

BAT TRANSECT AND AUTOMATED SURVEY REPORT

LAND NORTH OF A47 NORMANDY WAY AND
WEST OF A447 ASHBY ROAD, HINCKLEY

ON BEHALF OF

RICHBOROUGH

REFERENCE: ZEL_477

DATE: JUNE 2024

V1

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Report Data	
Report Title	Bat Transect and Automated Survey Report
Report Reference	ZEL_477
Client	Richborough
Site	Land north of A47 Normandy Way and west of A447 Ashby Road, Hinckley
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V1	Bat Transect and Automated Survey Report	E. Seaton	28 June 2024

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Where any appraisal is based upon information provided by third parties, it is assumed that this information is relevant, correct and complete; there has been no independent verification of information obtained from third parties unless otherwise stated. Where field investigations have been carried out these have been appropriate to the agreed scope of works and carried out to a level of detail required to achieve the stated objectives.

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EXECUTIVE SUMMARY

- A Preliminary Ecological Appraisal (including 2km data search) was undertaken of the land north of A47 Normandy Way and west of A447 Ashby Road, Hinckley on 10 July 2023. (see Zebra Ecology, 2021). This survey confirmed the site to hold low suitability for commuting and foraging bats (with reference to Collins, 2016). Seasonal surveys were therefore undertaken to confirm the levels of bat activity at the site.
- The site was divided into three transect routes, with surveys completed on 20 July 2023, 10 October 2023 and 14 May 2024. These surveys were supported by five static automated bat detectors (Song Metre Mini Bat) that were left on site for five consecutive nights between 20-25 July 2023, 10-15 October 2023 and 14-19 May 2024.
- Occasional bat activity was recorded during the walked transect surveys from at least five species: common pipistrelle, soprano pipistrelle, brown long-eared bat and big bat. *Myotis* sp. being detected during automated surveys. The majority of activity recorded was from common pipistrelle (>90% across automated surveys).
- The site has been assessed to be of 'district, parish or local importance' for commuting and foraging common pipistrelle, soprano pipistrelle, brown long-eared bat and *Myotis* sp. and big bat sp. (with reference to Wray et al., 2000).
- A scheme of mitigation, compensation and enhancement will be delivered via a future Ecological Mitigation & Enhancement Strategy and Landscape and Ecological Mitigation & Management Plan (LEMP). The following will form key elements of these plan:
 - A sensitive scheme of night-lighting to specifically minimise nocturnal illumination of retained wildlife habitats.
 - Retention and protection of mature deciduous trees and hedgerows (excluding to facilitate access) within future development and landscaping proposals to retain connectivity within the wider landscape. All retained trees and hedgerows to be afforded adequate protection in line with 'BS5837: 2012 Trees in relation to design, demolition and construction'.
 - Retention and buffering of boundary hedgerows to ensure bat populations are not isolated from the wider countryside.
 - Bolstering of existing hedgerows i.e. H20 (12 trees to be added) and creation of additional native hedgerows planted in a two-staggered row to improve connectivity across the site. Additional tree planting along existing hedgerows to also improve their capacity to facilitate bat dispersal across the site.

- Specific management of retained habitat areas (e.g. mature trees, hedgerows, field margins) to maximise wildlife value.
 - Planting of 214 new native trees. Total of 1.07km of native species-rich hedgerow with trees proposed.
 - Species-rich (minimum 9 species per m²) wildflower meadow areas / strips to be created across the site totalling 3.05ha.
 - Inclusion of a variety of flowering plants with a range of colours, fragrances and shapes within the landscape planting to attract a diverse food source for foraging bats. Further advice and guidance of bat-friendly gardening has been provided by the Bat Conservation Trust (2015).
 - New roosting provision in the form of crevice and hollow boxes to increase roosting opportunity post-development. Incorporation of bat ridge and slope access tiles within 20% of proposed units.
 - Management prescriptions to ensure the implementation of the above mitigation, compensation and enhancement measures, ongoing ecological maintenance of retained habitats and aftercare of all important ecological features.
- Provided that an appropriate scheme of mitigation, compensation and enhancement measures is provided, it will be possible to maintain the '*favourable conservation status*' of the local bat population.

1.0 INTRODUCTION

Site Location and Summary

- 1.1 Zebra Ecology Ltd were commissioned by Richborough Estates Ltd. to undertake nocturnal bat activity surveys of the land west of Ashby Road and north of Normandy Way (A47), Hinckley, Leicestershire (centred on Ordnance Survey grid reference SP 427 959).
- 1.2 The site is approximately 16ha in area and comprises species-poor modified grassland (cattle-grazed fields) with occasional scattered trees. The fields are bound by a combination of species-rich and native hedgerows. A tributary of Tweed River runs off-site along the western boundary. The application site boundary is shown in Figure 1.



Figure 1: Application Site Boundary

- 1.3 Planning consent is being sought from Hinckley and Bosworth Council for an 'Outline planning application with all matters reserved except for access, for the erection of up to 415 dwellings, associated open space, drainage, landscaping and infrastructure'.

Survey Objectives

- 1.4 The objectives of the survey were to:
 - Carry out nocturnal bat activity surveys based on the previously identified suitability of the on-site habitats for commuting and foraging bats in line with best practice guidelines (Collins, 2016; Mitchell Jones, 2016);
 - Where bats are present, identify the species involved and where possible the levels and distribution of activity;
 - Identify to identify appropriate avoidance, mitigation, compensation and enhancement measures as required to demonstrate compliance with the 'mitigation

hierarchy' and requirements of local and National biodiversity policies (e.g. S.40 of the NERC Act 2006, NPPF etc).

2.0 METHODOLOGY

Desk Study

- 2.1 A third-party data search was undertaken to attain biological records from Leicestershire and Rutland Environment Records Centre (LRERC) during July 2023 to identify any bat records within a 2km radius of SP 42751 95935.

Transect Surveys

- 2.2 The nocturnal surveys were completed by licensed and/or appropriately experienced ecologists using a range of full spectrum bat detectors. Two transect routes were designed to ensure that all habitats with the potential to be used by commuting and foraging bats were adequately covered. All bat activity observed during the surveys was recorded and the time and species noted. The weather conditions were also recorded for each visit. A plan of the transect route was used by each surveyor to show bat flight lines. Dusk emergence surveys commenced at sunset and continued for 120 minutes. Details of the surveys, timings, surveyors and equipment can be seen in Table 2:

Table 1: Details of Survey Parameters

Date	Weather Conditions	Start / Finish Times	Surveyors & Licence Number (if applicable)	Equipment
20 July 2023	Temperature: 18°C Wind (Beaufort): 0 Cloud Cover: 20% Precipitation: none	21:16 – 23:16 (sunset: 21:16)	E. Seaton (2015-15098-CLS-CLS) A. Woodman (2021-50870-CLS-CLS) A. Elliott (2021-49562-CLS-CLS)	Anabat Walkabout x 2 EM Touch 2 Pro x 1
10 October 2023	Temperature: 13°C Wind (Beaufort): 0 Cloud Cover: 100% Precipitation: none	18:23 – 20:23 (sunset: 18:23)	E. Seaton (2015-15098-CLS-CLS) A. Woodman (2021-50870-CLS-CLS) C. Needham (2016-23451-CLS-CLS)	Anabat Walkabout x 2 EM Touch 2 Pro x 1
14 May 2024	Temperature: 16°C Wind (Beaufort): 0 Cloud Cover: 80% Precipitation: none	20:55 – 22:55 (sunset: 20:55)	E. Seaton (2015-15098-CLS-CLS) A. Elliott (2021-49562-CLS-CLS) D. Howgego (n/a)	Anabat Walkabout x 2 EM Touch 2 Pro x 1

Automated Surveys

- 2.3 Five automated static bat detectors were left on site for five nights between 20 July & 25 July 2023, 10 October & 15 October 2023 and 14 May & 19 May 2024. All automated bat detectors deployed were Song Meter Minis (Bat) affording Zero Crossing and Full Spectrum recording. Detectors were located along likely commuting routes or directed towards foraging habitats. Recordings were analysed using AnaLook Insight software.

Limitations

- 2.4 The detection of activity is biased towards bat species that have louder echolocation calls. Species such as the brown long eared bat *Plecotus auritus* that produce very quiet calls may be under recorded as a result. However, visual cues indicating the presence of quiet calling species were noted to reduce this limitation.
- 2.5 It is not always possible to identify all bats to species level using sound analysis techniques. For example, the calls of *Myotis* species can demonstrate a large number of overlapping parameters making species level identification difficult. In this situation, bats have been identified as *Myotis* sp.

Assessment

- 2.6 The ecological value of bat foraging habitat and commuting corridors was assessed using the system of Wray *et al* (2010) in line with the CIEEM Guidelines for Ecological Impact Assessment (2006). The categorisation of bats in England by distribution and rarity (adapted from Wray et al., 2010) are shown in Tables 2:

Table 2: Rarity of bat species within England

Rarity within range (England)	Species
Rarest (population under 10,000)	Greater horseshoe bat <i>Rhinolophus ferrumequinum</i> Bechstein's bat <i>Myotis bechsteinii</i> Alcathoe's bat <i>Myotis alcathoe</i> Greater mouse-eared bat <i>Myotis myotis</i> Barbastelle <i>Barbastella barbastellus</i> Grey long-eared bat <i>Plecotus austriacus</i>
Rarer (population 10,000 to 100,000)	Lesser horseshoe bat <i>Rhinolophus hipposideros</i> Whiskered bat <i>Myotis mystacinus</i> Brandt's bat <i>Myotis brandtii</i> Daubenton's bat <i>Myotis daubentonii</i> Natterer's bat <i>Myotis nattereri</i> Leisler's bat <i>Nyctalus leisleri</i> Noctule <i>Nyctalus noctule</i> Serotine <i>Eptesicus serotinus</i>
Common (population over 100,000)	Common pipistrelle <i>Pipistrellus pipistrellus</i> Soprano pipistrelle <i>Pipistrellus pygmaeus</i> Brown long-eared bat <i>Plecotus auritus</i>

Table 3: Method for evaluating importance of commuting / foraging habitat

Species (A)	Number of Bats (B)	Roosts/potential roosts nearby (C)	Type and complexity of linear features (D)	Foraging habitat characteristics (E)
Common (2)	Individual bats (5)	None (1)	Absence of (other) linear features (1)	Industrial or other site without established vegetation (1)
		Small number (3)	Unvegetated fences and large field sizes (2)	Suburban areas or intensive arable land (2)
Rarer (5)	Small number of bats (10)	Moderate number / Not known (4)	Walls, gappy or flailed hedgerows, isolated well grown hedgerows, and moderate field sizes (3)	Isolated woodland patches, less intensive arable and/or small towns and villages (3)
		Large number of roosts, or close to a SSSI for the species (5)	Well-grown and well-connected hedgerows, small field sizes (4)	Larger or connected woodland blocks, mixed agriculture, and small villages/hamlets (4)
Rarest (20)	Large number of bats (20)	Close to or within a SAC for the species (20)	Complex network of mature well-established hedgerows, small fields and rivers/streams (5)	Mosaic of pasture, woodlands and wetland areas (5)

Table 4: Level of importance of commuting / foraging habitat

Geographic frame of reference	Score
Not Important	1-10
District, Local or Parish	11-20
County	21-30
Regional	31-40
National / UK	41-50
International	>50

3.0 RESULTS

Desk Study

- 3.1 The third-party data search returned records from common pipistrelle, soprano pipistrelle, brown long-eared bat, whiskered bat, Daubenton's, Natterer's, *Myotis* sp., noctule, Leisler's and barbastelle within 2km of the application site.

Nocturnal Survey

- 3.2 A summary of the results of each transect survey is provided below. This should be read in conjunction with the Bat Activity Plans (see Appendix A) recording bat locations. Two transect routes covered the site.

Transect Survey I (20 July 2023)

- 3.3 The survey commenced at 21:16. The most frequently recorded bat species was common pipistrelle, with 36 passes during the survey across all three transect routes. Four *Nyctalus* sp. were recorded at 22:14, 22:33 and 22:56 (two locations). No other species were detected. Bat passes were distributed relatively evenly across the site. The survey finished at 23:16.

Transect Survey II (10 October 2023)

- 3.4 The survey commenced at 18:23. The most frequently recorded bat species was common pipistrelle, with 24 passes during the survey. A *Myotis* sp. was detected at the south of the site at 18:48, followed by big bat at the east of the site at 18:53 and serotine at the west of the site at 19:05. Activity was concentrated at the west of the site. The survey finished at 20:23.

Transect Survey III (14 May 2024)

- 3.5 The survey commenced at 20:55. The only recorded bat species was common pipistrelle, with 17 passes during the survey. Bat passes were distributed relatively evenly across the site. The survey finished at 22:55.

Table 5: Summary of Survey Results for Transect 1 (yellow)

Species	Number of Passes			Total no. of passes
	July 2023 Survey I	October 2023 Survey II	May 2024 Survey III	
Common pipistrelle	14	7	8	29
Soprano pipistrelle	0	0	0	0
Brown long-eared bat	0	0	0	0
<i>Myotis</i> sp.	0	0	0	0
Big bat sp.	1	1	0	2

Total no. of passes	15	8	8	31
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Table 6: Summary of Survey Results for Transect 2 (red)

Species	Number of Passes			Total no. of passes
	July 2023 Survey I	October 2023 Survey II	May 2024 Survey III	
Common pipistrelle	10	4	6	20
Soprano pipistrelle	0	0	0	0
Brown long-eared bat	0	0	0	0
<i>Myotis</i> sp.	0	1	0	1
Big bat sp.	2	0	0	2
Total no. of passes	12	5	6	23

Table 7: Summary of Survey Results for Transect 3 (blue)

Species	Number of Passes			Total no. of passes
	July 2023 Survey I	October 2023 Survey II	May 2024 Survey III	
Common pipistrelle	11	13	3	27
Soprano pipistrelle	0	0	0	0
Brown long-eared bat	0	0	0	0
<i>Myotis</i> sp.	0	0	0	0
Big bat sp.	1	1	0	2
Total no. of passes	12	14	3	29

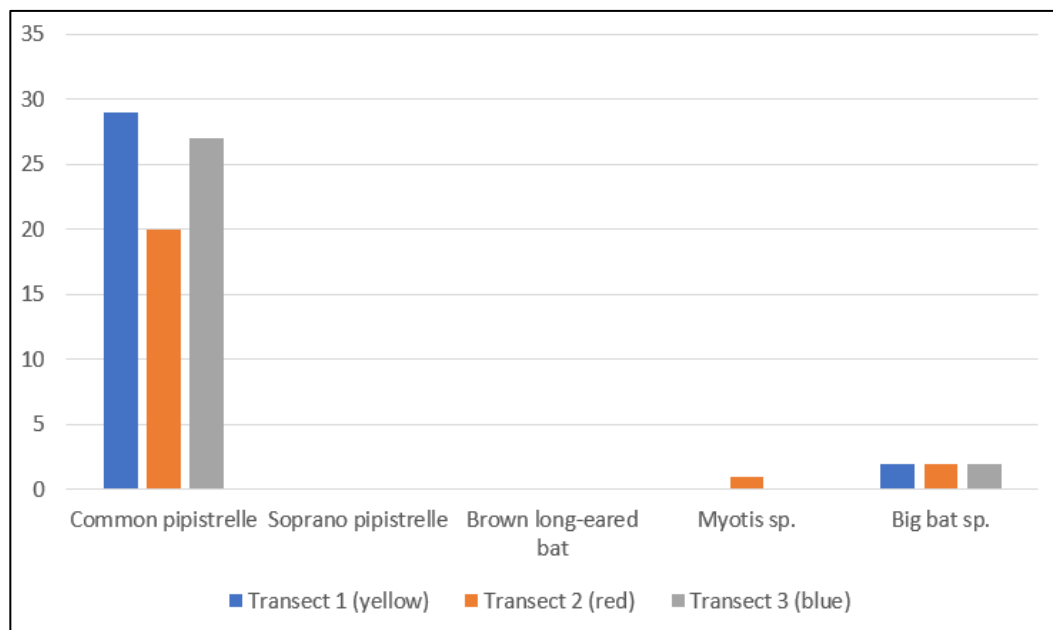


Figure 2: Bar chart showing the total number of passes for each bat species (y-axis) recorded on each transect route from combined surveys undertaken during July 2023, October 2023 and May 2024.

Automated Survey

- 3.6 Five automated static bat detectors (Song Meter Mini Bat) were left on site for five consecutive nights per survey per month. Locations can be seen within Appendix A. A summary of the results of each static survey is provided below:

Detector 1

- 3.7 A total of 8091 recordings were made by detector 1. Common pipistrelle was the most frequently recorded species accounting for 99% of the activity.

Table 8: Summary of Survey Results recorded by Detector 1

Species	Total Number of Passes			Total
	20 – 25 July 2023 Survey I	10 – 15 October 2023 Survey II	14 – 19 May 2024 Survey III	
Common pipistrelle	270	4938	2796	8004
Soprano pipistrelle	0	0	45	45
Brown long-eared bat	7	10	4	21
Myotis sp.	3	1	0	4
Big bat sp.	4	10	3	17
Total	284	4959	2848	8091

Detector 2

- 3.8 A total of 5912 recordings were made by the detector 2. Common pipistrelle was the most frequently recorded species accounting for 97% of the activity.

Table 9: Summary of Survey Results recorded by Detector 2

Species	Total Number of Passes			Total
	20 – 25 July 2023 Survey I	10 – 15 October 2023 Survey II	14 – 19 May 2024 Survey III	
Common pipistrelle	2623	3080	59	5762
Soprano pipistrelle	3	0	0	3
Brown long-eared bat	8	1	0	9
<i>Myotis</i> sp.	1	2	0	3
Big bat sp.	25	110	0	135
Total	2660	3193	59	5912

Detector 3

- 3.9 A total of 640 recordings were made by detector 3. Common pipistrelle was the most frequently recorded species accounting for 90% of the activity.

Table 10: Summary of Survey Results recorded by Detector 3

Species	Total Number of Passes			Total
	20 – 25 July 2023 Survey I	10 – 15 October 2023 Survey II	14 – 19 May 2024 Survey III	
Common pipistrelle	167	260	148	575
Soprano pipistrelle	0	0	3	3
Brown long-eared bat	2	1	0	3
<i>Myotis</i> sp.	6	1	0	7
Big bat sp.	25	19	8	52
Total	200	281	159	640

Detector 4

- 3.10 A total of 1314 recordings were made by detector 4. Common pipistrelle was the most frequently recorded species accounting for 93% of the activity.

Table 11: Summary of Survey Results recorded by Detector 4

Species	Total Number of Passes			Total
	20 – 25 July 2023 Survey I	10 – 15 October 2023 Survey II	14 – 19 May 2024 Survey III	
Common pipistrelle	208	145	868	1221
Soprano pipistrelle	4	2	0	6
Brown long-eared bat	30	12	2	44
<i>Myotis</i> sp.	1	0	0	1
Big bat sp.	4	14	24	42
Total	247	173	894	1314

Detector 5

- 3.11 A total of 3105 recordings were made by detector 4. Common pipistrelle was the most frequently recorded species accounting for 99% of the activity.

Table 12: Summary of Survey Results recorded by Detector 5

Species	Total Number of Passes			Total
	20 – 25 July 2023 Survey I	10 – 15 October 2023 Survey II	14 – 19 May 2024 Survey III	
Common pipistrelle	101	287	2677	3065
Soprano pipistrelle	0	0	8	8
Brown long-eared bat	3	6	2	11
<i>Myotis</i> sp.	0	1	1	2
Big bat sp.	2	15	4	21
Total	106	309	2692	3107

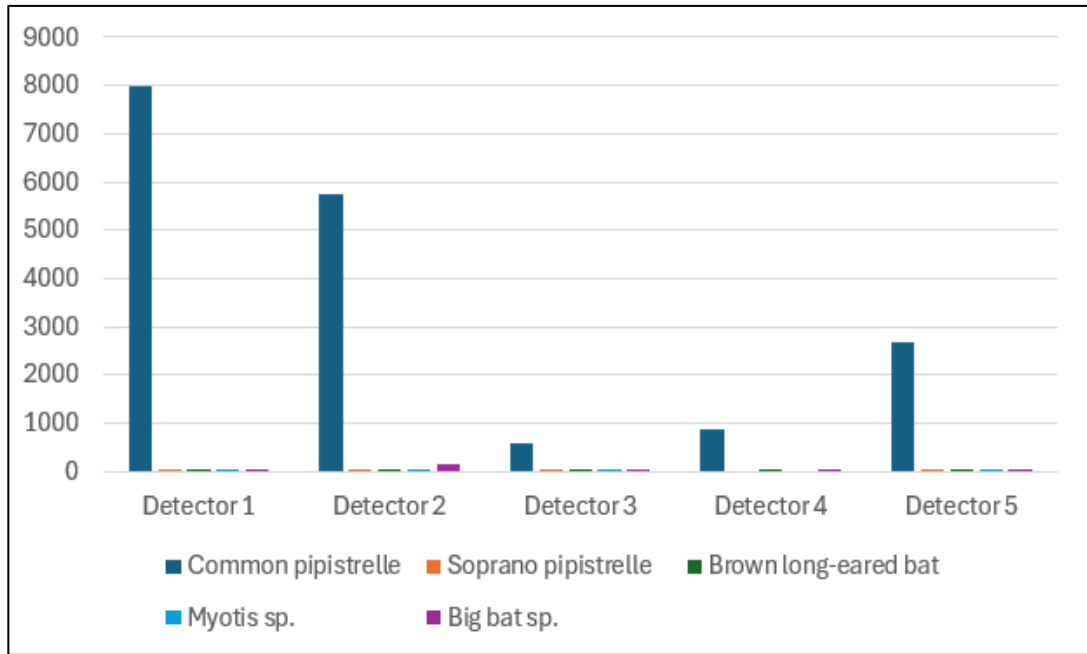


Figure 3: Bar chart showing the total number of passes for each bat species (y-axis) recorded by static detectors for each static location from combined surveys undertaken during July 2023, October 2023 and May 2024.

4.0 SITE ASSESSMENT AND RECOMMENDATIONS

Value of bat foraging and commuting habitat

- 4.1 The ecological value of bat foraging habitat and commuting corridors at the Land at Hinckley North has been assessed using the system of Wray *et al* (2010) in line with the CIEEM Guidelines for Ecological Impact Assessment (2006)¹.

Table 13: The value of site for commuting bats.

Species rarity (A)	Estimate of numbers (B)	Roosts / potential roosts nearby (C)	Type & complexity of linear features (D)	Total Score (A+B+C+D)	Commuting Value
Common pipistrelle (2)	Small number of bats (10)	Small number (3)	Walls, gappy or flailed hedgerows, isolated well-grown hedgerows, and moderate field sizes (3)	18	District, local or parish (Score 11 - 20)
Soprano pipistrelle (2)	Individual bats (5)	Not known (4)	Walls, gappy or flailed hedgerows, isolated well-grown hedgerows, and moderate field sizes (3)	14	District, local or parish (Score 11 - 20)
Brown long-eared bat (2)	Individual bats (5)	Small number (3)	Walls, gappy or flailed hedgerows, isolated well-grown hedgerows, and moderate field sizes (3)	13	District, local or parish (Score 11 - 20)
Myotis sp. (5)	Individual bats (5)	Small number (3)	Walls, gappy or flailed hedgerows, isolated well-grown hedgerows, and moderate field sizes (3)	16	District, local or parish (Score 11 - 20)
'Big Bats' (5)	Individual bats (5)	Not known (4)	Walls, gappy or flailed hedgerows, isolated well-grown hedgerows, and moderate field sizes (3)	17	District, local or parish (Score 11 - 20)

Table 14: The value of site for foraging bats.

Species rarity (A)	Estimate of numbers (B)	Roosts / potential roosts nearby (C)	Type & complexity of foraging features (E)	Total Score (A+B+C+E)	Foraging Value
Common pipistrelle (2)	Small number of bats (10)	Small number (3)	Surburban areas or intensive arable land (2)	17	District, local or parish (Score 11 - 20)
Soprano pipistrelle (2)	Individual bats (5)	Not known (4)	Surburban areas or intensive arable land (2)	13	District, local or parish (Score 11 - 20)
Brown long-eared bat (2)	Individual bats (5)	Small number (3)	Surburban areas or intensive arable land (2)	12	District, local or parish (Score 11 - 20)

¹ The CIEEM Guidelines for Ecological Impact Assessment have since been updated (2018). However, the category system described within Wray *et al*. remains the most effective assessment of foraging and commuting value in current guidelines.

Myotis sp. (5)	Individual bats (5)	Small number (3)	Suburban areas or intensive arable land (2)	15	District, local or parish (Score 11 - 20)
'Big Bats' (5)	Individual bats (5)	Not known (4)	Suburban areas or intensive arable land (2)	16	District, local or parish (Score 11 - 20)

Conclusion and Impacts

- 4.2 Activity recorded during all transect surveys was generally low with the majority of activity being from common pipistrelle. The majority of boundary hedgerows are to be retained and enhanced as part of the development proposal and secured as part of a future Landscape & Ecological Management Plan (see below).

Mitigation & Enhancement Strategy

- 4.3 A scheme of mitigation, compensation and enhancement should be delivered via a future Ecological Mitigation & Enhancement Strategy and / or Landscape & Ecological Management Plan. The following are anticipated to form key elements of this plan:
- A sensitive scheme of night-lighting to specifically minimise nocturnal illumination of retained wildlife habitats.
 - Retention and protection of mature deciduous trees and hedgerows (excluding to facilitate access) within future development and landscaping proposals to retain connectivity within the wider landscape. All retained trees and hedgerows to be afforded adequate protection in line with 'BS5837: 2012 Trees in relation to design, demolition and construction'.
 - Retention and buffering of boundary hedgerows to ensure bat populations are not isolated from the wider countryside.
 - Bolstering of existing hedgerows i.e. H20 (12 trees to be added) and creation of additional native hedgerows planted in a two-staggered row to improve connectivity across the site. Additional tree planting along existing hedgerows to also improve their capacity to facilitate bat dispersal across the site.
 - Specific management of retained habitat areas (e.g. mature trees, hedgerows, field margins) to maximise wildlife value.
 - Planting of 214 new native trees. Total of 1.07km of native species-rich hedgerow with trees proposed.
 - Species-rich (minimum 9 species per m²) wildflower meadow areas / strips to be created across the site totalling 3.05ha.
 - Inclusion of a variety of flowering plants with a range of colours, fragrances and shapes within the landscape planting to attract a diverse food source

for foraging bats. Further advice and guidance of bat-friendly gardening has been provided by the Bat Conservation Trust (2015).

- New roosting provision in the form of crevice and hollow boxes to increase roosting opportunity post-development. Incorporation of bat ridge and slope access tiles within 20% of proposed units.
- Management prescriptions to ensure the implementation of the above mitigation, compensation and enhancement measures, ongoing ecological maintenance of retained habitats and aftercare of all important ecological features.

Conclusion

- 4.4 Provided that an appropriate scheme of mitigation, compensation and enhancement measures is provided (see above), it will be possible to maintain the '*favourable conservation status*' of the local bat population.

5.0 REFERENCES

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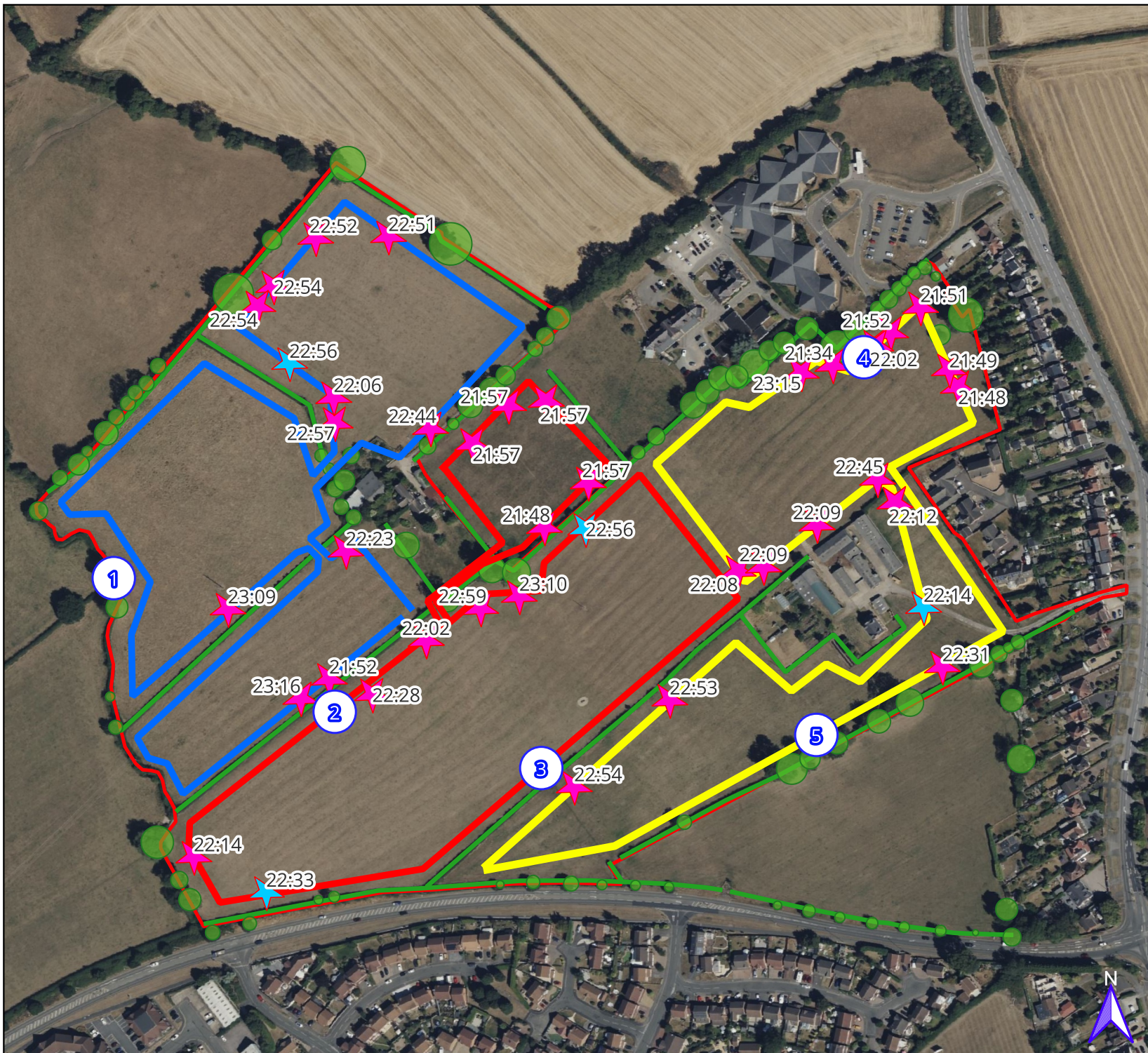
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APPENDIX A

Bat Transect Plan I – 20 July 2023

Bat Transect Plan II – 10 October 2023

Bat Transect Plan III – 14 May 2024



- Static Locations
- Big Bat
- Common pipistrelle
- Red Transect
- Yellow Transect
- Blue Transect
- Trees
- Hedgerows
- Application Site Boundary



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PROJECT

Land to the west of Ashby Road and North of
Normandy Way (A47), Hinckley, Leicestershire

DRAWING TITLE

Bat Transect Activity Map 1

CLIENT

Richborough Estates Ltd

DATE

20 July 2023

DRAWING NUMBER

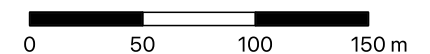
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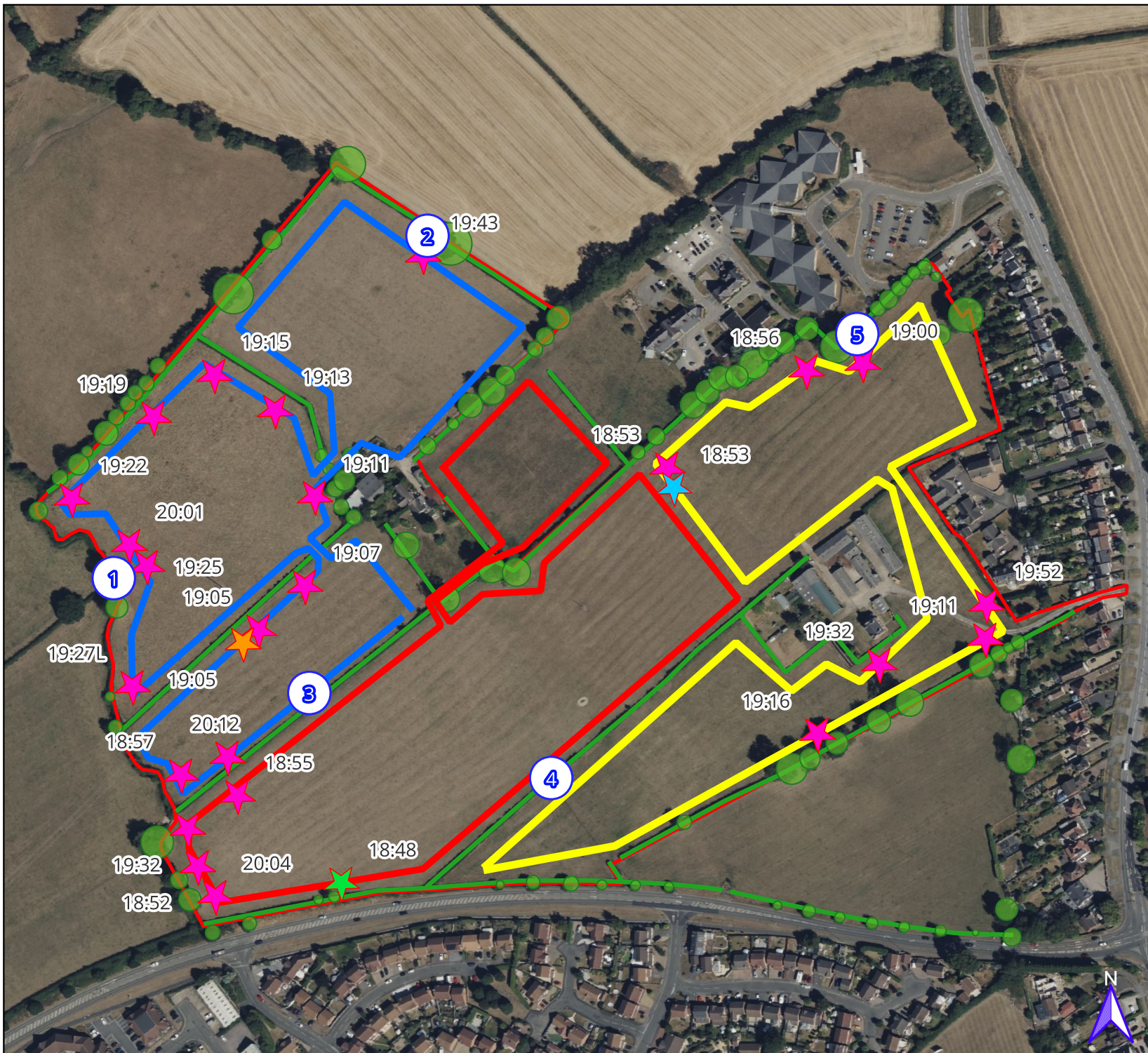
VERSION

1

DRAWN BY

A. Elliott





- Static Locations
- Application Site Boundary
- Serotine
- Myotis sp.
- Big Bat
- Common pipistrelle
- Red Transect
- Yellow Transect
- Blue Transect
- Trees
- Hedgerows



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PROJECT

Land to the west of Ashby Road and North of
Normandy Way (A47), Hinckley, Leicestershire

DRAWING TITLE

Bat Transect Activity Map 2

CLIENT

Richborough Estates Ltd

DATE

10 October 2023

DRAWING NUMBER

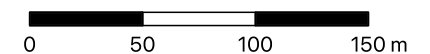
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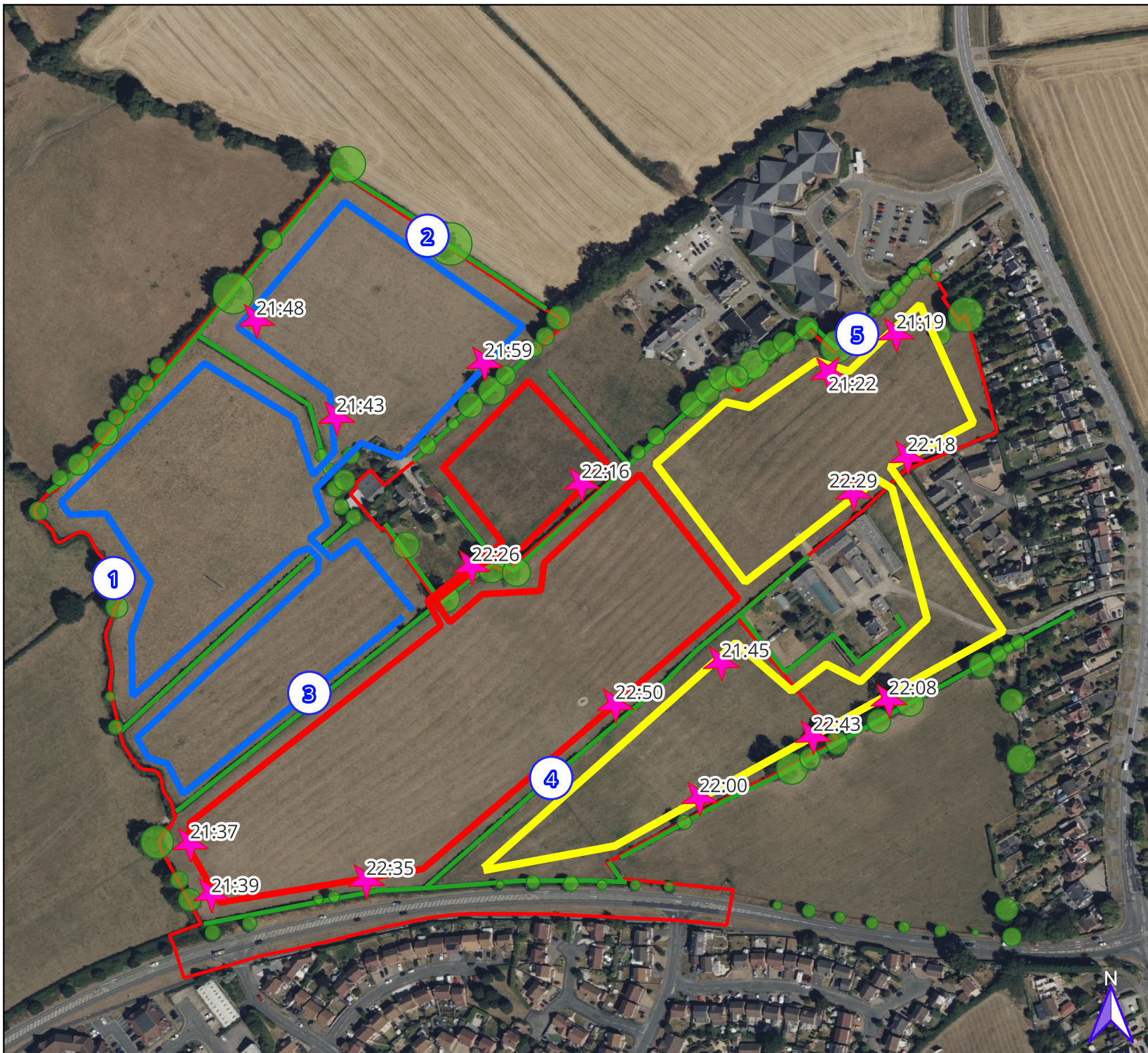
VERSION

1

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A. Elliott





- Application Site Boundary
- Static Locations
- Common pipistrelle
- Red Transect
- Yellow Transect
- Blue Transect
- Trees
- Hedgerows



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PROJECT

Land to the west of Ashby Road and North of
Normandy Way (A47), Hinckley, Leicestershire

DRAWING TITLE

Bat Transect Activity Map 3

CLIENT

Richborough

DATE

14 May 2024

DRAWING NUMBER

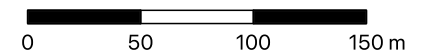
ZEL_477_Trans3

VERSION

1

DRAWN BY

A. Elliott



APPENDIX B

Legislation

Bats and the places they use for shelter or protection i.e. roosts, receive European protection under The Conservation of Habitats and Species Regulations 2017, as amended (Habitats Regulations 2017). They receive further legal protection under the Wildlife and Countryside Act (WCA) 1981, as amended. This protection means that bats, and the places they use for shelter or protection, are capable of being a material consideration in the planning process.

Regulation 43 of the Habitats Regulations 2017 (as amended), states that a person commits an offence if they:

- deliberately capture, injure or kill a bat;
- deliberately disturb bats; or
- damage or destroy a bat roost (breeding site or resting place).

Disturbance of animals includes in particular any disturbance which is likely to impair their ability to survive, to breed or reproduce, or to rear or nurture their young, or in the case of animals of a hibernating or migratory species, to hibernate or migrate; or to affect significantly the local distribution or abundance of the species to which they belong. It is an offence under the Habitats Regulations 2017 for any person to have in his possession or control, to transport, to sell or exchange or to offer for sale, any live or dead bats, part of a bat or anything derived from bats, which has been unlawfully taken from the wild.

Whilst broadly similar to the above legislation, the WCA 1981 (as amended) differs in the following ways:

- Section 9(1) of the WCA makes it an offence to intentionally (rather than deliberately) kill, injure or take any protected species.
- Section 9(4)(a) of the WCA makes it an offence to intentionally or recklessly damage or destroy, or obstruct access to, any structure or place which a protected species uses for shelter or protection.
- Section 9(4)(b) of the WCA makes it an offence to intentionally or recklessly disturb any protected species whilst occupying a structure or place which it uses for shelter or protection.

Reckless offences were added by the Countryside and Rights of Way (CROW) Act 2000. As bats re-use the same roosts (breeding site or resting place) after periods of vacancy, roosts are protected whether or not bats are present.

APPENDIX C

Qualifications and Experience

Zebra Ecology Ltd is Registered Practice of the Chartered Institute of Ecology and Environmental Management (CIEEM). A comprehensive range of ecological services are offered including Preliminary Ecological Appraisal (PEA), Ecological Impact Assessment (EcIA), Habitat Regulations Assessment (HRA), Biodiversity Impact Assessment (BIA) and European Protected Species (EPS) Surveys / Licensing.

The practice works closely with clients to achieve their aspirations alongside securing the best outcomes for the environment. With wildlife legislation and policy as its basis; commercial awareness, pragmatism and defensible advice is combined to form Zebra Ecology's approach.

As well as offering a wide range of ecological services, Zebra Ecology forms part of Zebra Group offering an in-house collaborative approach in conjunction with Zebra Architects, Zebra Landscape Architects, Zebra Trees and Zebra Land and Development.

Emma Seaton BSc (Hons) MCIEEM

Emma holds a BSc (Hons) degree in Biology from the University of Sheffield and has since gained a postgraduate certificate in Ecological Consultancy. Her ecological experience includes Preliminary Ecological Appraisals, Ecological Impact Assessments (EcIA), surveying for notable / European Protected Species, mitigation / licensing advice and providing Continued Professional Development (CPD) sessions for developers on Biodiversity Net Gain. She has held Natural England survey licences for bats (Class 2), great crested newts and white-clawed crayfish since 2015. She is also a Registered Consultant under the Bat Mitigation Class Licence (BMCL) licence and an Earned Recognition (ER) consultant under the Natural England bat pilot project. Emma is a Full member of the Chartered Institute of Ecology and Environmental Management (CIEEM).

Andrew Elliott BSc (Hons)

Andy holds a BSc (Hons) degree in Biological Sciences (Zoology) from the University of Birmingham, and has a particular passion for ornithology, as well as social ecology. Since graduating, Andy has spent considerable time on the African continent, contributing to research projects in fields such as evolutionary sociality in birds, black rhinoceros behavioural ecology and linear infrastructure wildlife-mortality mitigation. Andy holds a Class 1 survey licence for bats, and has a broad range of consulting experience, working on large and small-scale projects across the UK.