noted. This combined with an assessment of the roosting opportunities around a location were combined, along within the results from other surveys, to assess the likelihood of nearby roosts. It should be noted that this is a qualitative assessment only for risk assessment and was utilised as such.

i) Survey Limitations (March – September)

3.1.18 Within the survey design, it was not possible to deploy detectors to all locations simultaneously, due to the size of the Main Development Site, risk of interference by members of the public and practical considerations. The detectors were deployed in two sets (19 and 21 respectively), ensuring both sets were undertaken on a monthly basis. However, due to the rotational deployment for the purposes of this study, considering the large amount of

data collected, and the normalisation calculations applied (assessing ‘passes per hour’), this issue is unlikely to have affected the value of the data. The rotations utilised are presented in **Table 3-4**.

Table 3-4: Monitoring Location Deployment Subsets

Deployment Subset	Monitoring Locations	
1	MS02 MS03 MS04 MS05 MS06 MS07 MS09 MS13 MS14 MS17	MS21 MS22 MS25 MS30 MS32 MS34 The Grove South of Great Mount Wood Entrance to Lover’s Lane
2	Aldhurst Farm Sizewell Marshes MS08 MS10 MS11 MS12 MS15 MS16 MS18 MS19 MS20	MS23 MS24 MS26 MS27 MS28 MS29 MS31 MS33 MS35 MS36

3.1.19 It is difficult within automated survey data to determine a ‘bat ‘pass’, as without visual observations, the same individual bat may pass multiple times or multiple bats may pass the detector. However, to address this issue, the same parameters for file partitioning were utilised on all detectors, and a single sound file was identified as a bat ‘pass’. This allows a repeatable comparison of activity levels between static locations. It is not possible from this data (or any static (automated) detector data) to accurately assess the number of bats within an area, however an assessment of bat ‘activity’ can be made.

3.1.20 The deployment of the August and September SM4 detectors was delayed due to the ongoing COVID-19 pandemic and unavoidable logistical obstacles. However, they were deployed as soon after as practicable, and the same number of deployments was achieved.

- 3.1.21 During the deployments to date, some SD cards became corrupted, some SM4 detectors failed and in some cases no recordings were and no data was recoverable. This applies to MS21, MS13, MS22, MS23 in April, MS06, MS27 in May, MS05, MS10, MS21, MS25 in June and MS07, MS09, MS24, MS25, MS30, MS34 and Entrance to Lover's Lane in July. During May, the SSSI Triangle /Sizewell Marsh and MS29 positions were unable to be deployed due to flooding. Also, the mic was found unattached for MS17 in July (likely due to public interference) and only 2-nights of data was recorded. There were other cases in which no five consecutive evenings of data were recorded due to equipment fault, this was the case for MS12, Entrance to Lovers Lane, MS18, MS19 and MS31 in April, MS31 in May, MS20 in June, and MS28 in July. However, these locations were redeployed where practicable as part of the following deployments, therefore this is not considered to be a limitation to the survey.
- 3.1.22 On some occasions, such as MS15 in April, MS22, MS34 in May, MS02 and MS13 in July, the SM4 detector only partially recorded and developed a malfunction for the remaining days that it was deployed. Consequently, the dates taken forward for data analysis were different to the remainder of May and July. As the assessment is for the same number of nights (5), this is not considered to have impacted upon the comparability of activity at different positions.
- 3.1.23 Despite these survey issues, the equipment functioned correctly in the majority of the surveys.
- 3.1.24 In addition, in the analysis, all data was assessed using a 'passes per hour' manipulation/normalisation, in order to ensure that variations in deployment period were minimised within the comparative results.
- 3.1.25 It should be noted that some bat species are difficult to record on statics (i.e. brown long-eared) due to the 'quiet' nature of their echolocation calls. This was taken into consideration when analysing the results. Automatic identification is considered suitably accurate for the purposes of this survey, however, this type of software will provide false identifications in a low percentage of instances. As such, where species which are not present in Suffolk were identified, these were manually removed.

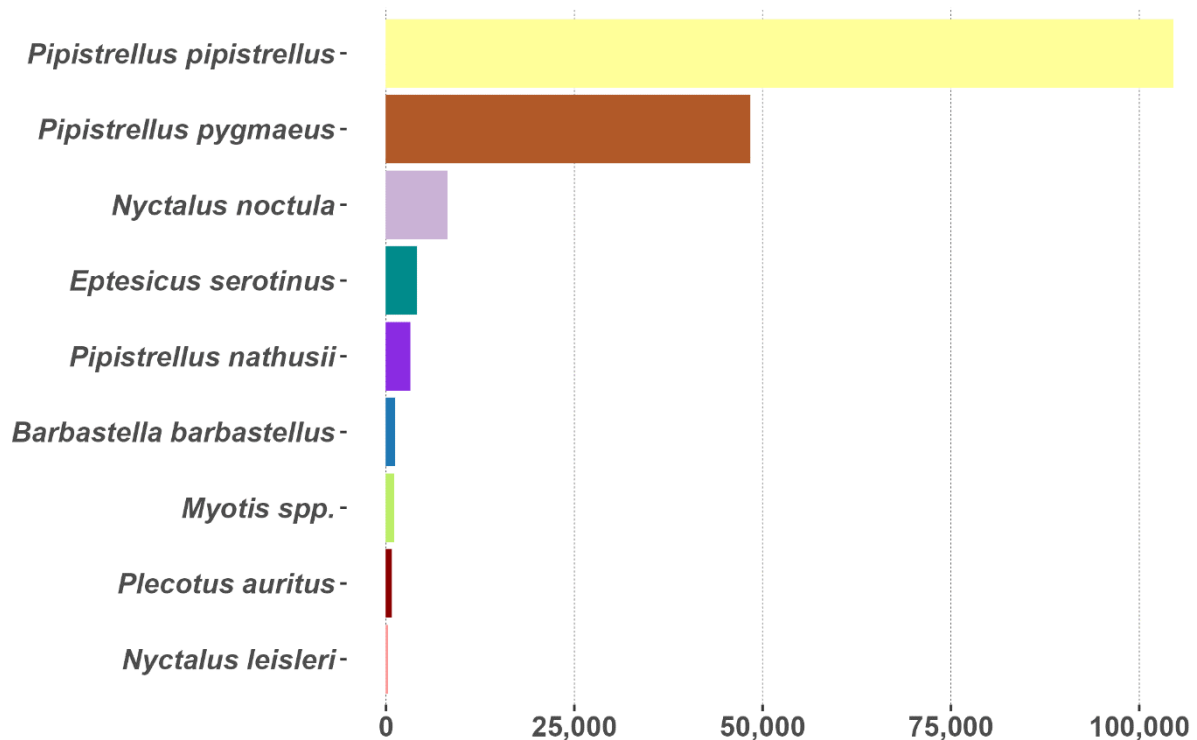
4 RESULTS

a) Seasonal variation of call frequency (i.e. activity)

4.1.1 During the survey period, a total of 171,385 ‘bat passes’ were identified by Kaleidoscope Pro. The calls were identified to species group.

4.1.2 The distribution of these calls between the species identified is shown on **Plot 2** below.

Plot 2: Count of Species Observations



4.1.3 The majority of calls were recorded within July. **Table 4-1** below shows the level of call activity between April and July 2021 inclusive.

Table 4-1: Number of Bat Passes per Month by Species

Species	April	May	June	July	Species Total
<i>Barbastella barbastellus</i>	7	61	386	767	1,221
<i>Eptesicus serotinus</i>	123	1,080	576	2,297	4,076
<i>Myotis spp.</i>	100	521	226	184	1,031
<i>Nyctalus leisleri</i>	16	34	50	116	216
<i>Nyctalus noctula</i>	487	1,681	3,116	2,831	8,115
<i>Pipistrellus nathusii</i>	819	388	1,623	392	3,222
<i>Pipistrellus pipistrellus</i>	6,705	26,424	35,827	35,506	10,4462
<i>Pipistrellus pygmaeus</i>	4,566	11,854	15,690	16,221	48,331
<i>Plecotus spp.</i>	171	169	199	173	712
Total N° of Bat Passes	12,994	42,211	57,693	58,487	171,385

b) Bat activity assessments

- 4.1.4** Activity levels across the main development site varied greatly. Once the data was normalised (to a passes per hour value), clear variations between the number of calls at each location became apparent. below outlines the 'Median calls per hour' across the main development site at each monitoring location, normalised for survey effort. Bat pass rates are often highly variable between nights, with some nights having few or no passes and other nights having high activity. In these circumstances, the median is likely to be a more useful summary of the 'average' activity than is the mean.

Table 4-2: Median Bat Passes per Hour by Monitoring Location of each Species

Monitoring Location	Species								
	Barbastelle	Serotine	Myotis spp.	Leisler's	Noctule	Nathusius Pipistrelle	Common Pipistrelle	Soprano Pipistrelle	Plecotus spp.
Aldhurst Farm	0.21	0.94	0.14	0.25	4.8	0.2	4.86	2.95	0.17
Entrance to Lovers Lane	0.00	0.23	1.15	0.14	4.08	20.07	12.13	2.49	0.18
MS02	0.13	0.16	0.26	0.12	1.4	0.41	7.5	37.58	0.16
MS03	3.78	0.53	0.14	0.34	1.09	0.68	8.8	5.15	0.14
MS04	0.55	0.82	0.23	0.14	0.69	0.31	47.6	2.06	0.13
MS05	0.00	0.47	0.13	0.00	0.40	0.5	7.72	1.24	0.13
MS06	0.27	4.06	0.00	0.27	10.8	0.27	9.85	5.46	0.27
MS07	0.21	0.41	0.55	0.12	3.1	2.95	12.31	44.6	1.02
MS08	0.12	0.37	0.26	0.24	0.74	0.14	4.26	1.1	0.12
MS09	0.23	3.21	0.16	0.23	0.38	0.34	2.11	1.36	0.27
MS10	0.74	6.37	0.12	0.25	0.38	0.13	7.68	3.38	0.25
MS11	0.24	4.49	0.13	0.12	0.93	0.13	8.70	2.21	0.62
MS12	0.13	5.03	0.38	0.25	0.99	0.25	27.83	4.39	0.13
MS13	0.13	4.22	0.68	0.14	1.09	0.41	2.56	1.1	0.27
MS14	0.23	0.69	0.28	0.14	1.44	0.21	2.84	5.71	0.23
MS15	0.27	1.99	0.53	0.2	0.97	0.32	7.72	10.46	0.27

Monitoring Location	Species								
	Barbastelle	Serotine	Myotis spp.	Leisler's	Noctule	Nathusius Pipistrelle	Common Pipistrelle	Soprano Pipistrelle	Plecotus spp.
MS16	0.13	1.28	0.12	0.00	1.13	0.37	58.1	3.7	0.00
MS17	0.14	0.96	0.55	0.12	0.76	0.27	3.43	2.38	0.27
MS18	1.25	0.19	0.24	0.12	1.32	0.14	22.33	6.62	0.14
MS19	0.13	0.25	0.38	0.13	0.62	0.57	55.4	24.9	0.41
MS20	0.13	0.00	0.38	0.00	0.51	1.67	52.55	28.27	0.38
MS21	0.20	0.8	0.92	0.13	0.34	0.13	30.62	3.70	0.12
MS22	1.36	2.42	0.81	0.14	1.36	0.36	38.9	16.46	0.55
MS23	0.25	0.00	0.37	0.12	0.83	0.14	9.94	31.32	0.19
MS24	0.13	0.41	0.14	0.14	1.78	0.89	11.96	9.79	0.13
MS25	0.00	0.23	0.17	0.10	1.00	0.23	3.3	6.32	0.19
MS26	0.14	0.12	0.14	0.10	0.87	0.27	17.92	9.58	0.25
MS27	0.00	0.12	0.12	0.00	0.21	0.37	16.13	6.22	0.21
MS28	0.13	0.00	0.55	0.10	0.94	0.13	0.53	0.76	0.17
MS29	0.12	0.12	0.10	0.10	0.42	0.55	3.16	1.42	0.23
MS30	0.55	0.41	0.2	0.19	0.92	0.14	4.52	1.98	0.12
MS31	0.13	0.62	0.25	0.25	0.39	0.28	65.75	15.49	0.41
MS32	0.13	0.27	0.14	0.13	0.54	0.2	4.55	1.4	0.13
MS33	0.34	0.13	0.13	0.19	6.5	0.37	57.28	3.57	0.14
MS34	0.23	0.14	0.16	0.00	0.58	0.27	47.00	4.81	0.14
MS35	0.11	0.12	0.11	0.12	0.51	0.67	12.68	1.97	0.00

Monitoring Location	Species								
	Barbastelle	Serotine	Myotis spp.	Leisler's	Noctule	Nathusius Pipistrelle	Common Pipistrelle	Soprano Pipistrelle	Plecotus spp.
MS36	0.00	0.12	0.14	0.24	1.9	0.25	13.94	11.11	0.12
South of Great Mount Wood	0.4	1.19	0.14	0.14	0.78	0.21	10.83	1.37	0.13
SSSI Triangle	0.12	0.12	0.19	0.12	0.42	0.42	7.34	3.43	0.21
The Grove	0.13	0.17	0.32	0.14	0.55	0.27	16.83	3.75	0.18

4.1.5 **Table 4-3** below shows the total number of bat passes at each monitoring location per month. For locations where deployments were not possible due to external factors, or where there was a technical error which meant no data was able to be included in analysis, 'N/A' is listed. More detail on this is included in the survey limitations section of this report.

Table 4-3: Total Bat Passes by Month / Monitoring Location and Total Median Bat Passes per Hour by Monitoring Location

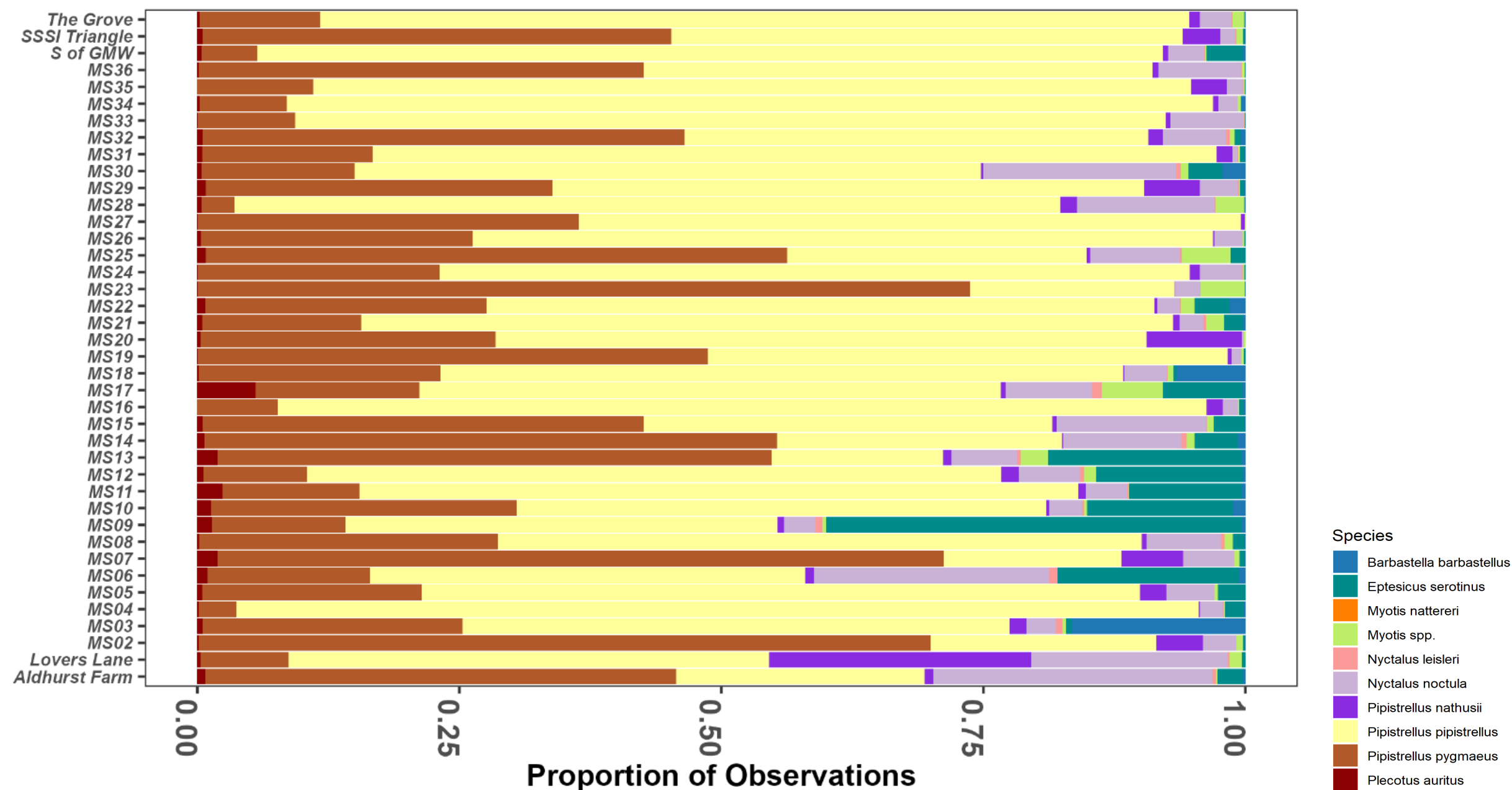
Location	Number of Bat Passes					Total median bat passes per hour
	April	May	June	July	Total	
Aldhurst Farm	18	336	842	2261	3457	14.52
Entrance to Lovers Lane	N/A	486	1906	N/A	2393	40.47
MS02	136	2143	3274	1257	6810	47.72
MS03	38	1376	613	1668	3695	20.65
MS04	126	849	4000	5907	10882	52.53
MS05	277	80	N/A	582	939	10.59
MS06	654	N/A	782	1586	3022	31.25
MS07	319	1170	4994	N/A	6485	65.27
MS08	15	21	542	904	1482	7.35
MS09	105	707	993	N/A	1805	8.29
MS10	406	96	N/A	1900	2402	19.3
MS11	67	451	206	1672	2396	17.57
MS12	N/A	1695	287	2312	4294	39.38
MS13	N/A	273	563	1181	2017	10.6
MS14	241	454	497	1096	2288	11.77
MS15	51	960	1389	2488	4888	22.73
MS16	166	3608	1118	2841	7733	64.83
MS17	359	521	334	N/A	1214	8.88
MS18	N/A	799	1784	1221	3804	32.35
MS19	N/A	4556	3532	2860	10948	82.79
MS20	3824	4753	N/A	N/A	8577	83.89
MS21	N/A	51	N/A	2218	2269	36.96
MS22	N/A	550	3051	1913	5514	62.36
MS23	N/A	3630	512	2145	6287	43.16
MS24	N/A	2567	1869	N/A	4436	25.37
MS25	134	492	N/A	N/A	626	11.54
MS26	315	222	3612	3501	7650	29.39
MS27	2282	N/A	48	2707	5057	23.38
MS28	58	141	564	N/A	763	3.31
MS29	347	N/A	283	289	919	6.22
MS30	70	337	896	N/A	1303	9.03
MS31	N/A	N/A	3612	2934	6546	83.57
MS32	156	12	470	210	848	7.49
MS33	278	1274	5996	5323	12871	68.65

Location	Number of Bat Passes					Total median bat passes per hour
	April	May	June	July	Total	
MS34	672	17	3779	N/A	4468	53.33
MS35	467	2457	391	1139	4454	16.29
MS36	569	1730	1391	1809	5499	27.82
South of Great Mount Wood	211	2912	547	559	4229	15.19
SSSI Triangle	544	N/A	499	599	1642	12.37
The Grove	89	486	2517	1405	4497	22.34

- 4.1.6 Across the main development site, the assemblage of bats utilising each area varies with location. The activity level alone does not necessarily represent the value of the area (i.e. an area where a common pipistrelle repeatedly forages may not necessarily be more valuable than a location where a varied assemblage of bats forages / commutes).

4.1.8 **Plot 3** below shows the proportion of bat passes by monitoring location.

Plot 3: Proportion of bat passes recorded at each deployment location



c) Assemblage of Species

i. Sitewide assemblage

4.1.9 The calls recorded were largely common or soprano pipistrelles, these bats formed 60.95% and 28.20% of the calls recorded respectively.

4.1.10 Overall, 1,221 Barbastelle calls were recorded during the survey (April to July 2021 inclusive). The numbers of calls from each species group are presented in **Table 4-4** below.

Table 4-4: Species and Number of Bat Passes

Species	Count (No.)	Percentage of total (%)
Common pipistrelle	104,462	60.95
Soprano pipistrelle	48,331	28.20
Noctule	8,115	4.73
Serotine	4,076	2.38
Nathusius pipistrelle	3,222	1.88
Barbastelle	1,221	0.71
<i>Myotis</i> spp.	1,031	0.60
<i>Plecotus</i> spp.	712	0.42
Leisler's	216	0.13

4.1.11 Across the main development site, the assemblage of bats utilising each area varies with location. The activity level alone does not necessarily represent the value of the area (i.e. an area where a common pipistrelle repeatedly forages may not necessarily be more valuable than a location where a varied assemblage of bats forages / commutes).

4.1.12 To examine the diversity of the assemblage at each location, the proportion of bats which were not identified as 'common or soprano pipistrelles' was examined.

4.1.13 **Table 4-5** shows the percentage of bat passes recorded within each of the two groups (common and soprano pipistrelles and 'other bats'). Locations where the proportion of bats which were common or soprano pipistrelles was less than 90% are highlighted in yellow to identify areas where the assemblage of bats was more diverse.

Table 4-5: Percentage of passes of ‘common’ and ‘rarer’ species of bats.

Position	Percentage of common bats (passes of common or soprano pipistrelle)*	Percentage of passes of ‘rarer’ bat species
Aldhurst Farm	68.6	31.4
Entrance to Lovers Lane	54.3	45.7
MS02	91.3	8.7
MS03	77.0	23.0
MS04	95.5	4.5
MS05	89.5	10.5
MS06	57.0	43.0
MS07	86.2	13.8
MS08	89.9	10.1
MS09	54.0	46.0
MS10	79.7	20.3
MS11	81.6	18.4
MS12	76.2	23.8
MS13	69.2	30.8
MS14	81.8	18.2
MS15	81.1	18.9
MS16	96.2	3.8
MS17	71.1	28.9
MS18	88.2	11.8
MS19	98.2	1.8
MS20	90.3	9.7

Position	Percentage of common bats (passes of common or soprano pipistrelle)*	Percentage of passes of 'rarer' bat species
MS21	92.6	7.4
MS22	90.6	9.4
MS23	93.2	6.8
MS24	94.6	5.4
MS25	84.0	16.0
MS26	96.6	3.4
MS27	99.5	0.5
MS28	81.9	18.1
MS29	89.6	10.4
MS30	74.4	25.6
MS31	96.8	3.2
MS32	90.2	9.8
MS33	92.3	7.7
MS34	96.7	3.3
MS35	94.8	5.2
MS36	91.1	8.9
South of Great Mount Wood	91.7	8.3
SSSI Triangle	93.5	6.5
The Grove	94.4	5.6

i. **Barbastelle and Natterer's bat at each location**

4.1.14 Across the main development site, the activity of Natterer's bats and Barbastelle bats varies with location. This section has been added to

present the activity of these species at each location, to indicate a value of these areas for these species.

4.1.15 **Table 4-6** shows the median passes per hour of barbastelle and natterer's bat overall.

Table 4-6: Median passes per hour of barbastelle and Natterer's bat

Location	Median passes per hour of barbastelle	Median passes per hour of Natterer's bat
Aldhurst Farm	0.21	0.13
Entrance to Lovers Lane	0.00	0.35
MS02	0.13	0.14
MS03	3.78	0.00
MS04	0.55	0.21
MS05	0.00	0.00
MS06	0.27	0.00
MS07	0.21	0.14
MS08	0.12	0.13
MS09	0.23	0.14
MS10	0.74	0.12
MS11	0.24	0.13
MS12	0.13	0.62
MS13	0.13	0.14
MS14	0.23	0.34
MS15	0.27	0.13
MS16	0.13	0.00
MS17	0.14	0.17
MS18	1.25	0.13
MS19	0.13	0.13
MS20	0.13	0.38
MS21	0.2	0.39
MS22	1.36	0.27
MS23	0.25	0.13
MS24	0.13	0.12
MS25	0.00	0.11
MS26	0.14	0.14
MS27	0.00	0.00
MS28	0.13	0.18
MS29	0.12	0.00
MS30	0.55	0.12
MS31	0.13	0.14
MS32	0.13	0.14
MS33	0.34	0.00
MS34	0.23	0.14
MS35	0.11	0.00
MS36	0.00	0.14

Location	Median passes per hour of barbastelle	Median passes per hour of Natterer's bat
South of Great Mount Wood	0.4	0.00
SSSI Triangle	0.12	0.12
The Grove	0.13	0.18

Table 4-7: Median passes per hour of barbastelle (by month)

Location	Barbastelle Bat			
	April	May	June	July
Aldhurst Farm	0.00	0.12	0.27	0.00
MS02	0.10	0.12	0.14	0.13
MS03	0.00	0.00	0.41	17.70
MS04	0.00	0.75	0.41	0.00
MS06	0.00	0.00	0.14	0.53
MS07	0.00	0.12	0.27	0.00
MS08	0.00	0.00	0.00	0.12
MS09	0.00	0.35	0.14	0.00
MS10	0.00	0.00	0.00	0.74
MS11	0.00	0.00	0.00	0.24
MS12	0.00	0.13	0.00	0.24
MS13	0.00	0.12	0.14	0.00
MS14	0.00	0.35	0.14	0.13
MS15	0.00	0.00	0.00	0.27
MS16	0.11	0.13	0.00	0.43
MS17	0.00	0.12	0.21	0.00
MS18	0.00	0.51	7.86	0.87
MS19	0.00	0.13	0.00	0.18
MS20	0.00	0.13	0.00	0.00
MS21	0.00	0.12	0.00	0.27
MS22	0.00	0.00	2.20	0.33
MS23	0.00	0.13	0.00	0.31
MS24	0.00	0.13	0.00	0.00
MS26	0.00	0.00	0.14	0.00

Location	Barbastelle Bat			
	April	May	June	July
MS28	0.00	0.13	0.00	0.00
MS29	0.00	0.00	0.00	0.12
MS30	0.00	0.29	0.55	0.00
MS31	0.00	0.00	0.14	0.12
MS32	0.00	0.00	0.14	0.13
MS33	0.00	0.00	0.41	0.12
MS34	0.10	0.00	0.41	0.00
MS35	0.10	0.13	0.00	0.00
South of Great Mount Wood	0.00	0.12	0.00	0.53
SSSI Triangle	0.00	0.00	0.00	0.12
The Grove	0.00	0.00	0.00	0.13

Table 4-8: Median passes per hour of Natterer's bat (by month)

Location	Natterer's Bat			
	April	May	June	July
Aldhurst Farm	0.00	0.00	0.00	0.13
Lovers Lane	0.00	0.35	0.00	0.00
MS02	0.48	0.17	0.14	0.00
MS04	0.00	0.00	0.21	0.00
MS07	0.19	0.00	0.14	0.00
MS08	0.00	0.00	0.21	0.12
MS09	0.19	0.00	0.14	0.00
MS10	0.00	0.00	0.00	0.12
MS11	0.00	0.13	0.00	0.00
MS12	0.00	0.62	0.00	0.00
MS13	0.00	0.00	0.14	0.00
MS14	0.68	0.23	0.00	0.00
MS15	0.00	0.00	0.00	0.13
MS17	0.20	0.00	0.14	0.00
MS18	0.00	0.13	0.14	0.12
MS19	0.00	0.13	0.00	0.00

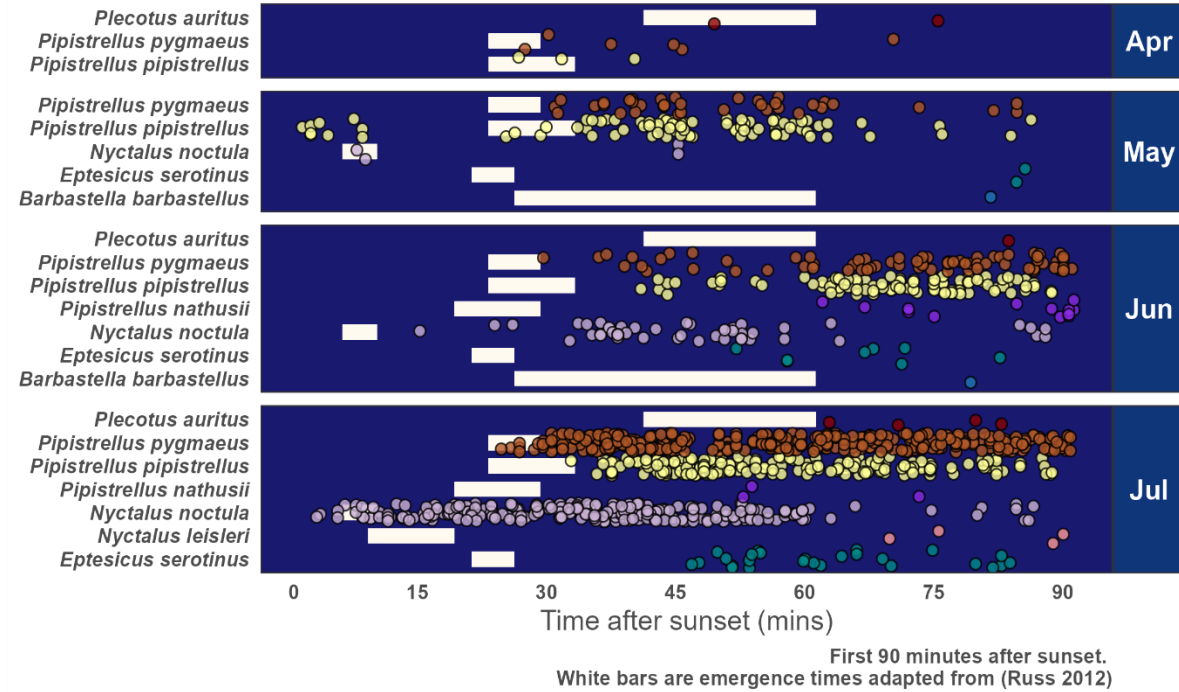
Location	Natterer's Bat			
	April	May	June	July
MS20	0.00	0.38	0.00	0.00
MS21	0.00	0.00	0.00	0.39
MS22	0.00	0.00	0.48	0.13
MS23	0.00	0.13	0.00	0.18
MS24	0.00	0.13	0.00	0.00
MS25	0.10	0.12	0.00	0.00
MS26	0.00	0.00	0.14	0.00
MS28	0.10	0.25	0.00	0.00
MS30	0.10	0.12	0.00	0.00
MS31	0.00	0.00	0.14	0.00
MS32	0.00	0.00	0.14	0.13
MS34	0.00	0.00	0.14	0.00
MS36	0.00	0.25	0.14	0.12
SSSI Triangle	0.00	0.00	0.00	0.12
The Grove	0.00	0.35	0.00	0.13

d) Areas where bat emergence times indicate nearby roosts

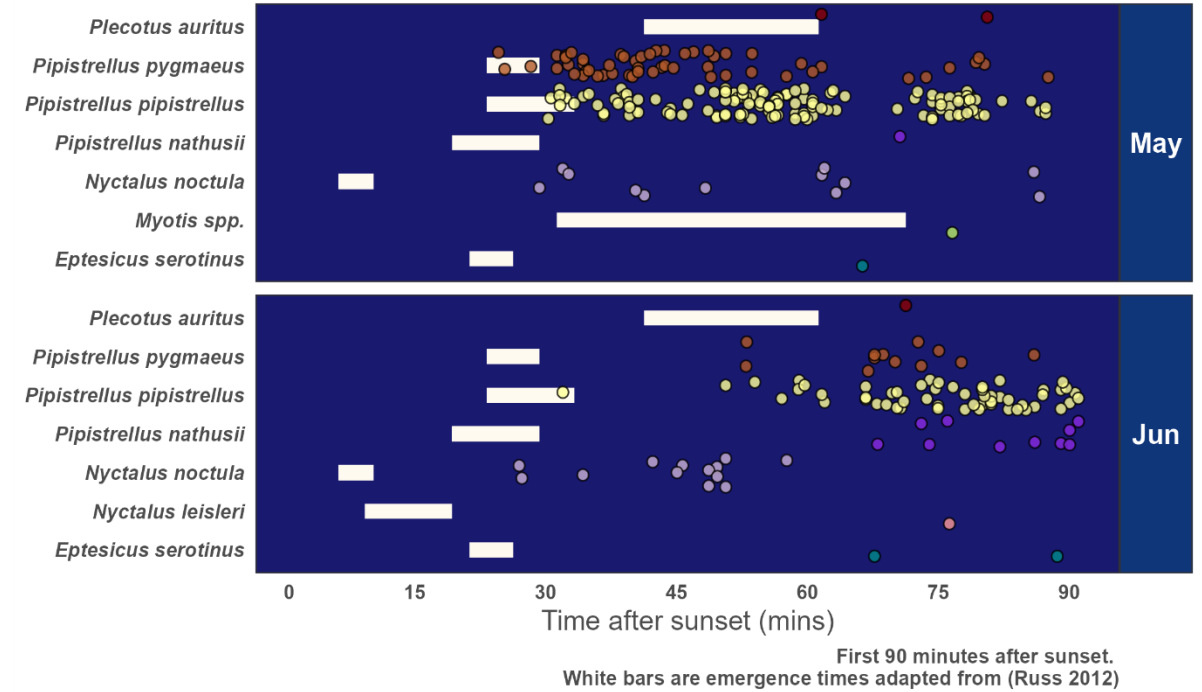
4.1.16 Plot 4 below presents the bat observations, against the estimated emergence time, for species to exit their roosts; indicating the likelihood a roost for that species is nearby. Any observation nearer or before sunset is likely to be a stronger indication that a roost is nearby. The roost emergence times for the bat species is based on the work of British Bat Calls: A Guide to Species Identification (Russ 2012).

Plot 4: Roost and Observed Emergence by Location

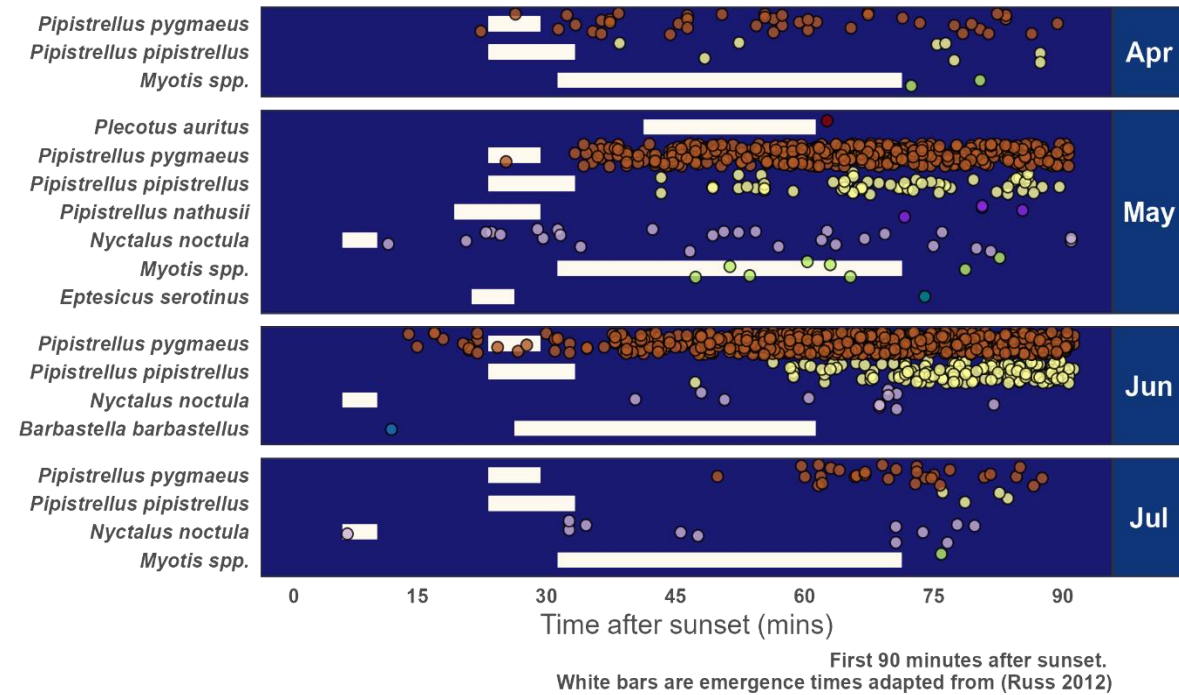
Location: Aldhurst Farm



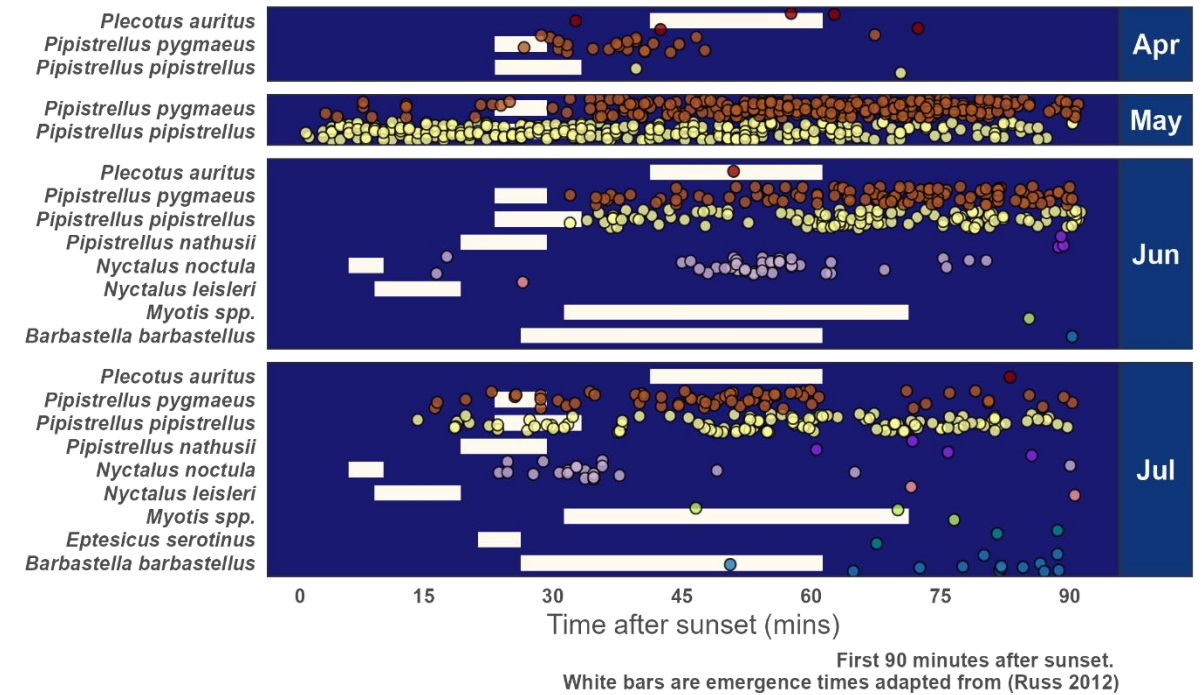
Location: Lovers Lane



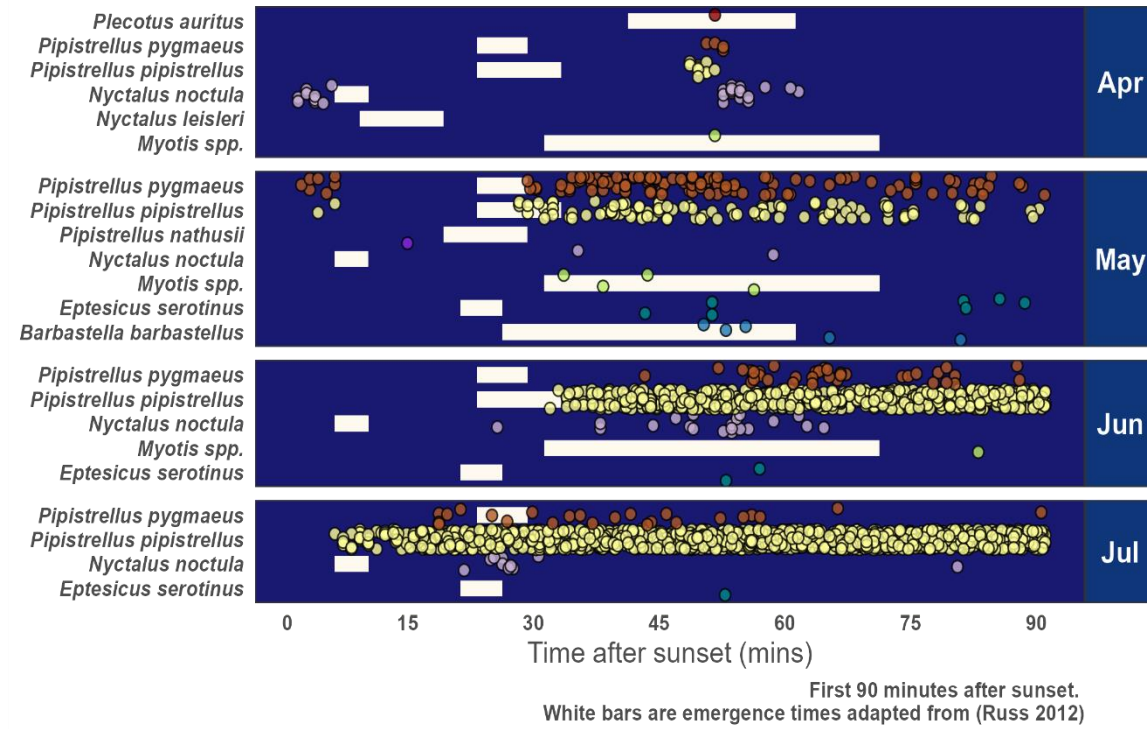
Location: MS02



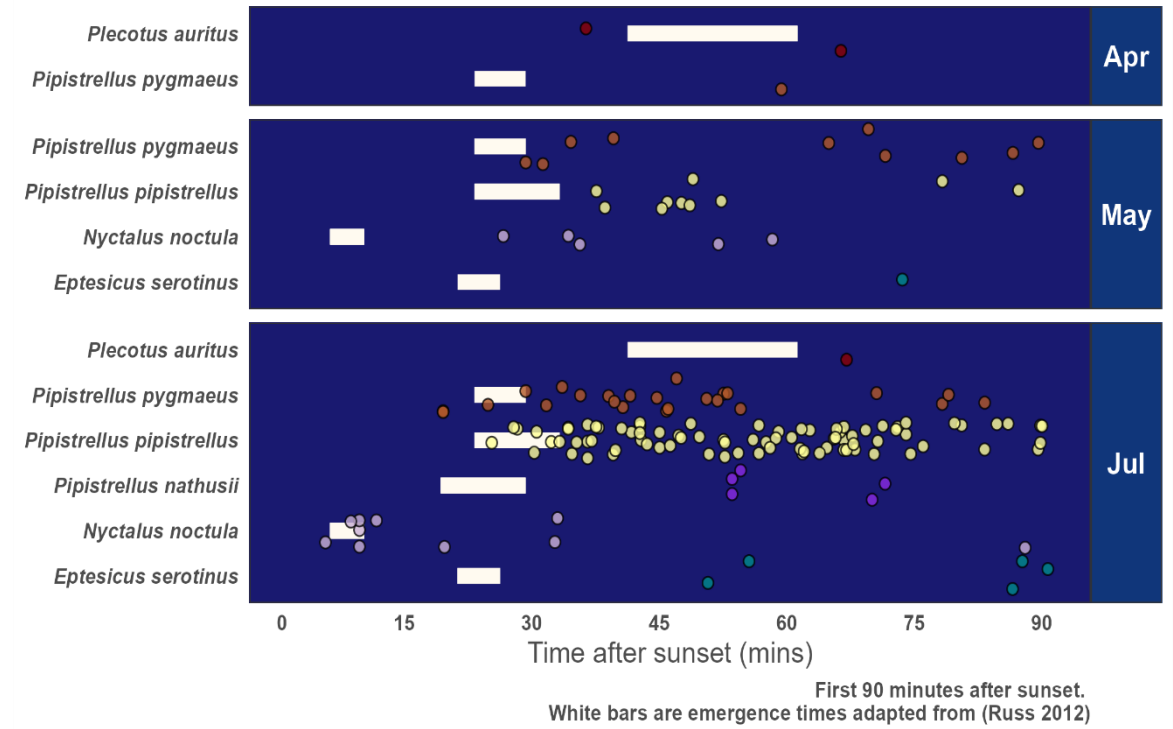
Location: MS03



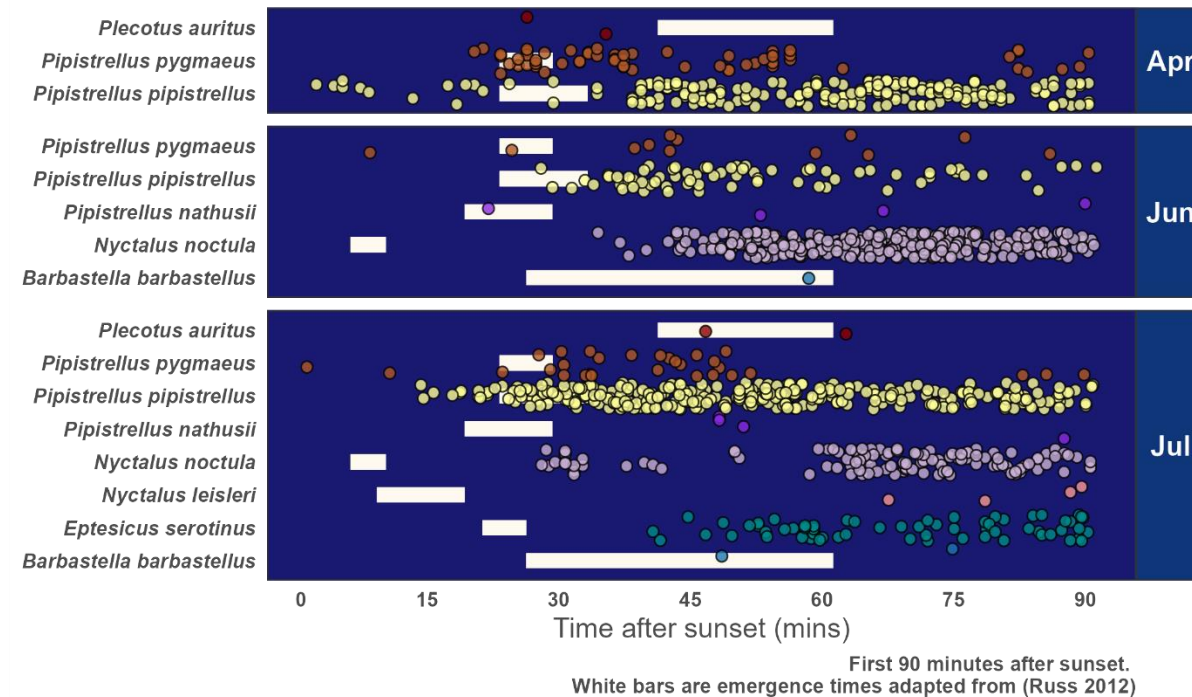
Location: MS04



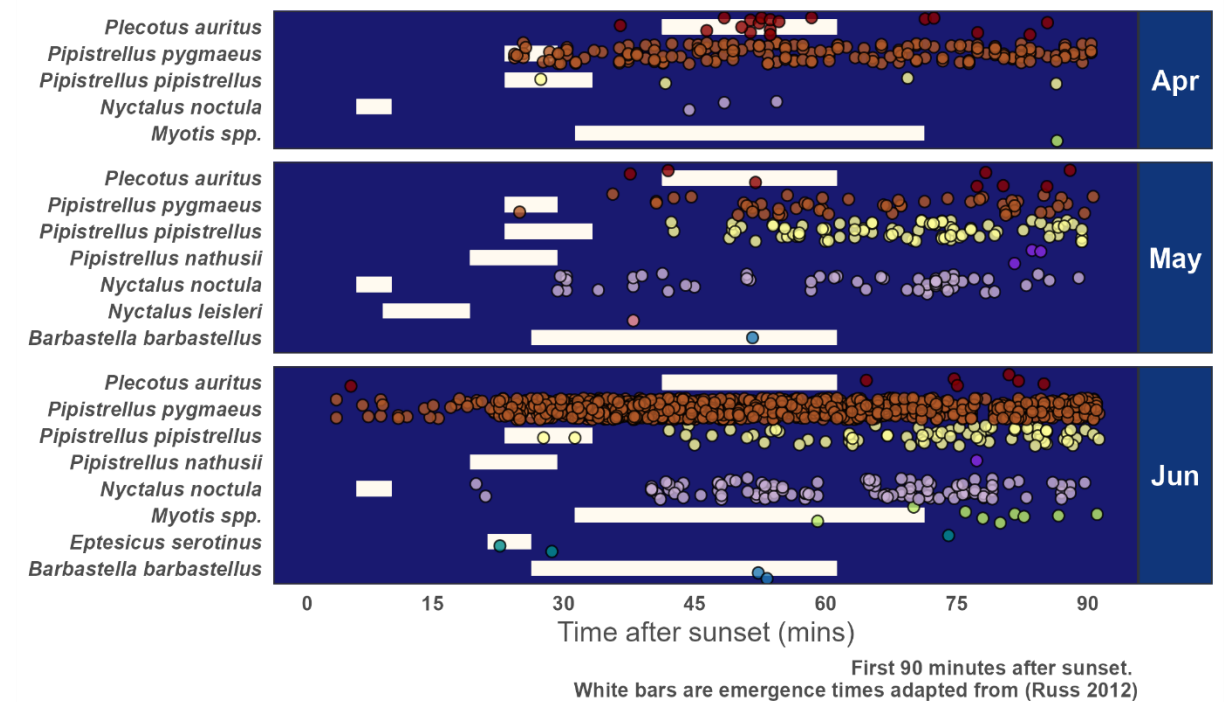
Location: MS05



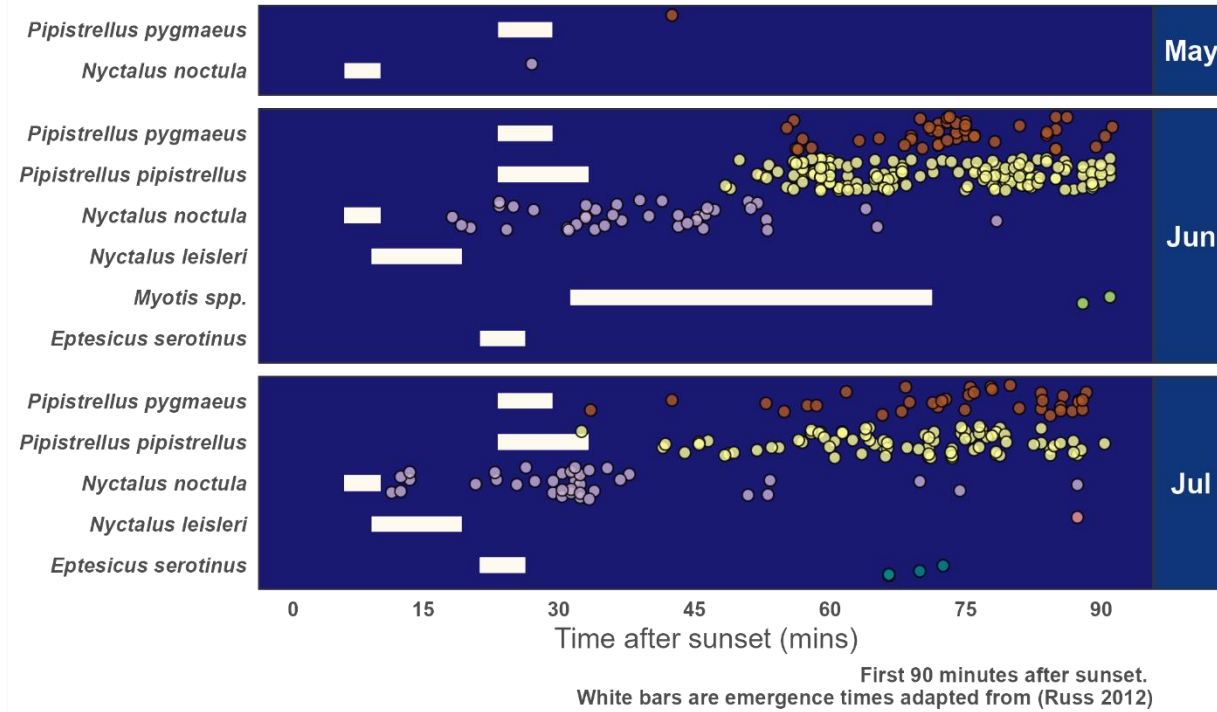
Location: MS06



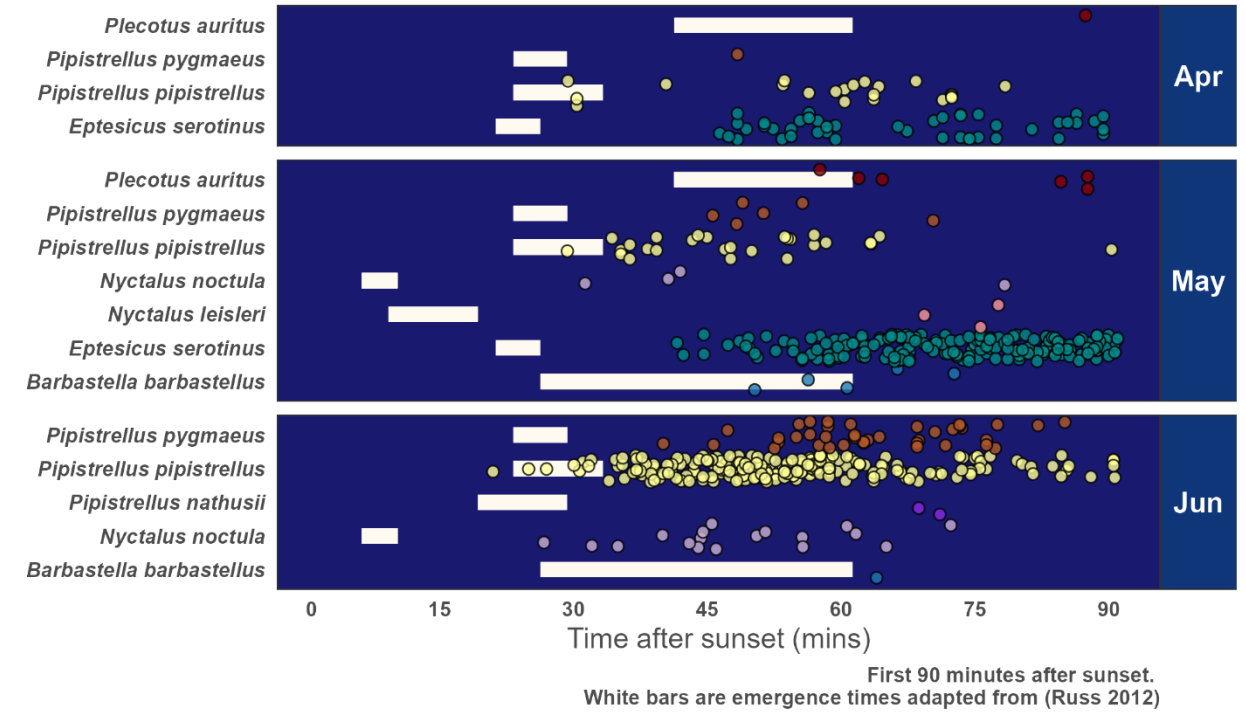
Location: MS07



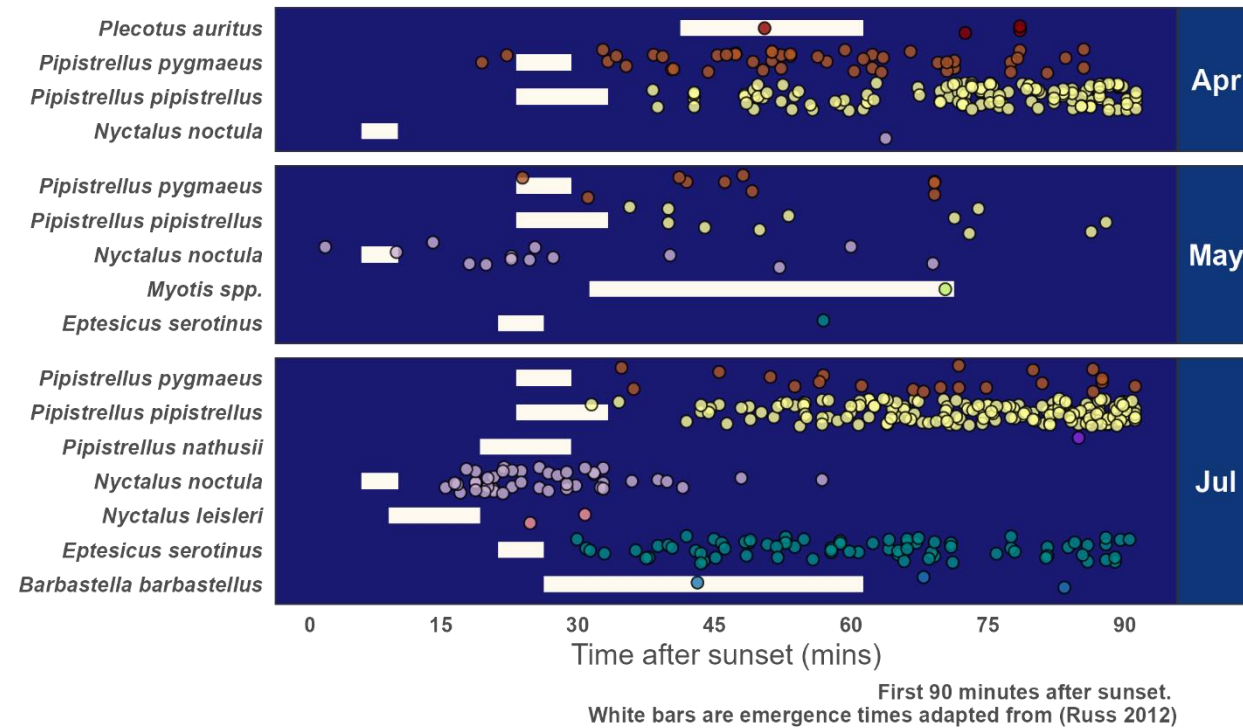
Location: MS08



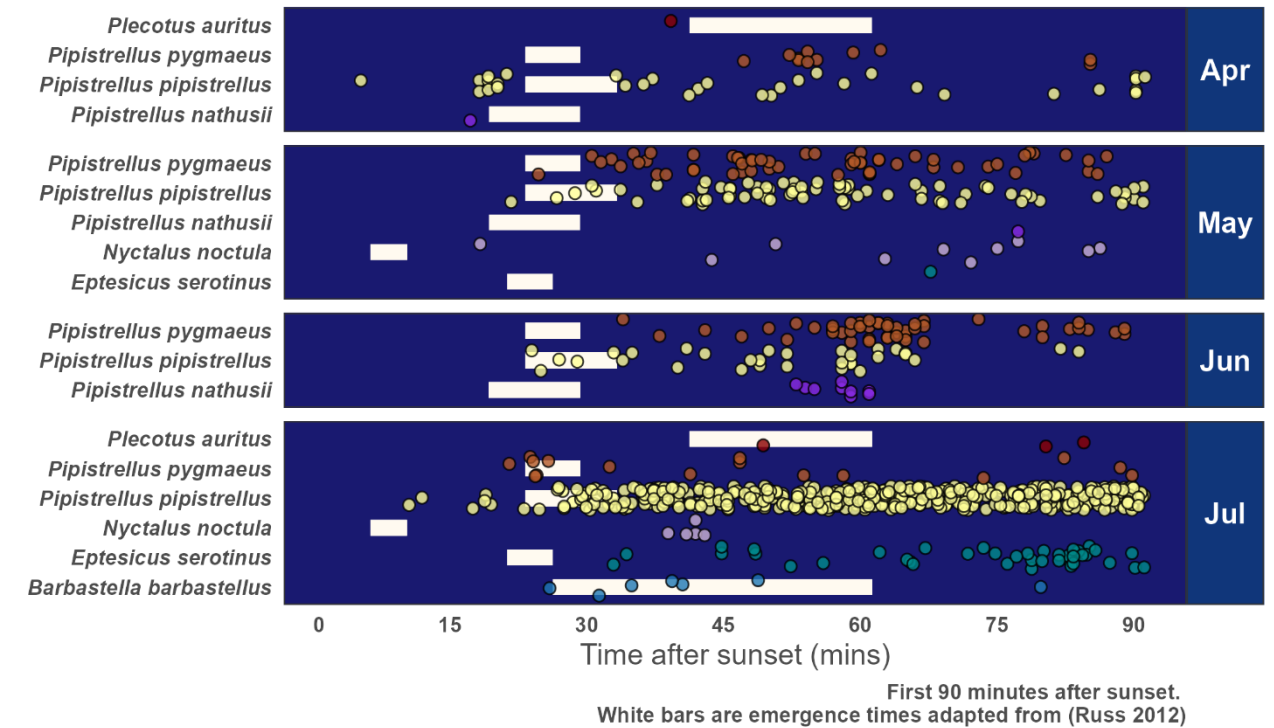
Location: MS09



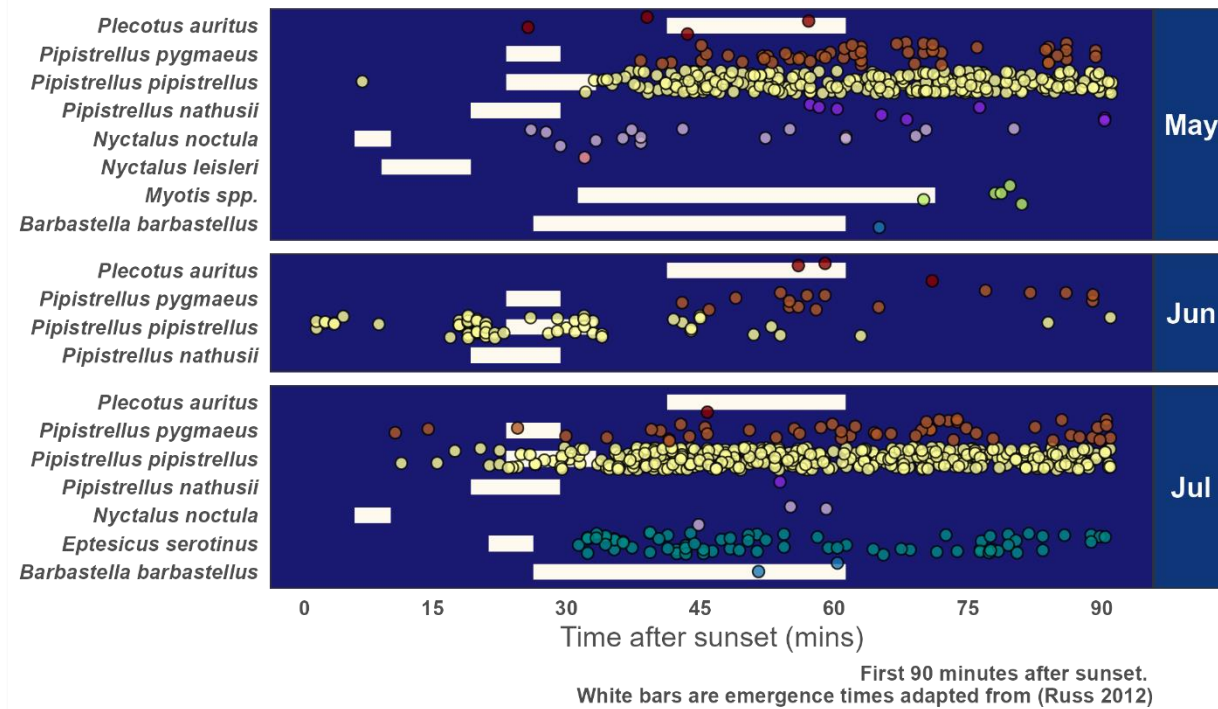
Location: MS10



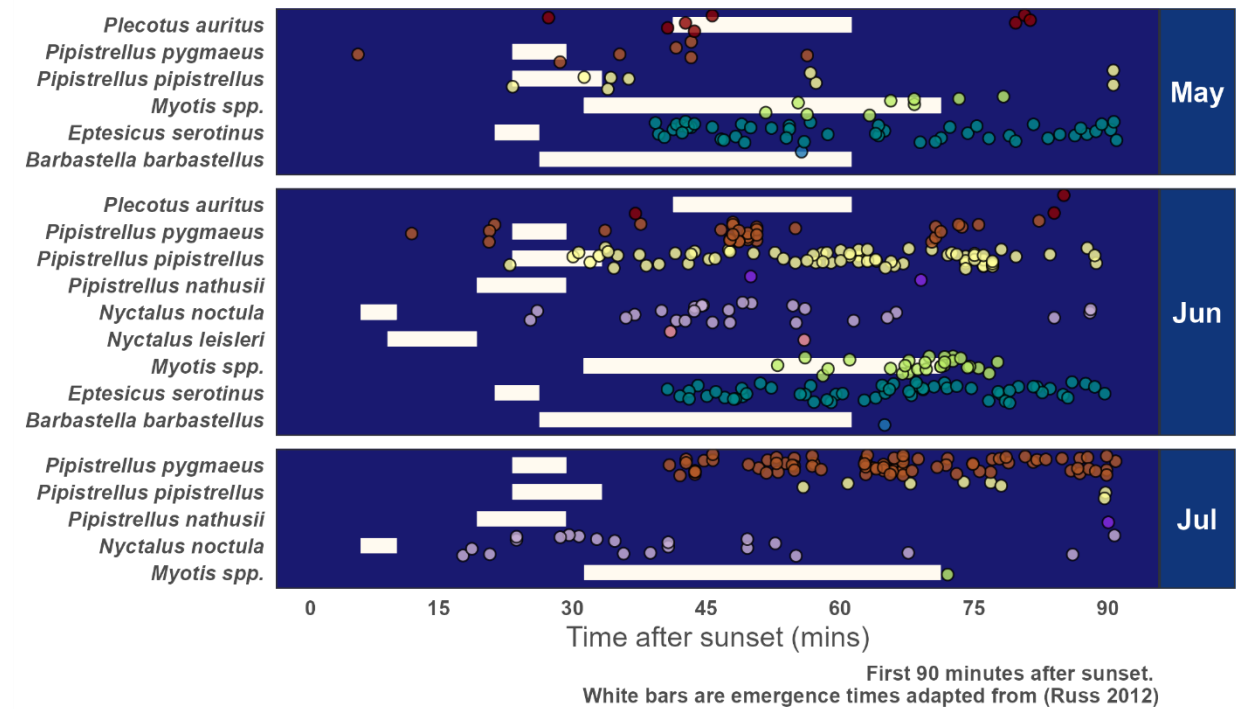
Location: MS11



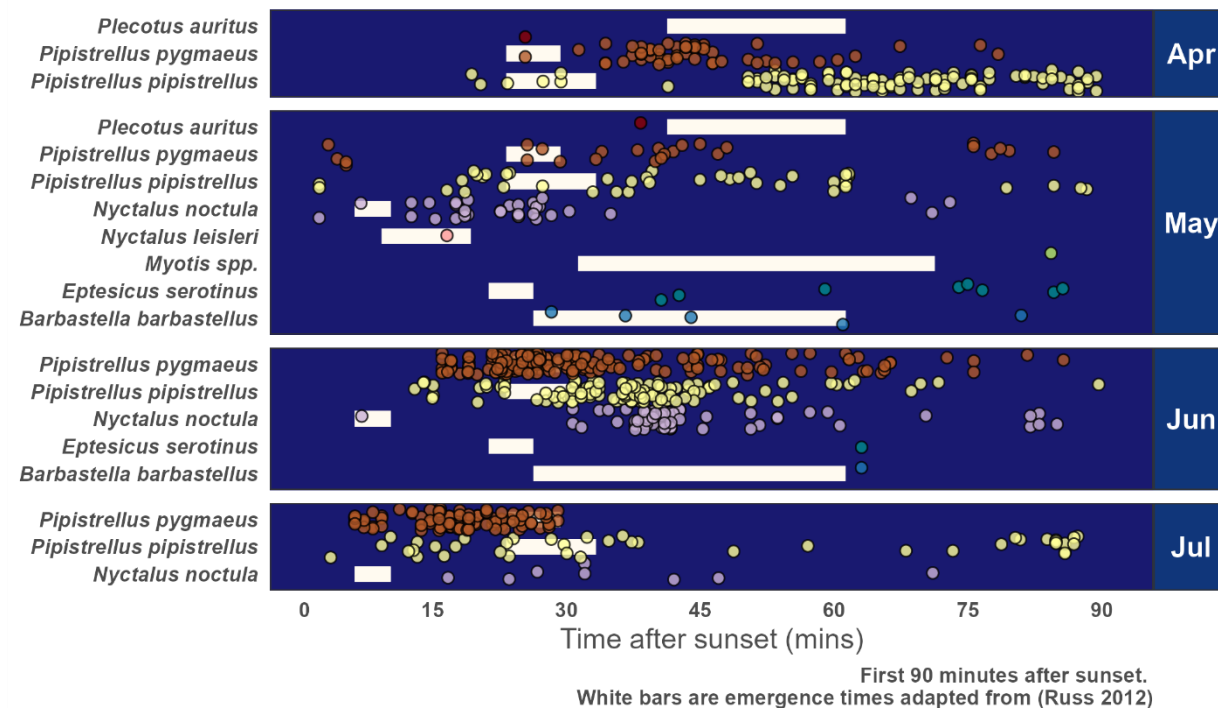
Location: MS12



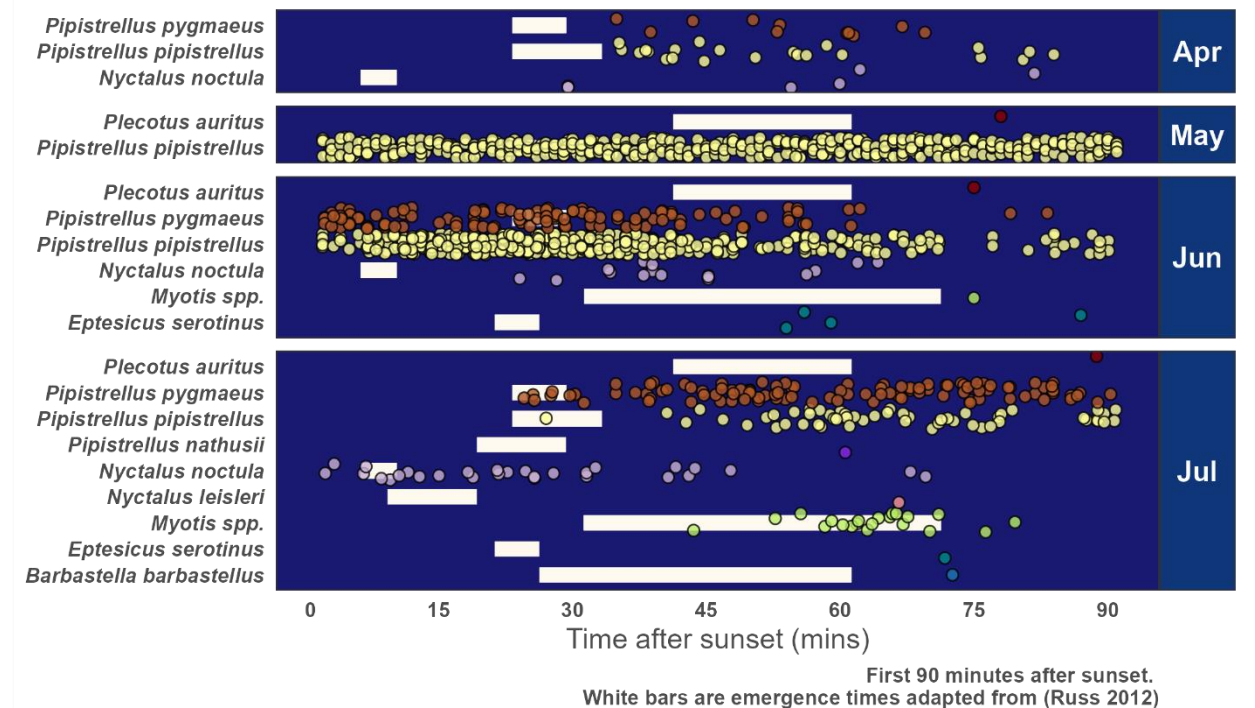
Location: MS13



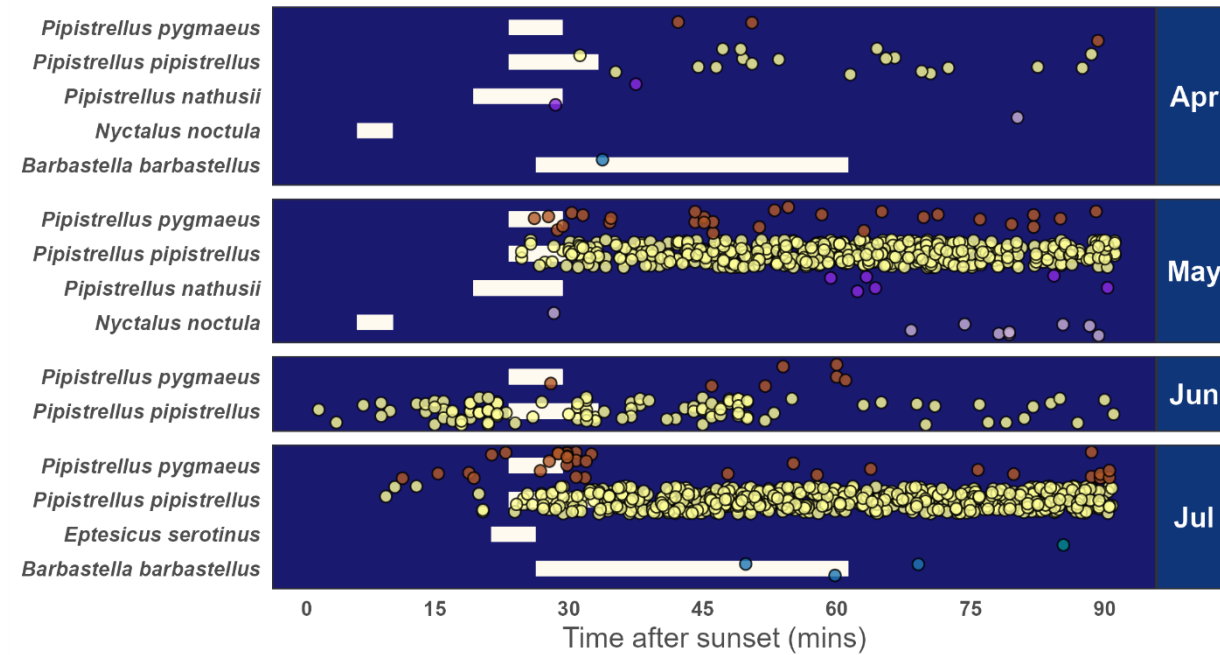
Location: MS14



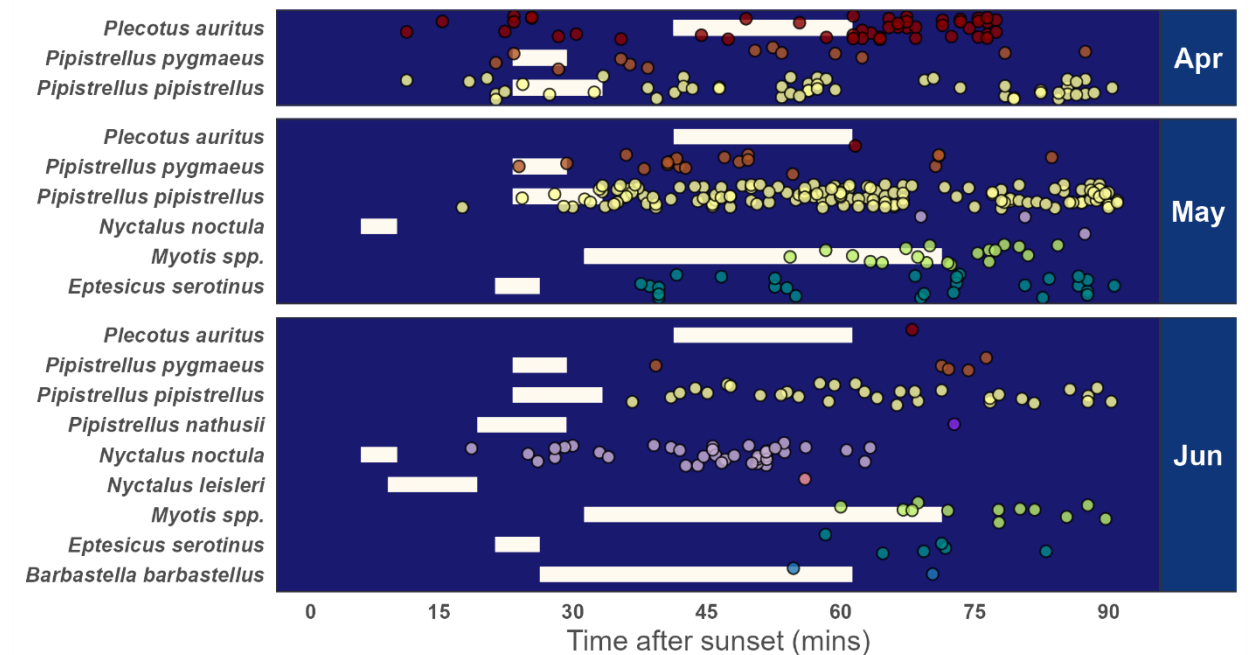
Location: MS15



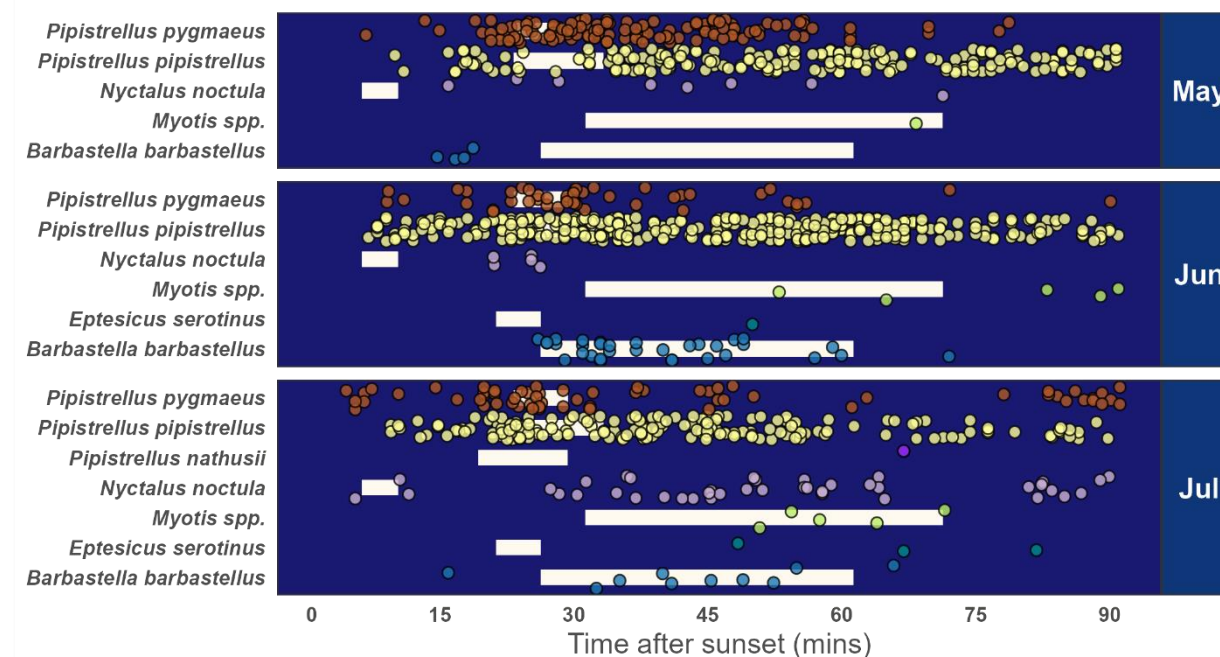
Location: MS16



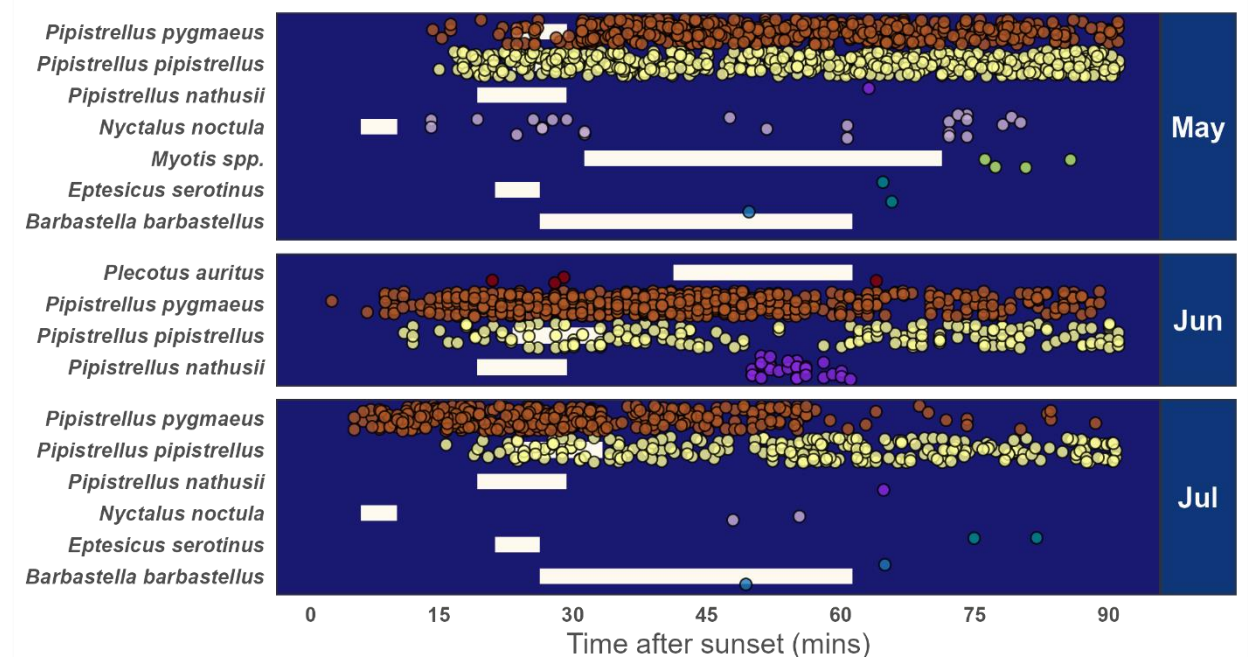
Location: MS17



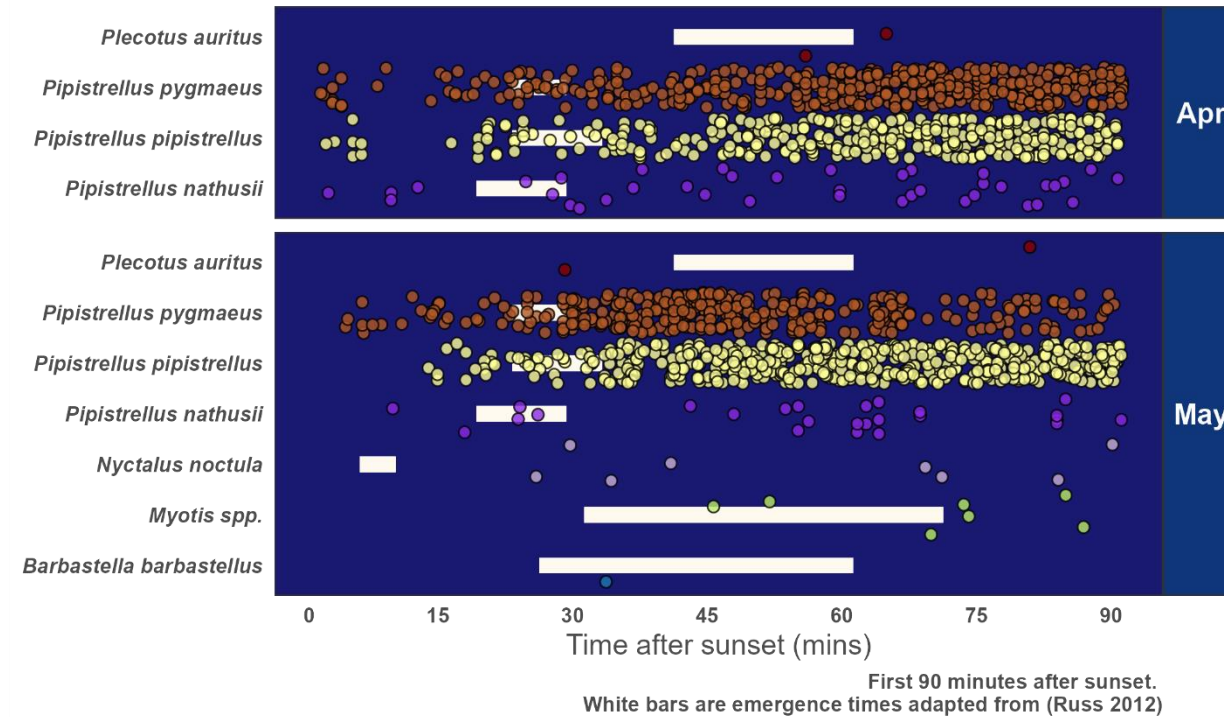
Location: MS18



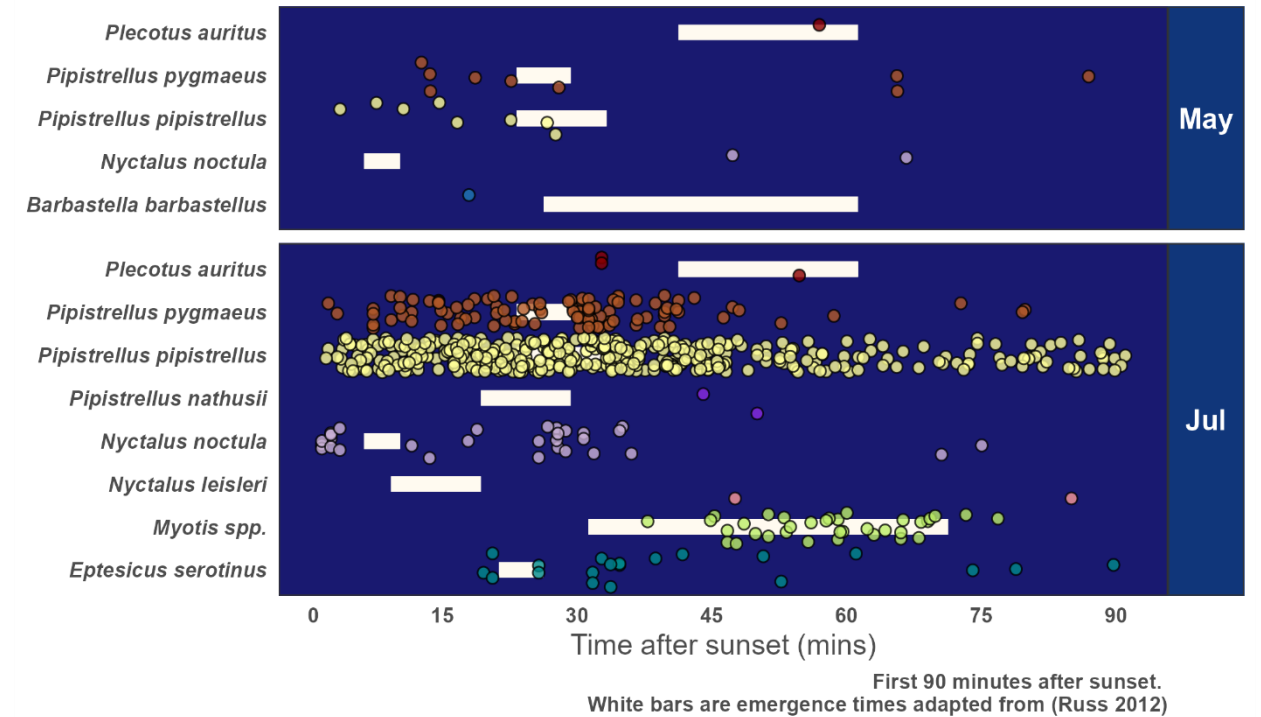
Location: MS19



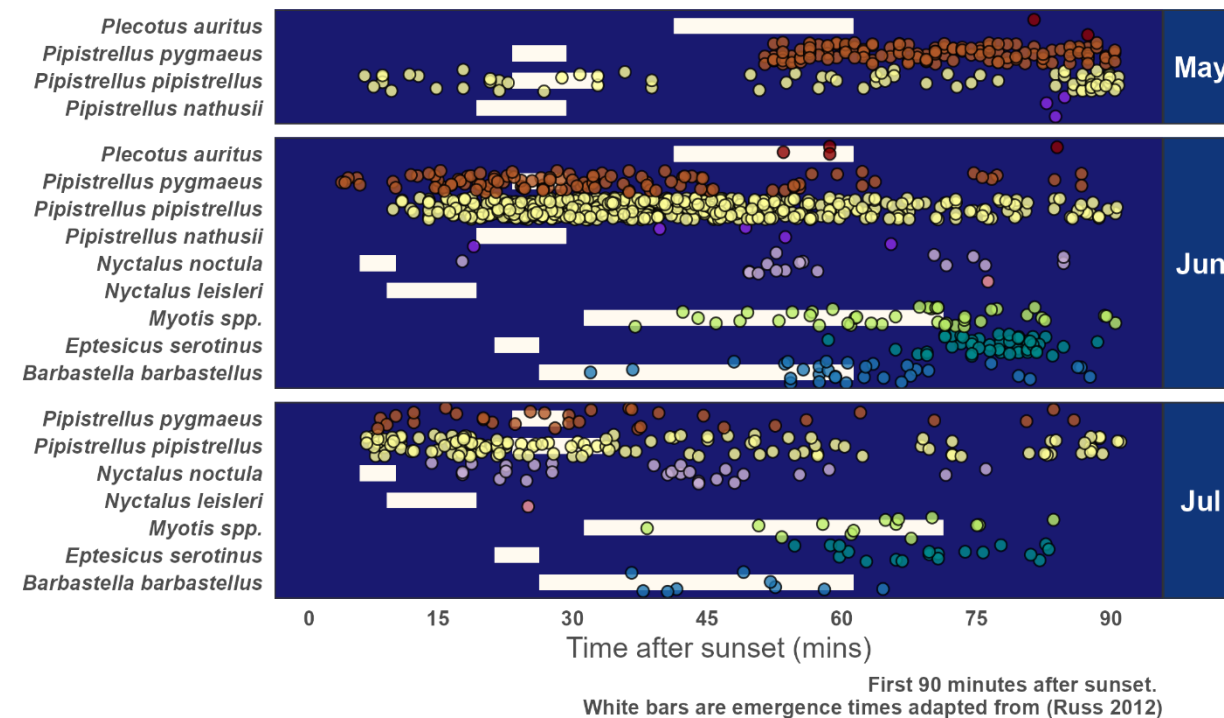
Location: MS20



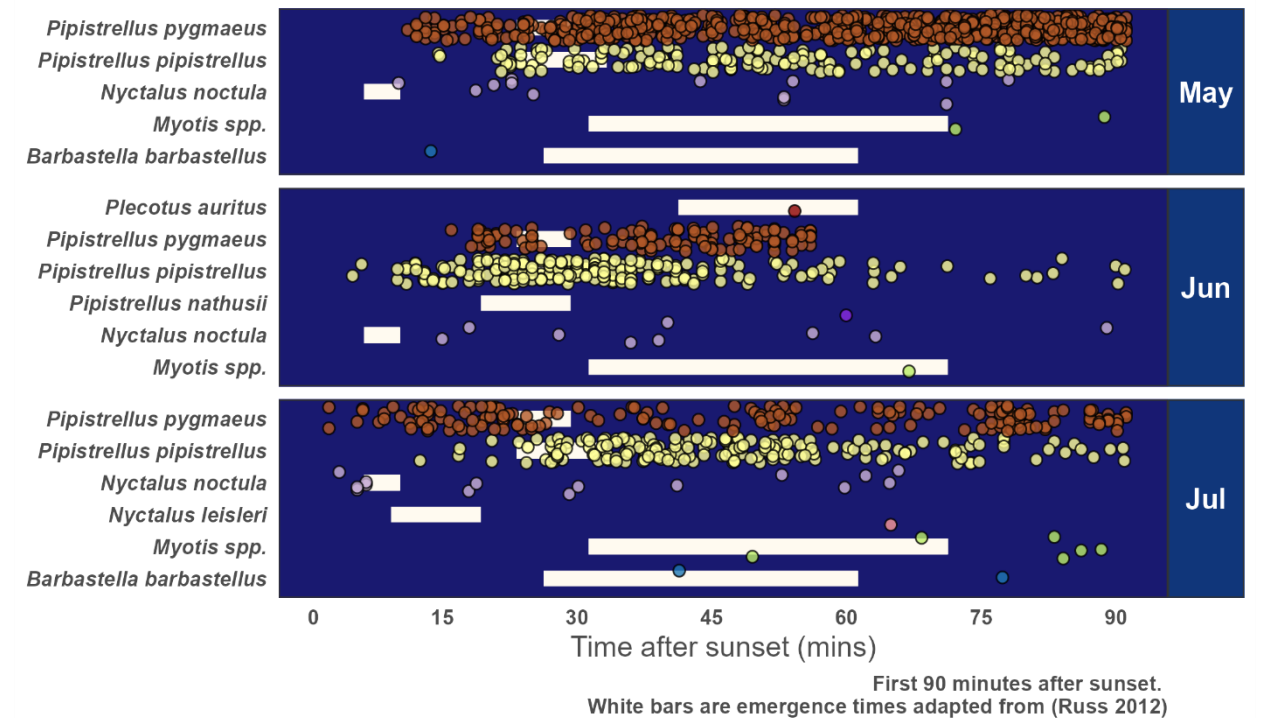
Location: MS21



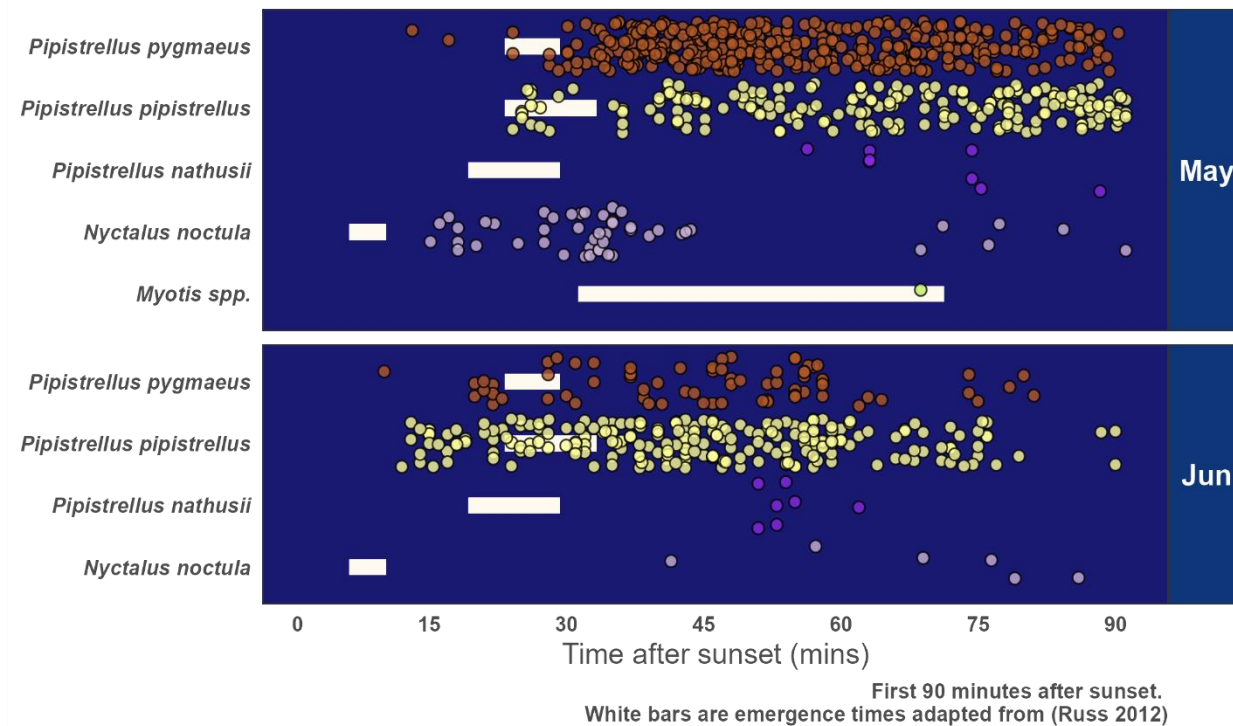
Location: MS22



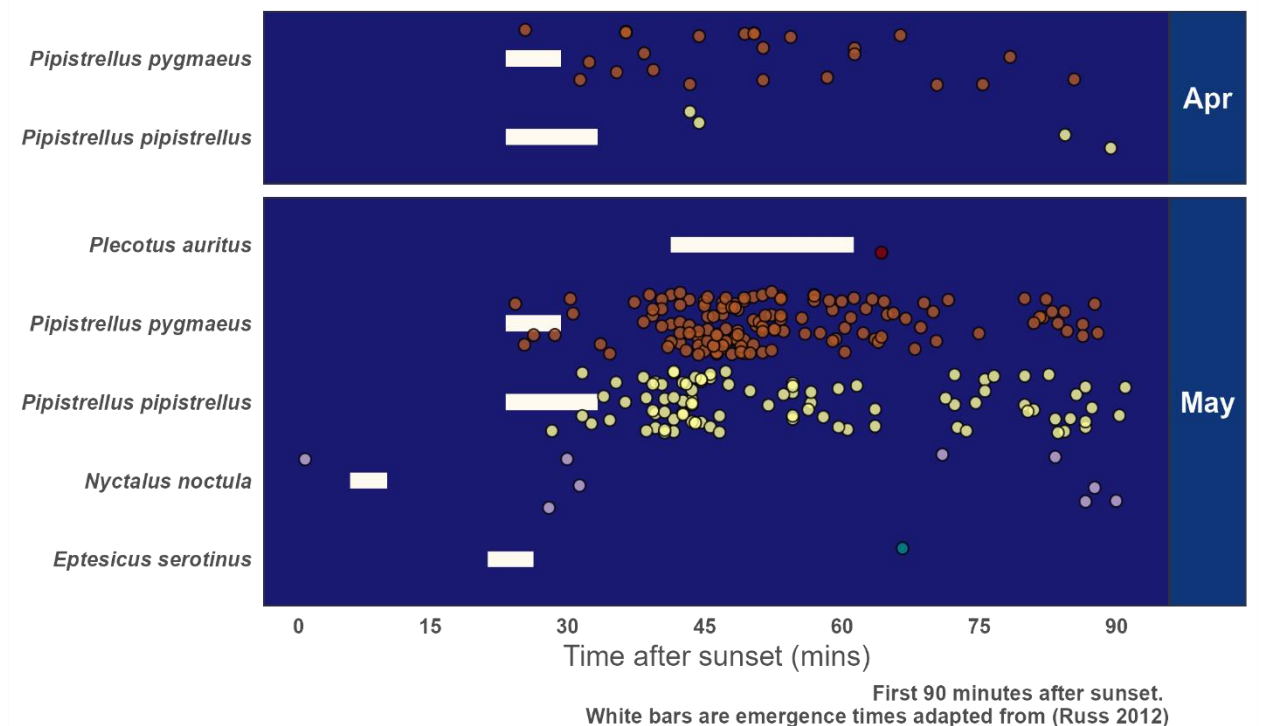
Location: MS23



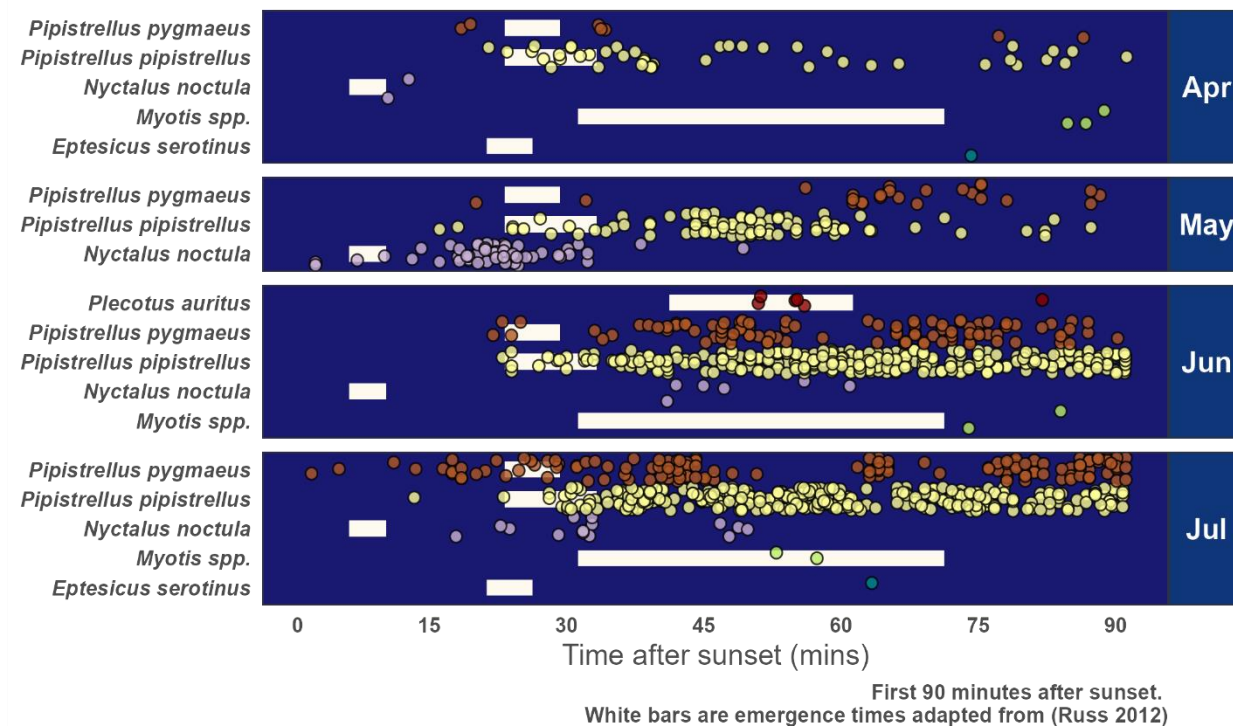
Location: MS24



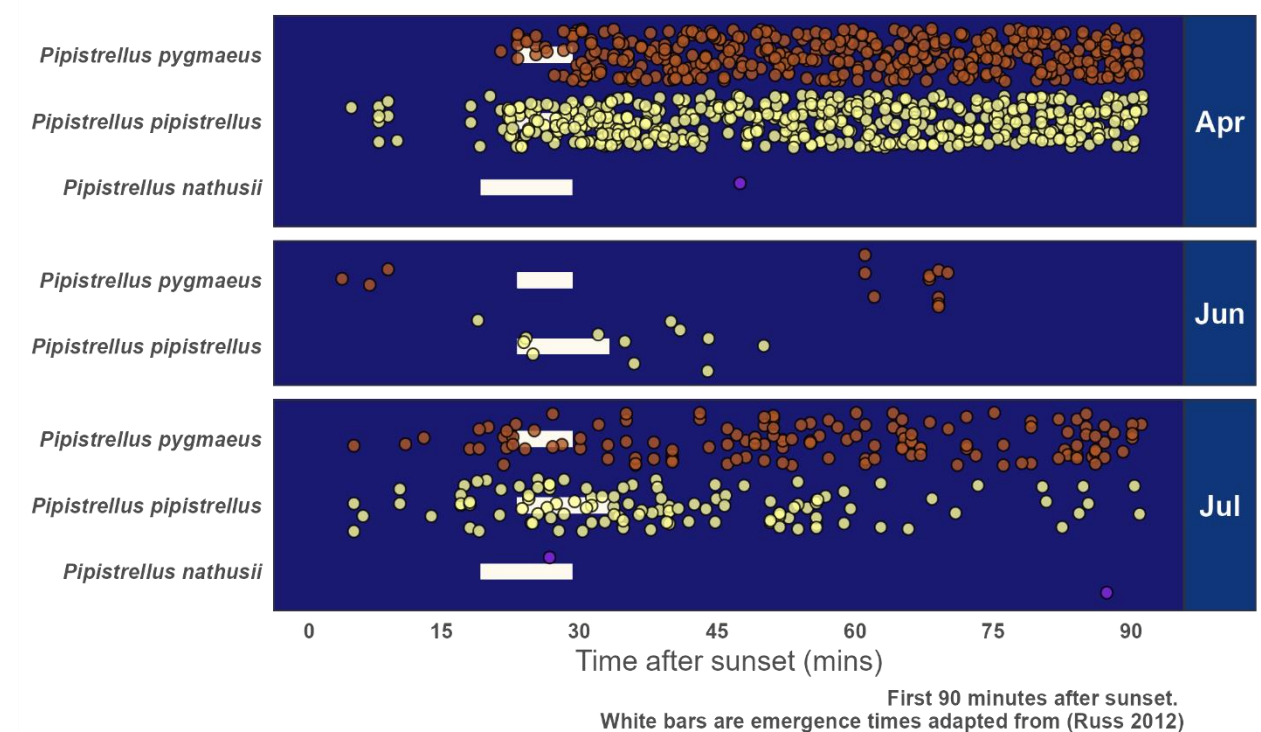
Location: MS25



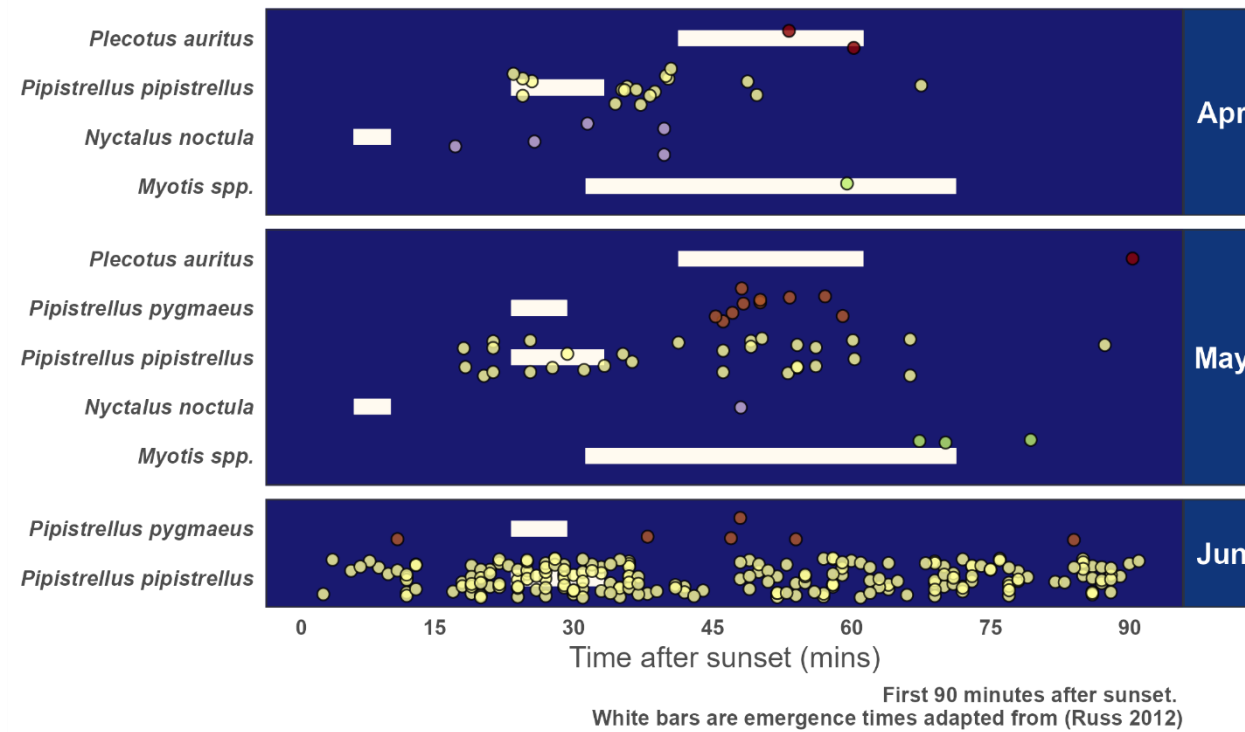
Location: MS26



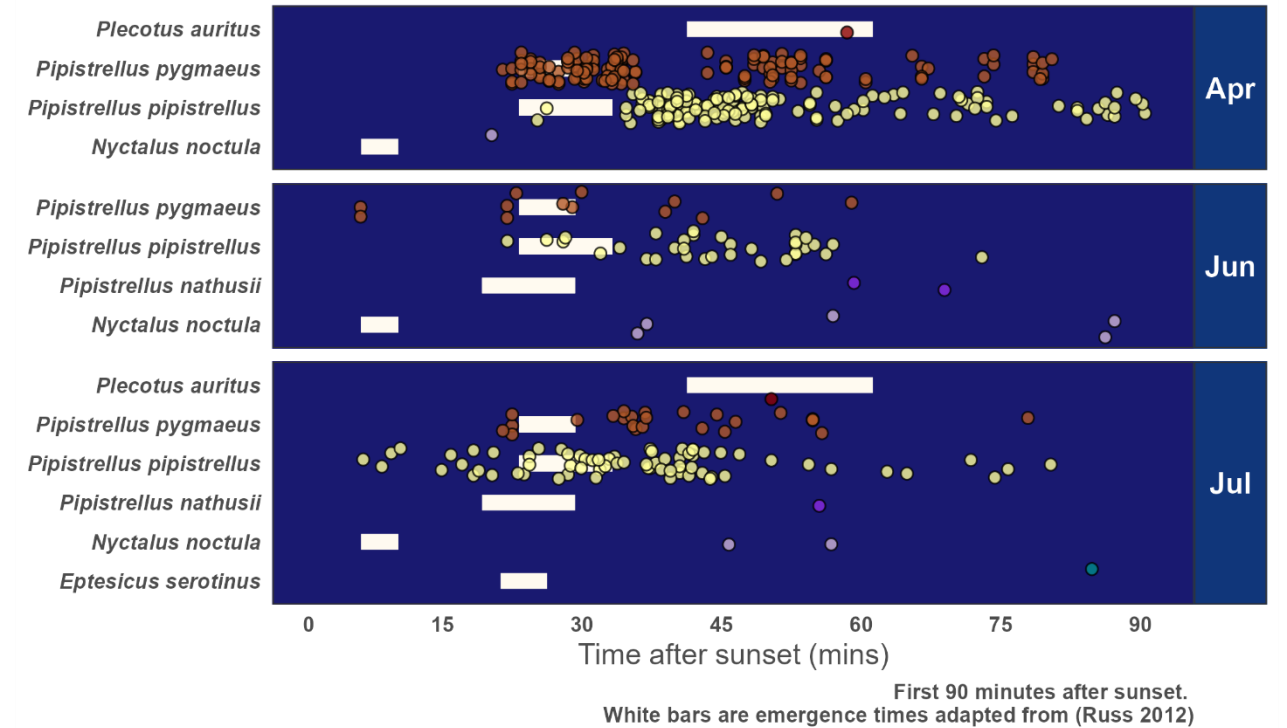
Location: MS27



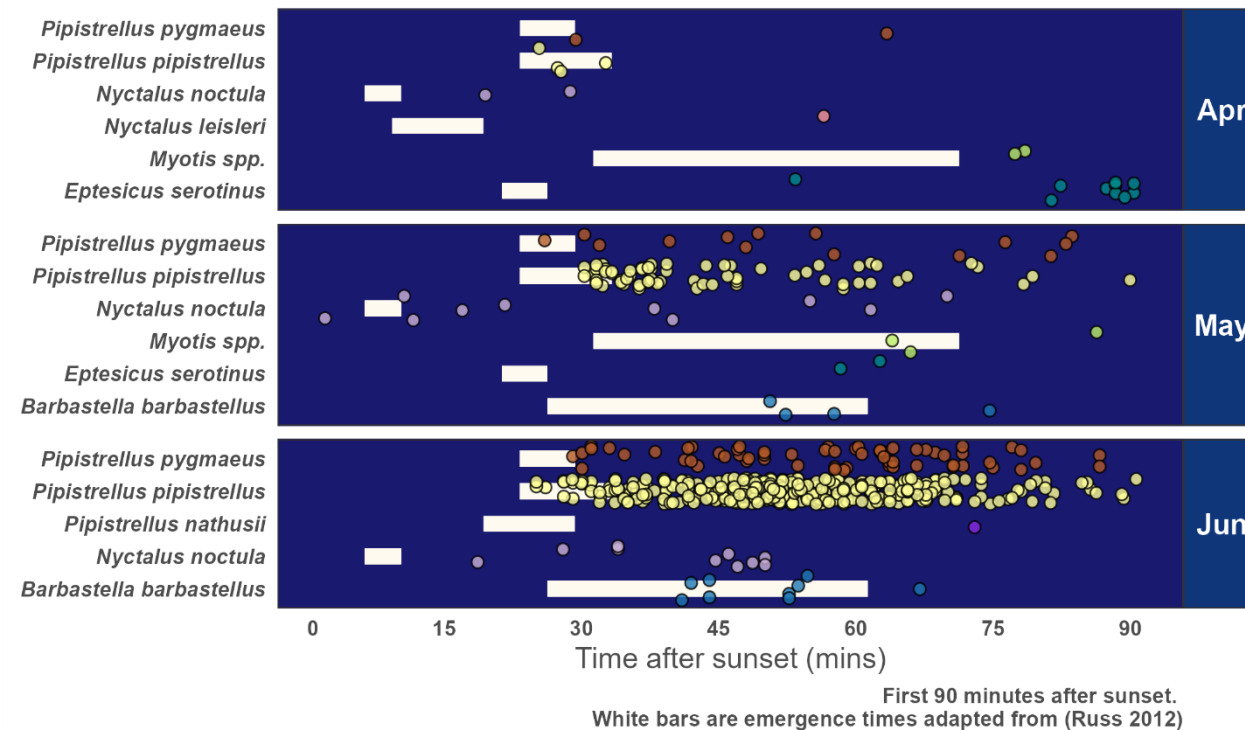
Location: MS28



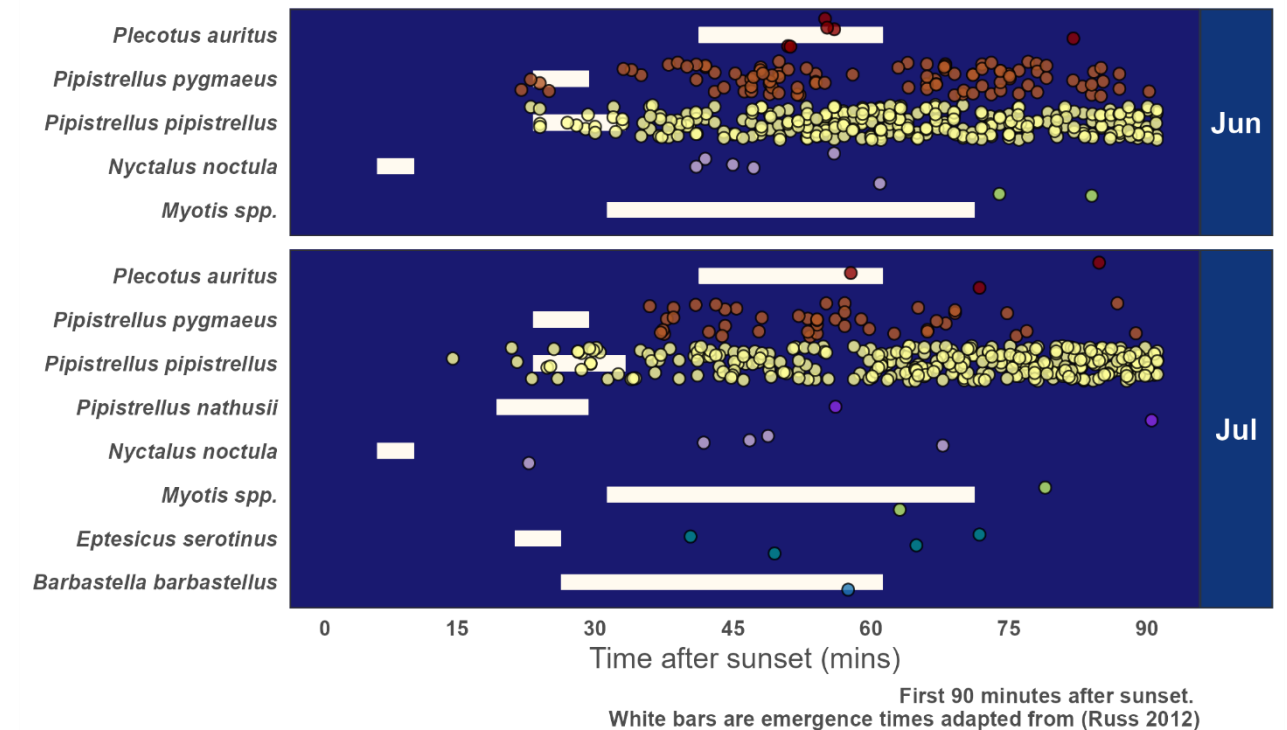
Location: MS29



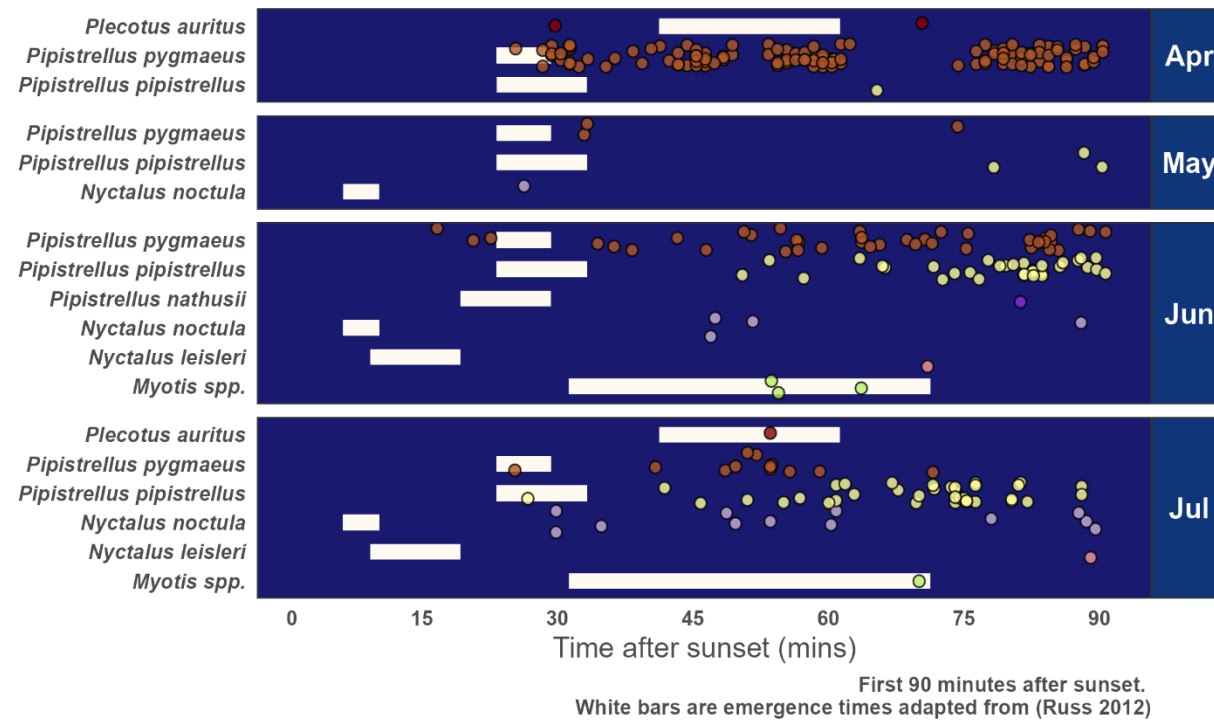
Location: MS30



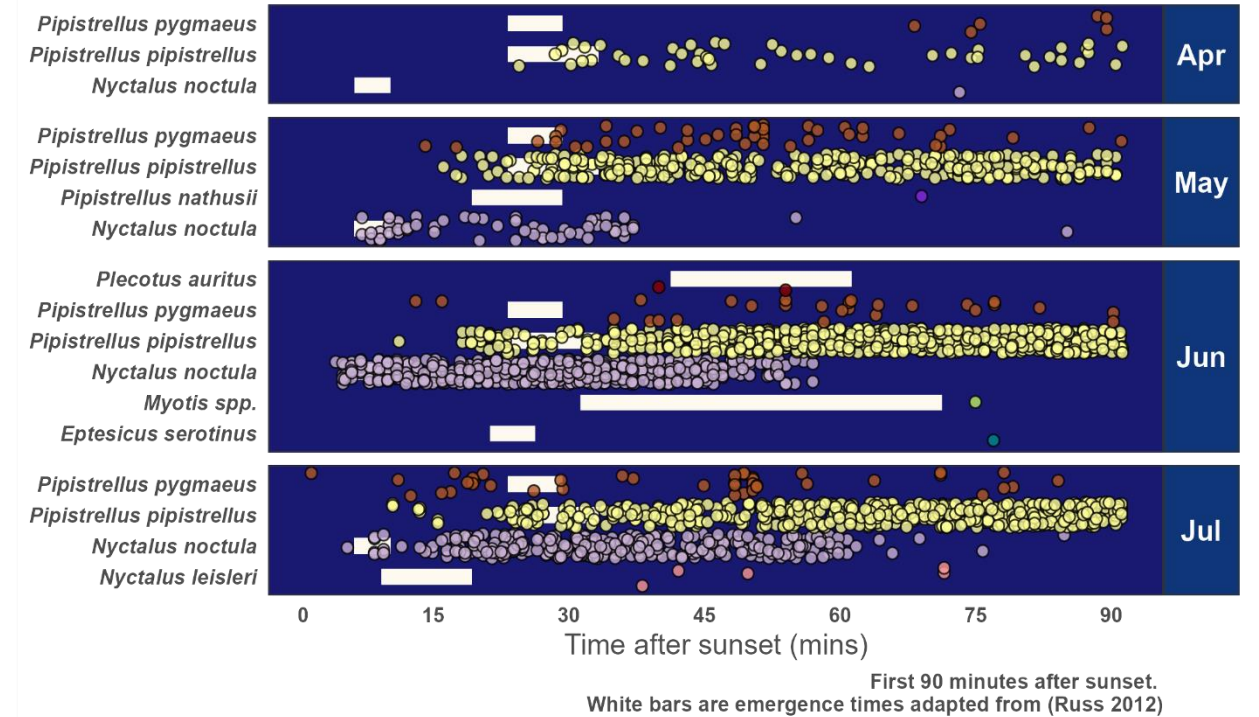
Location: MS31



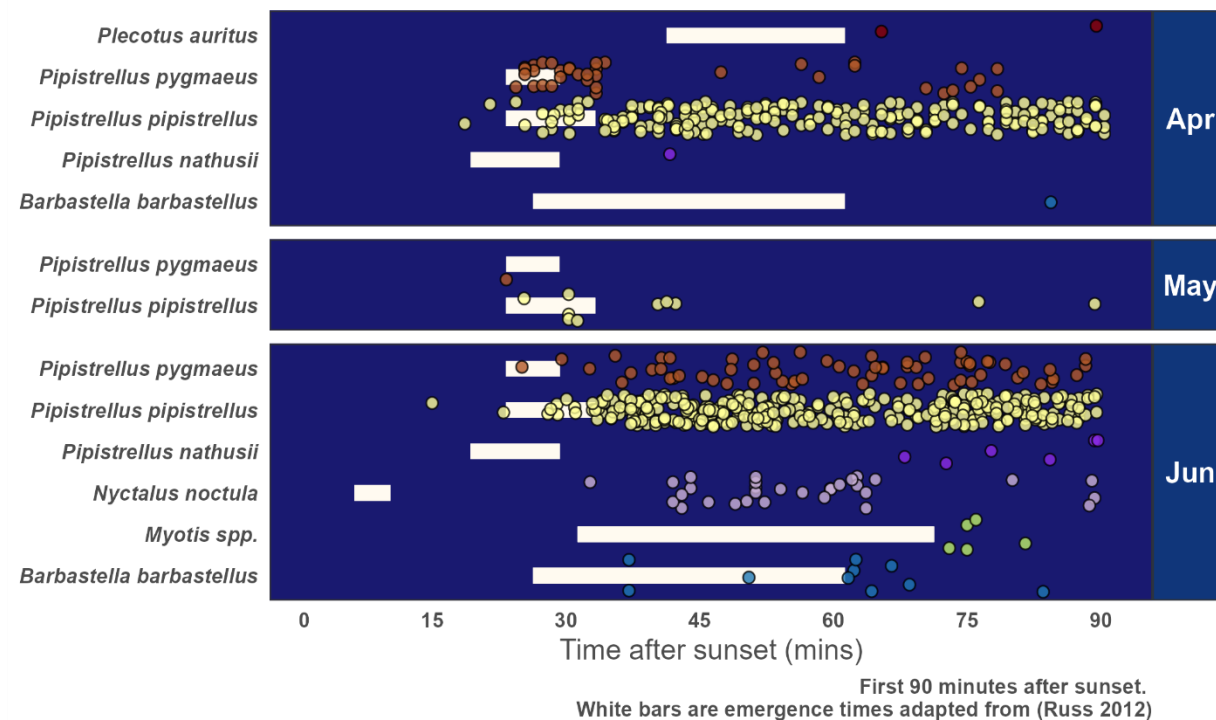
Location: MS32



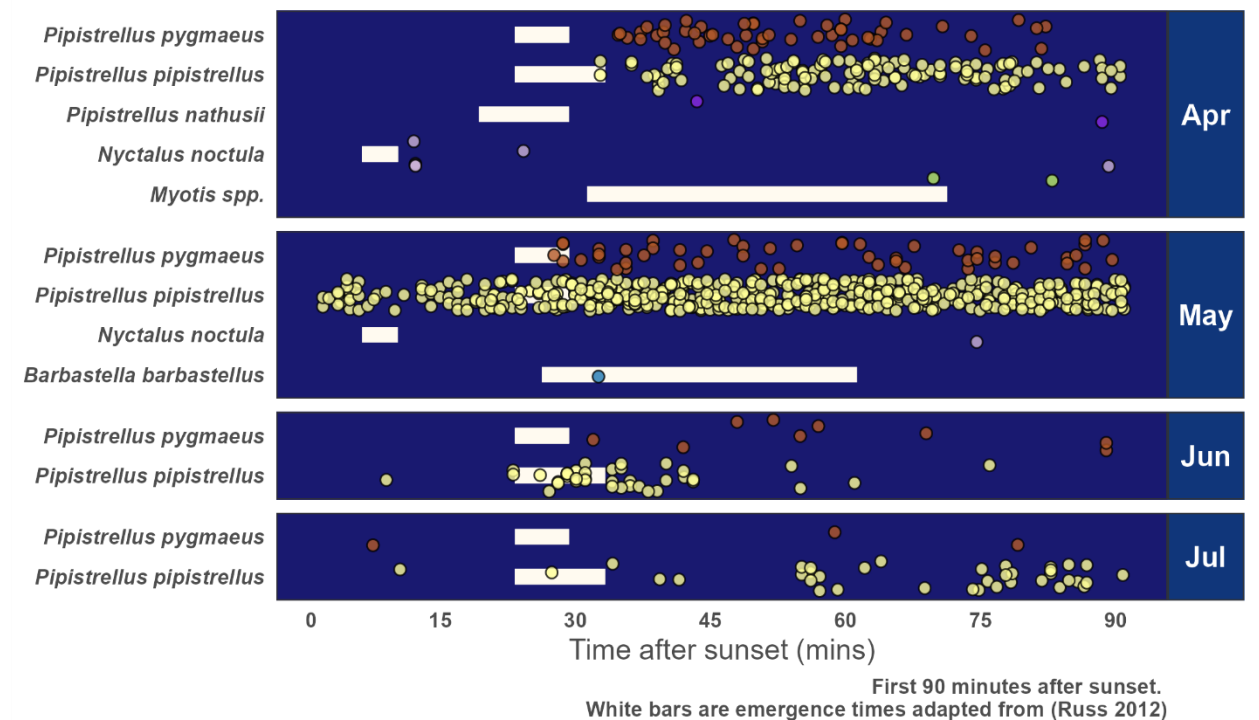
Location: MS33



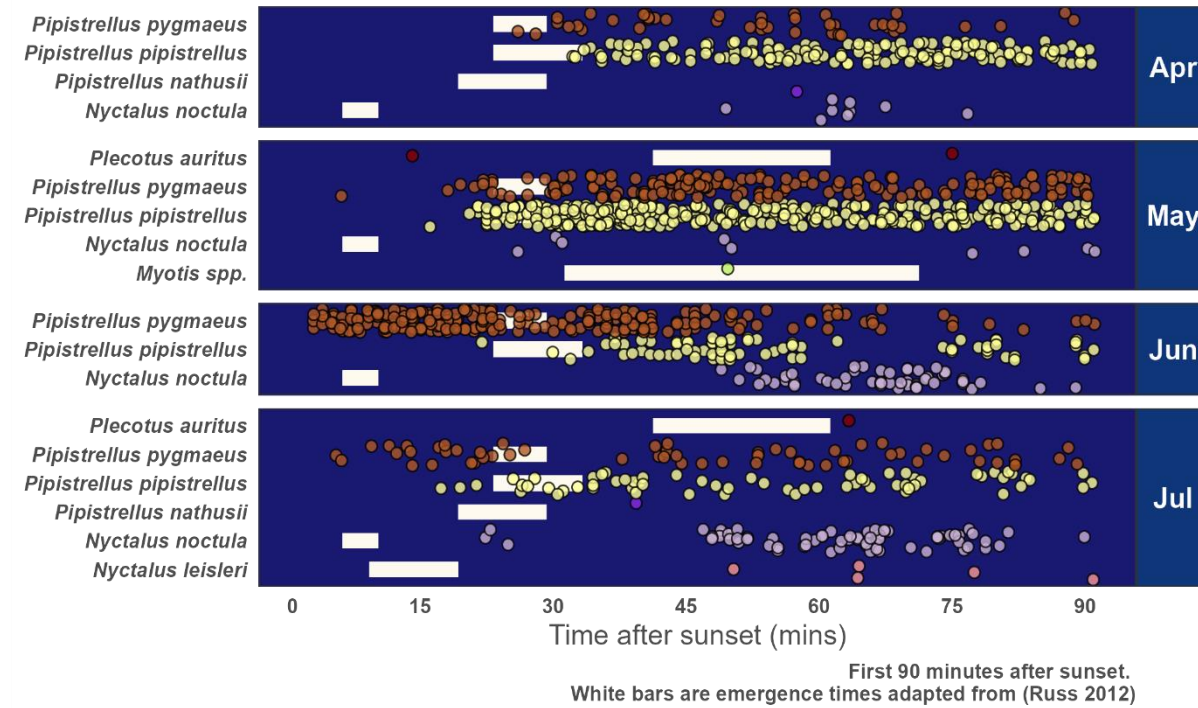
Location: MS34



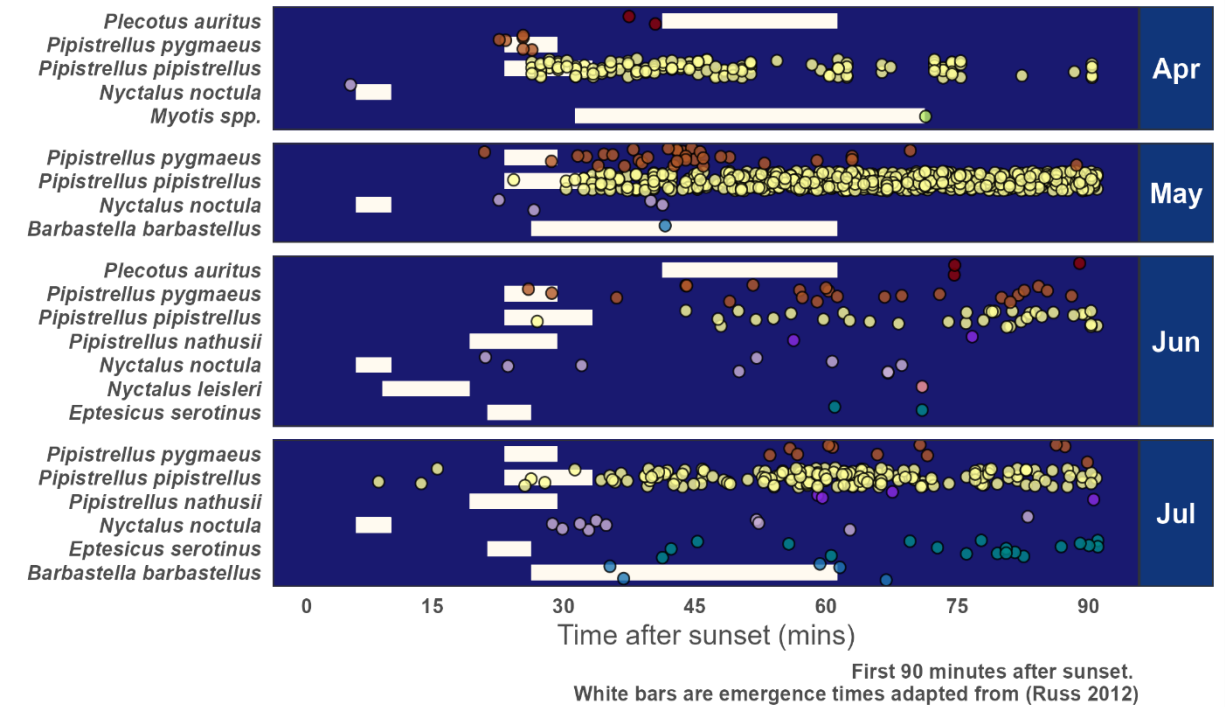
Location: MS35



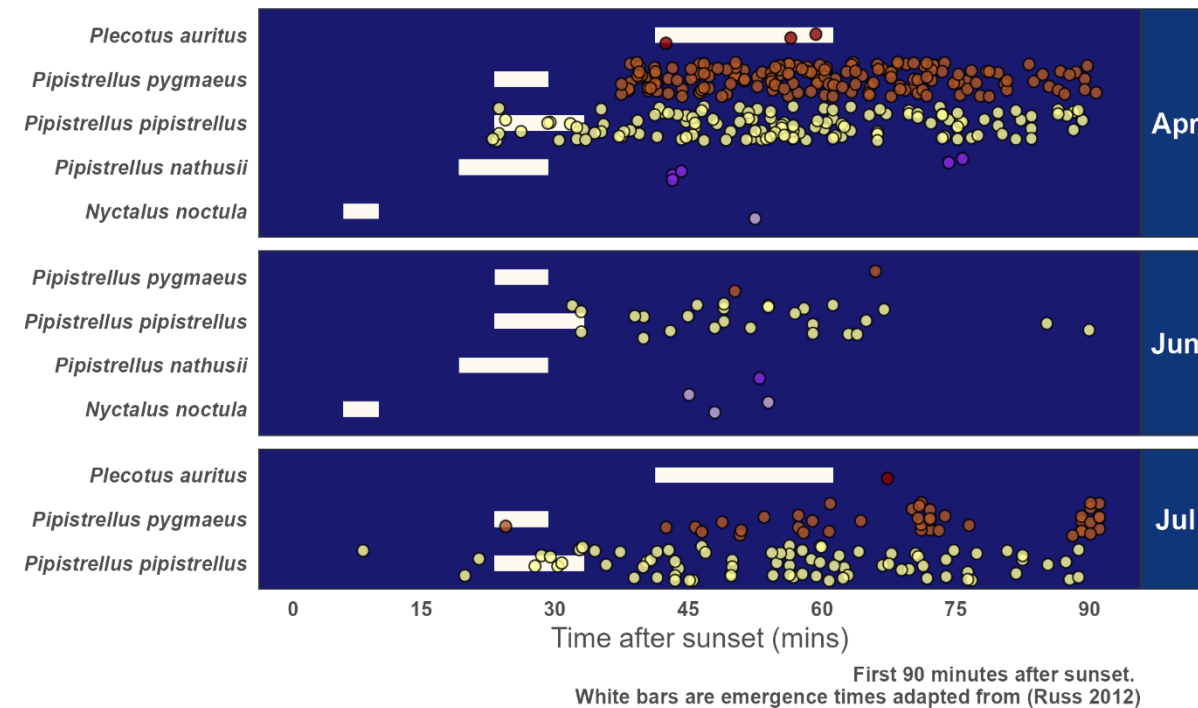
Location: MS36



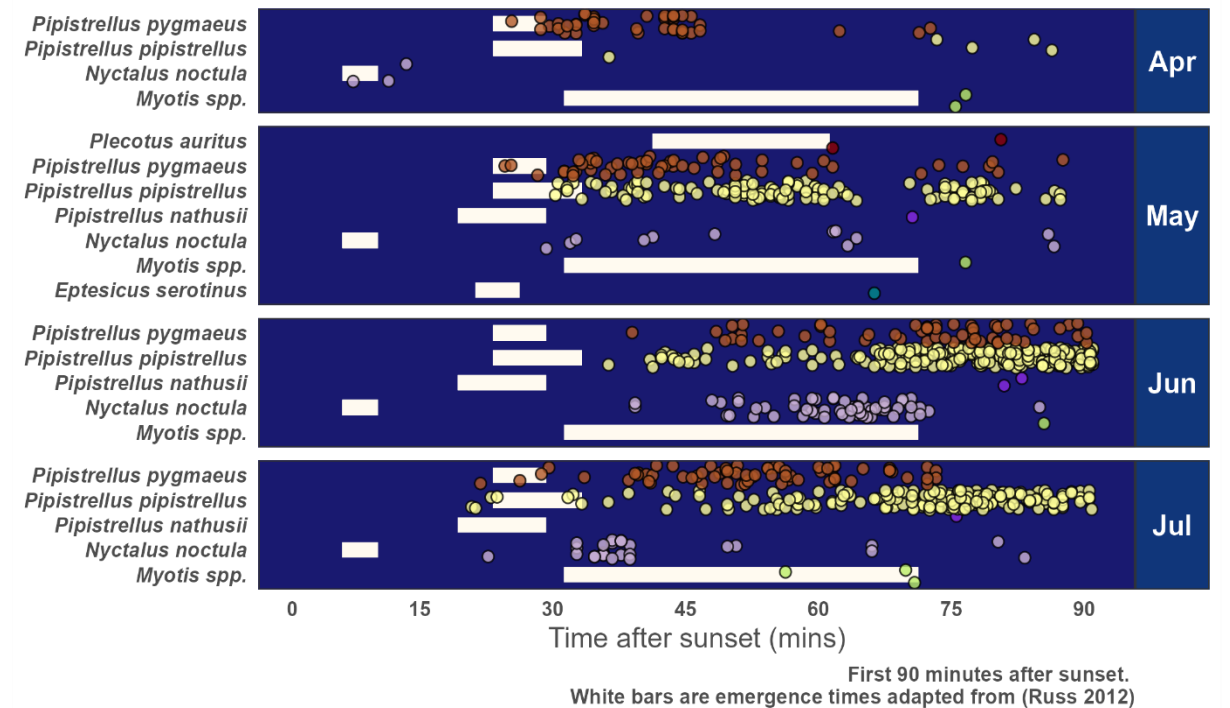
Location: S of GMW



Location: SSSI Triangle



Location: The Grove



5 DISCUSSION

5.1 Activity Levels

a) Areas with high levels of bat activity (intra site analysis)

5.1.1 The analysis of the results suggests that certain areas (and habitats) present on the main development site have higher levels of activity for bats. The most valuable areas appeared to be the following (shown on **Figure 2**), these areas have median activity levels of >50 passes per hour (during the surveys conducted to date):

- The southern edge of Goose Hill woodland adjacent to the SSSI triangle (MS20);
- North of the National Grid site (MS31);
- East of Nursery Covert woodland (MS19);
- The Western edge of Reckham Pits Wood (MS33);
- The Southern edge of The Grove woodland (MS07);
- Crossroads within Goose Hill (MS16);
- Bridleway adjacent to Fiscal Policy woodland (MS22);
- Habitat surrounding Lower Abbey Farm (MS34); and
- Upper Abbey track: north-south bridleway (MS04).

5.1.2 MS20, located within the southern edge of Goose Hill woodland adjacent to the SSSI triangle, has the highest level of activity of all the monitoring locations (83.89 bat passes per hour), however it should be noted that as the activity recorded by the static detectors has no visual component, this could be one or a small number of bats foraging repeatedly close to the detector. Other areas with the highest levels of activity were MS19 and MS31.

ii. Areas with lower levels of bat activity

5.1.3 The lowest levels of activity (those with a median pass number of <10) were recorded at the following monitoring locations:

- Southern edge of the EDF Energy Estate at the Sizewell gap (MS28)

- Junction between SSSI and Grimsey's Corner (MS29)
- Treeline / hedge leading into arable fields north of Kenton Hills (MS08)
- Stonewall Belt, running south from Ash Woods (MS32)
- Upper Abbey track: north-south bridleway (MS09)
- South of Abbey Cottage (MS17)
- Eastbridge Road and lane to Upper Abbey Farm (MS30)

iii. Areas with “rarer” bat activity

5.1.4 In addition to the areas where high levels of activity were recorded, it was important to determine which areas of the main development site are of importance due to the assemblage of bats they support (i.e. support a significant number of the rarer species of bats).

5.1.5 When the proportion of bat calls not attributed to common or soprano pipistrelles was assessed, twenty monitoring locations had a notable higher proportion of rarer bats. These locations were:

- Entrance to Lovers Lane;
- Aldhurst Farm;
- MS03 – in a small patch of woodland south of Lower Abbey Farm;
- MS05 – south-west corner of Ash Wood;
- MS06 – north-east corner of Ash Wood;
- MS07 – track between the Grove and Goose Hill;
- MS08 – on tree-line / hedge leading into arable fields north of Kenton Hills;
- MS09 – Upper Abbey track: north-south bridleway;
- MS10 – on the edge of Ash Wood;
- MS11 – crossroads within Goose Hill;
- MS12 – crossroads within Goose Hill;

- MS13 – north-west of Abbey Cottage;
- MS14 – the Bridleway adjacent to Upper Abbey Farm;
- MS15 – the Northern edge of Kenton Hills woodland;
- MS17 – south-east of Abbey Cottage;
- MS18 – Middle of Kenton Hills Woodland;
- MS25 – field south of Lover’s Lane;
- MS28 – southern edge of the EDF Energy Estate;
- MS29 – south-east edge of SSSI; and
- MS30 – Eastbridge Road and lane to Upper Abbey Farm.

5.1.6 In these areas, calls by ‘rarer’ bats made up more than 10% of the overall calls. However, it is worth noting that MS05, MS08 and MS29 had 89% soprano and common pipistrelle calls.

5.1.7 This suggests that these areas have importance for ‘rarer’ bats. These areas were therefore of value for *Nathusius pipistrelle*, *noctule*, *serotine*, *Barbastelle* and *Myotis* spp. bats.

iv. Areas where barbastelle bat activity is notable

5.1.8 The number of bat calls that can be attributed to *Barbastelle* bats (1,221) is notable. *Barbastelle* were recorded at all but five of the monitoring locations, suggesting this species is widely distributed across the Estate. The only locations where *barbastelle* were not recorded were:

- Entrance to Lovers Lane;
- MS05 (on the edge of Ash Woods);
- MS25 (to the West of Lovers Lane);
- MS27 (Between the SZB sire and Leiston Drain; and
- MS36 (South of Grimseys).

5.1.9 The location with the highest number of *Barbastelle* passes per hour (median) was MS03 with 3.78 median passes per hour. This location is to the north of the site adjacent to Lower Abbey Farm.

- 5.1.10 The level of barbastelle activity was also high (in relation to other static locations) at MS18, to the south of Kenton Hills, and MS22 (by Fiscal Policy Woodland) with a median pass rate of 1.25 and 1.36 passes per hour respectively.

v. Areas where Natterer's bat activity is notable

Overall, the level of activity of Natterer's bat across the site was low, with most locations having a median pass rate (passes per hour) of <0.3 passes per hour. The exceptions were the locations below:

- Entrance to Lovers Lane - 0.35 passes per hour of Natterer's bat (median);
- MS12 (on the edge of Goose Hill) – 0.62 passes per hour of Natterer's bat (median);
- MS14 (adjacent to Upper Abbey Farm) – 0.34 passes per hour of Natterer's bat (median);
- MS20 (edge of the SSSI triangle) - 0.38 passes per hour of Natterer's bat (median); and
- MS21 (adjacent to Leiston Old Abbey) – 0.39 passes per hour of Natterer's bat (median).

vi. Areas where bat emergence times indicate nearby roosts

- 5.1.11 This analysis is interim only and will be updated once the full suite of surveys is completed.
- 5.1.12 As visualised in **Plot 4**, common and soprano pipistrelle activity was recorded at multiple locations at the beginning of the species' emergence times, suggesting the potential for roosts nearby. Common and soprano pipistrelle are both considered to be 'common' species and previously recorded on the Estate so there is likely to be potential for there to be common and soprano pipistrelle roosts these locations.
- 5.1.13 Considering the frequency of recordings and time recorded compared to emergence times, the locations that indicated a potential nearby noctule roost are: Aldhurst Farm, MS05, MS10, MS15, MS21, MS23, MS26 and MS33. Also, the recording times for MS20 indicated a potential Nathusius pipistrelle roost nearby.
- 5.1.14 Of the 'rarest' species recorded on site, the locations that indicated a potential nearby barbastelle roost are: MS04, MS11, MS12, MS16, MS17,

MS18, MS21, MS22, MS30, MS34 and South of Great Mount Wood. Similarly, MS02, MS04, MS07, MS12, MS13, MS15, MS17, MS21, MS22, MS30 and the Grove indicated potential *Myotis* spp. roosts nearby.

- 5.1.15 However, it is difficult to determine roosting activity from static detectors alone and therefore not fully conclusive of a roost presence. This analysis will be updated once the full suite of surveys is completed.

5.2 Summary

- 5.2.1 The most important areas around the main development site for foraging bats are the woodlands throughout the Estate, including Goose Hill, Nursey Covert, Peckham Pits, The Grove woodland and the Bridleway from the Upper Abbey Track and adjacent to the Fiscal Policy woodland. Twenty of the monitoring locations had a higher proportion of rarer bats (particularly Entrance to Lovers Lane, Aldhurst Farm, MS03, MS06, MS09, MS10, MS12, MS13, MS17, MS30).
- 5.2.2 Barbastelle were recorded at most of the monitoring locations which accords with the findings of previous surveys, which recorded Barbastelle across the Estate. The site overall did record a notable number of Barbastelle records, however they only made up 0.71% of overall species recordings.
- 5.2.3 The important areas identified by the 2021 static monitoring surveys (woodlands and bridleway) are also consistent with the previous findings. The indication of potential roosts nearby to the monitoring location and the species recorded indicate the continued presence of those species previously identified as present within the estate.
- 5.2.4 Based on the bat static survey results presented in this report, the assessment of impacts on bats presented at within the **Updated Bat Impact Assessment** [\[AS-208\]](#) is unchanged.

REFERENCES

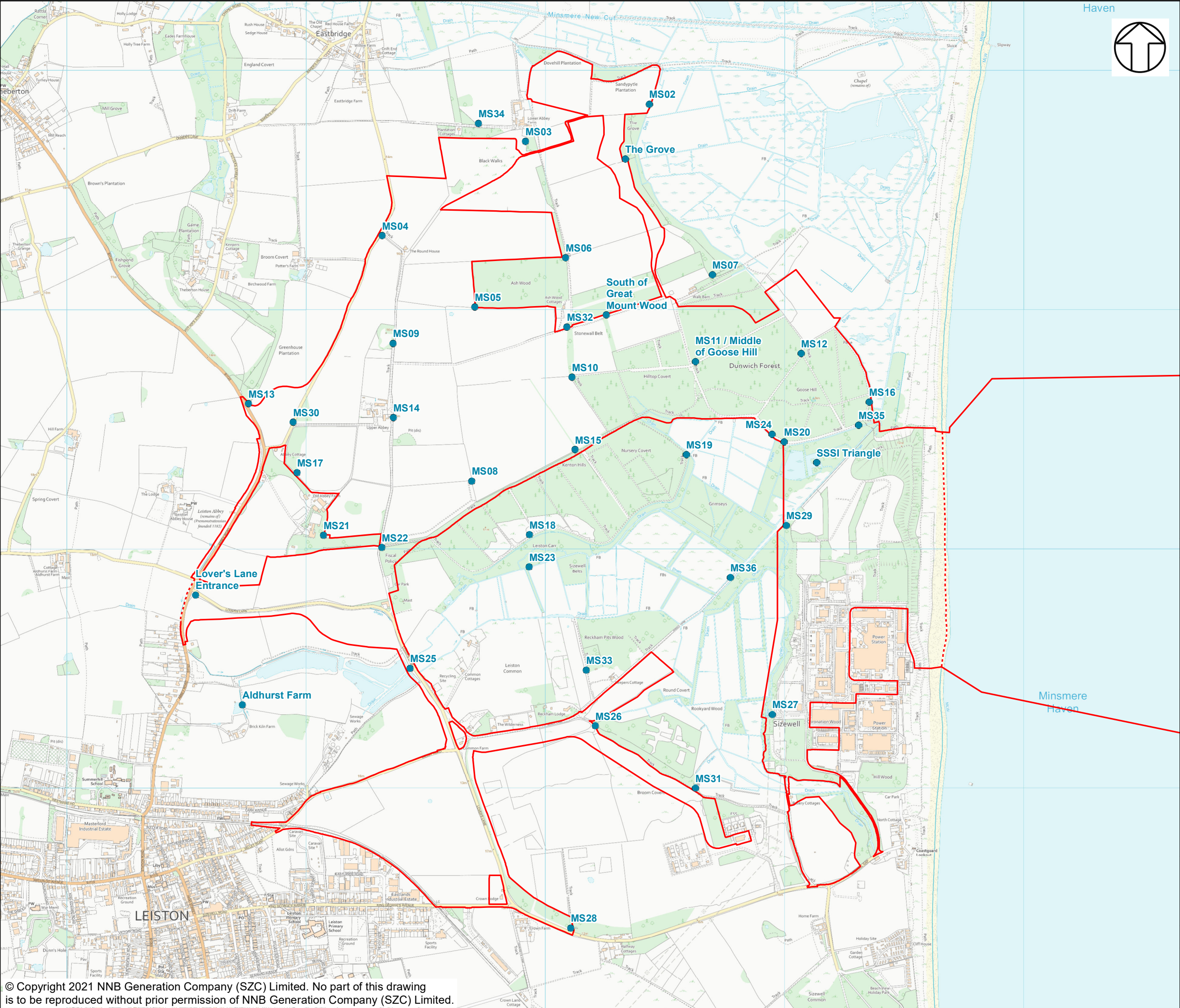
1. Wildlife and Countryside Act, as amended. 1981. (Online) Available from <http://www.legislation.gov.uk/ukpga/1981/69>
2. Statutory Instruments 2017 No. 1012. The Conservation of Habitats and Species Regulations 2017.
3. Suffolk Biodiversity Partnership. Suffolk Local Biodiversity Action Plan. May 2012. (Online). Available from: https://www.suffolkbis.org.uk/sites/default/files/biodiversity/priorityspecieshabitats/actionplans/Planning_BAP_Final%2018%20May%202012.pdf (Accessed 7 February 2019).
4. Natural Environment and Rural Communities Act. 2006. (Online). Available from: <http://www.legislation.gov.uk/ukpga/2006/16/contents>.
5. Chartered Institute of Ecology and Environmental Management. Guidelines for Ecological Impact Assessment in the United Kingdom and Ireland. Terrestrial, Freshwater, Coastal and Marine. Winchester: CIEEM, 2018
6. Collins. 2016. Bat Surveys for Professional Ecologists: Good Practice Guidelines. 3rd edition. London: The Bat Conservation Trust
7. Wray S, Wells D, Long E, Mitchell-Jones T, December 2010. Valuing Bats in Ecological Impact Assessment, IEEM In-Practice p 23-25.

APPENDIX A: EXAMPLE SM4 PROGRAMMING PARAMETERS

SM4 default settings

Deployment Scenario		Reason
SM4BAT-FS		
Start dd/mm/yy hh:mm:ss	Ignore	
Slot A	128GB	
Slot B	128GB	
Mic O:	SMM-U1	
Trig Ratio (%)	10% (default)	
Battery (Wh)	72 Wh (default)	
Setting		
Prefix	SM4-FS-001 (to 030)	
Gain	12dB	
Timezone	UTC+01 (= BST. Need to change to UTC when the clock go back)	
Lat	xx.xxN	Add appropriate value
Lon:	yy.yyW	Add appropriate value
16 kHz HPF	Off	
Sample rate	256kHz	
Call duration min	0.5ms	
Call duration max	Off	
Call frequency min	10kHz (default is 16kHz)	
Trigger level	Use default (12dB)	
Trigger window	3s	
Trigger max time	00:15	
Sunrise/sunset		
LED delay off		
Schedule		
Start	Set – 00:30	
Duty	always	
End	Rise + 00:30	

FIGURES



NOTES

KEY

- MAIN DEVELOPMENT SITE BOUNDARY
- - - DEMARCATION LINE
- STATIC MONITORING LOCATIONS

NOT PROTECTIVELY MARKED

COPYRIGHT
Reproduced from Ordnance Survey map with the permission of Ordnance Survey on behalf of the controller of Her Majesty's Stationary Office © Crown Copyright (2021). All Rights reserved. NNB GenCo 0100060408.

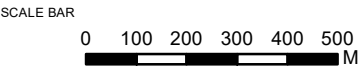


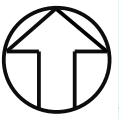
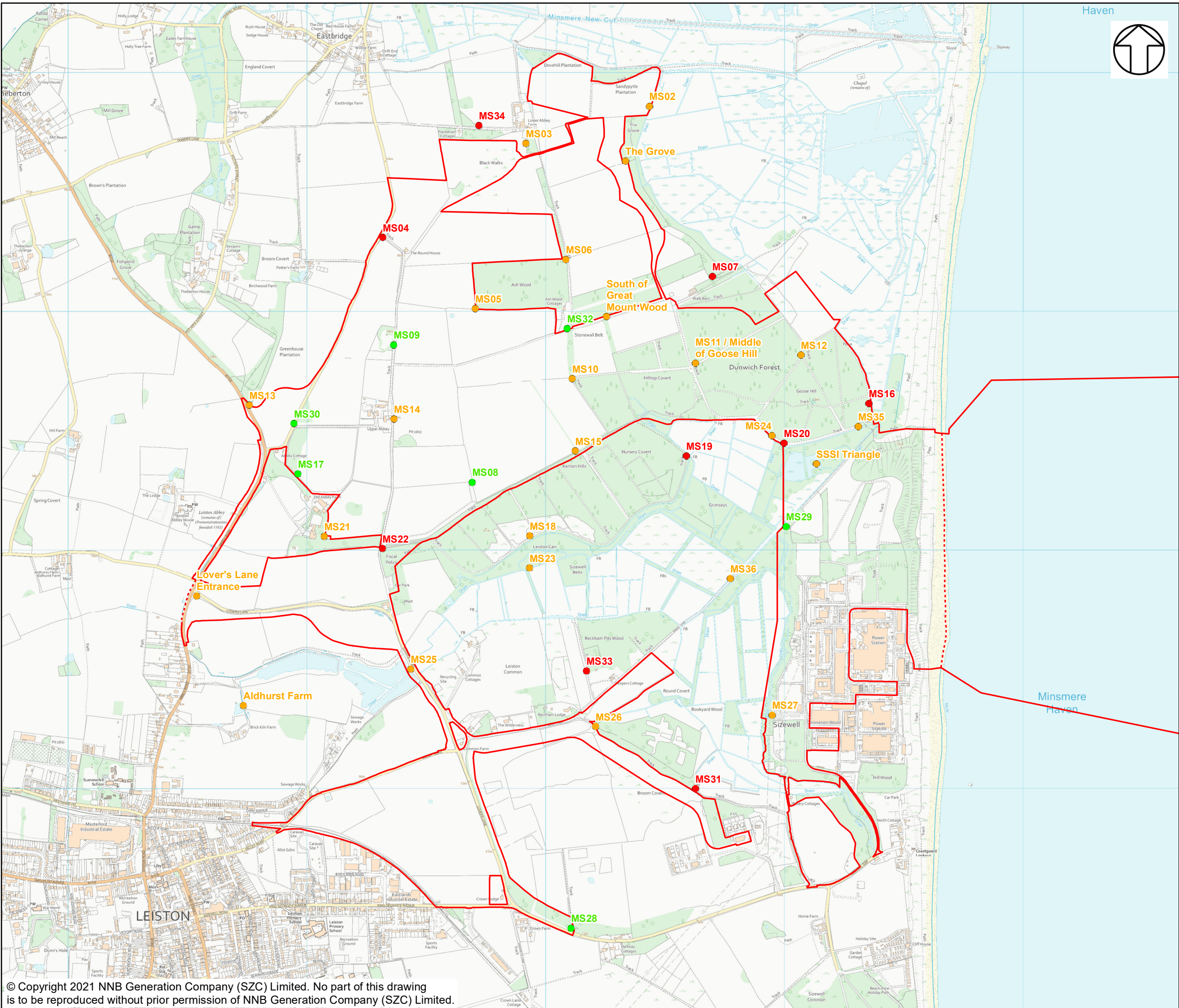
DOCUMENT:
SIZEWELL C
STATIC DETECTOR BAT SURVEY REPORT

DRAWING TITLE:
FIGURE 1 - STATIC MONITORING LOCATIONS 2021

DRAWING NO:
FIGURE 1

DATE: SEPT 2021 DRAWN: R.C. SCALE: 1:15,000 @A3





NOTES

KEY

- MAIN DEVELOPMENT SITE BOUNDARY
- - - DEMARCATION LINE
- ACTIVITY LEVEL
 - HIGH
 - MODERATE
 - LOW

NOT PROTECTIVELY MARKED

COPYRIGHT
Reproduced from Ordnance Survey map with the permission of Ordnance Survey on behalf of the controller of Her Majesty's Stationary Office © Crown Copyright (2021). All Rights reserved. NNB GenCo 0100060408.



DOCUMENT:
SIZEWELL C
STATIC DETECTOR BAT SURVEY REPORT

DRAWING TITLE:
FIGURE 2 - BAT ACTIVITY LEVELS 2021

DRAWING NO:
FIGURE 2

DATE:
SEPT 2021

DRAWN:
R.C.

SCALE:
1:15,000 @A3

SCALE BAR

