

Norwich Western Link

Environmental Statement

Chapter 11: Bats

Appendix 11.10: Figures

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1 Introduction

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- 1.1.8 Figure 11.8 Barbastelle roosts survey results - A map displaying the barbastelle roosts study results, showing the Red Line Boundary, the Site Boundary, roost type including night, panic, maternity, assumed maternity and hibernation roosts, as well as unspecified roosts. Locations of precautionary approach trees with assumed day roosts are also displayed. These roost types correspond with data sources including WSP 2019-2022 presence/likely absence surveys and WSP 2019 and 2021 radio-tracking. Finally, barbastelle colonies with indicative locations are displayed, encompassing larger areas across the Site Boundary and include Broadway/Telegraph Hill Colony, Felthorpe Colony, Primrose Grove Colony and Roarr! Dinosaur Park Colony which is grouped with Royal Norwich Golf Course Colony.
- 1.1.9 Figure 11.9 Automated static detector surveys (summer deployment) – Barbastelle - A map displaying the automated static detector surveys during the summer deployment, showing the average passes per night for barbastelle. The map shows the Red Line Boundary, the Site Boundary and average passes per night during summer deployment. The ranges displayed are 0-10, 10-20, 20-50, 50-100 and 100-297.4. The largest cluster of average passes per night of between 100-297.4 are located towards the northeastern end of the Site Boundary near to Northern Woodlands. It should be noted that the ranges are derived from the natural breaks in the data specific to each species and therefore the figures for each species are not directly comparable.
- 1.1.10 Figure 11.10 Automated static detector surveys (winter deployment) – Barbastelle - A map displaying the automated static detector surveys during the winter deployment, showing the average passes per night for barbastelle. The map shows the Red Line Boundary, the Site Boundary and average passes per night during winter deployment. The ranges displayed are 0.03-1, 1-5, 5-10, 10-15 and 15-19.66. The largest data point of average passes per night of between 15-19.66 is located towards the southwest of the Site Boundary within The Broadway.

- 1.1.11 Figure 11.11 Brown long-eared bat roosts - A map displaying the brown long-eared bat results in regard to roosts. This includes the Red Line Boundary, the Site Boundary, 3km buffer from the Red Line Boundary and roost type including day, night, panic, maternity, assumed maternity and hibernation roosts, as well as unspecified roosts. These roost types correspond with data sources including BSG 2009 radio tracking, Broadland Planning Portal, Norfolk Biodiversity Information Service (NBIS), MAGIC, A1270 Broadland Northway Bat Box/Retained Roosts Monitoring, WSP 2019-2022 Presence/Likely Absence Surveys and WSP2019 and 2021 Radio-tracking.
- 1.1.12 Figure 11.12 Automated static detector surveys (summer deployment) – Brown long-eared bat - A map displaying the automated static detector surveys during the summer deployment, showing the average passes per night for brown long-eared bat. The map shows the Red Line Boundary, the Site Boundary and average passes per night during summer deployment. The ranges displayed are 2-6, 6-12.2, 12.2-15.5, 15.5-25.8 and 25.8-137.2. The largest clusters of average passes per night of between 25.8-137.2 are located towards the northeastern end of the Site Boundary near to Northern Woodlands and River Wensum and Grassland. It should be noted that the ranges are derived from the natural breaks in the data specific to each species and therefore the figures for each species are not directly comparable.
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from the natural breaks in the data specific to each species and therefore the figures for each species are not directly comparable.

- 1.1.14 Figure 11.14 *Myotis* roosts - A map displaying the *Myotis* species results in regard to roosts. This includes the Red Line Boundary, the Site Boundary, 4km buffer from the Red Line Boundary and roost type including day, maternity, and hibernation roosts, as well as unspecified roosts. These roost types correspond with data sources including BSG 2009 radio tracking, Broadland Planning Portal, Norfolk Biodiversity Information Service (NBIS), MAGIC, WSP 2019-2022 Presence/Likely Absence Surveys and WSP2019 and 2021 Radio-tracking.
- 1.1.15 Figure 11.15 Automated static detector surveys (summer deployment) – *Myotis* species - A map displaying the automated static detector surveys during the summer deployment, showing the average passes per night for *Myotis* species. The map shows the Red Line Boundary, the Site Boundary and average passes per night during summer deployment. The ranges displayed are 1.5-8, 8-14.2, 14.2-25, 25-45 and 45-164.1. The largest clusters of average passes per night of between 45-164.1 are located towards the northeastern end of the Site Boundary near to Northern Woodlands and River Wensum and Grassland. It should be noted that the ranges are derived from the natural breaks in the data specific to each species and therefore the figures for each species are not directly comparable.
- 1.1.16 Figure 11.16 Automated static detector surveys (winter deployment) – *Myotis* species - A map displaying the automated static detector surveys during the winter deployment, showing the average passes per night for *Myotis* species. The map shows the Red Line Boundary, the Site Boundary and average passes per night during winter deployment. The ranges displayed are 0.34-0.7, 0.7-1.66, 1.66-2.7, 2.7-4.53, 4.53-24.89. The largest cluster of average passes per night of between 4.53-24.89 are located towards the northeastern end of the Site Boundary near to Northern Woodlands. It should be noted that the ranges are derived from the natural breaks in the data specific to each

species and therefore the figures for each species are not directly comparable.

- 1.1.17 Figure 11.17 Soprano pipistrelle roosts - A map displaying the soprano pipistrelle results in regard to roosts. This includes the Red Line Boundary, the Site Boundary, 3km buffer from the Red Line Boundary and roost type including day, maternity, and hibernation roosts, as well as unspecified roosts. These roost types correspond with data sources including MAGIC, Broadland Planning Portal, Norfolk Biodiversity Information Service (NBIS), A1270 Broadland Northway Bat Box/Retained Roosts Monitoring and WSP 2019-2022 Presence/Likely Absence Surveys and WSP2019 and 2021 Radio-tracking.
- 1.1.18 Figure 11.18 Automated static detector surveys (summer deployment) – soprano pipistrelle - A map displaying the automated static detector surveys during the summer deployment, showing the average passes per night for soprano pipistrelle. The map shows the Red Line Boundary, the Site Boundary and average passes per night during summer deployment. The ranges displayed are 5-100, 100-204, 204-371, 371-901 and 901-3432. The largest clusters of average passes per night of between 901-3432 are located towards the northeastern end of the Site Boundary near to Northern Woodlands and towards the southwestern end of the Site Boundary within The Broadway. It should be noted that the ranges are derived from the natural breaks in the data specific to each species and therefore the figures for each species are not directly comparable.
- 1.1.19 Figure 11.19 Automated static detector surveys (winter deployment) – soprano pipistrelle - A map displaying the automated static detector surveys during the winter deployment, showing the average passes per night for soprano pipistrelle. The map shows the Red Line Boundary, the Site Boundary and average passes per night during winter deployment. The ranges displayed are 0.3-4.8, 4.8-10, 10-32.4, 32.4-90.4 and 90.4-197.7. The largest cluster of average passes per night of between 90.4-197.7 are located towards the northeastern end of the Site Boundary near to Northern

Woodlands. It should be noted that the ranges are derived from the natural breaks in the data specific to each species and therefore the figures for each species are not directly comparable.

- 1.1.20 Figure 11.20 Common pipistrelle roosts - A map displaying the common pipistrelle results in regard to roosts. This includes the Red Line Boundary, the Site Boundary, 2km buffer from the Red Line Boundary and roost type including day, maternity, and hibernation roosts, as well as unspecified roosts. These roost types correspond with data sources including MAGIC, Broadland Planning Portal, Norfolk Biodiversity Information Service (NBIS), A1270 Broadland Northway Bat Box/Retained Roosts Monitoring and WSP 2019-2022 Presence/Likely Absence Surveys.
- 1.1.21 Figure 11.21 Automated static detector surveys (summer deployment) – common pipistrelle - A map displaying the automated static detector surveys during the summer deployment, showing the average passes per night for common pipistrelle. The map shows the Red Line Boundary, the Site Boundary and average passes per night during summer deployment. The ranges displayed are 9-220, 220-339, 339-700, 700-1700 and 1700-5126. The largest clusters of average passes per night of between 1700-5126 are located towards the northeastern end of the Site Boundary near to Northern Woodlands and towards the southwestern end of the Site Boundary within The Broadway and Foxburrow Plantation. It should be noted that the ranges are derived from the natural breaks in the data specific to each species and therefore the figures for each species are not directly comparable.
- 1.1.22 Figure 11.22 Automated static detector surveys (winter deployment) – common pipistrelle - A map displaying the automated static detector surveys during the winter deployment, showing the average passes per night for common pipistrelle. The map shows the Red Line Boundary, the Site Boundary and average passes per night during winter deployment. The ranges displayed are 0.2-5, 5-13.4, 13.4-22.3, 22.3-35.9 and 35.9-112. The largest cluster of average passes per night of between 35.9-112 are located towards the northeastern end of the Site Boundary near to Northern

Woodlands. It should be noted that the ranges are derived from the natural breaks in the data specific to each species and therefore the figures for each species are not directly comparable.

- 1.1.23 Figure 11.23 Nathusius pipistrelle roosts - A map displaying the Nathusius' pipistrelle results in regard to roosts. This includes the Red Line Boundary, the Site Boundary, 3km buffer from the Red Line Boundary and roost type including unspecified roosts. This roost type corresponds with a data source labelled BSG 2009 radio tracking.
- 1.1.24 Figure 11.24 Noctule and serotine roosts - A map displaying the noctule and serotine results in regard to roosts. This includes the Red Line Boundary, the Site Boundary, 4km buffer from the Red Line Boundary and roost type including day, maternity, and hibernation roosts, as well as unspecified roosts. These roost types correspond with data sources including Norfolk Biodiversity Information Service (NBIS), WSP 2019-2022 Presence/Likely Absence Surveys and WSP2019 and 2021 Radio-tracking.
- 1.1.25 Figure 11.25 Woodland resource - A map displaying the trees located across the Site Boundary with high and moderate suitability for bats. The map includes the Red Line Boundary, the Site Boundary and trees with high and moderate suitability for bats. The largest clusters of trees with high and moderate suitability appear to be located towards the northeastern end of the Site Boundary near to Northern Woodlands and River Wensum and Grassland, as well as towards the southwestern end of the Site Boundary within Foxburrow Plantation.
- 1.1.26 Figure 11.26 Mitigation locations - A map displaying the bat crossing features located across the Site. The map includes the Red Line Boundary, the Site Boundary and bat crossing features including green bridges, landscape treatment, underpasses, viaducts, areas identified for bat box installation and veteran feature creation, woodland improvements, woodland and scrub creation and finally hedgerow creation and improvements.

- 1.1.27 Figure 11.27 Bat monitoring locations - A map displaying the bat crossing features located across the Site. The map includes the Red Line Boundary, the Site Boundary and survey monitoring locations including areas identified for bat box installation and veteran trees, retained roost monitoring locations, indicative radio-tracking monitoring locations and indicative automated detector monitoring locations. The map also displays bat crossing features including green bridges, landscape treatment, underpasses, viaducts.
- 1.1.28 Figure 11.28 Committed Development Shortlist – A map displaying all developments included within the bat in-combination assessment shortlist, within 6km of the Red Line Boundary. The map includes the Site Boundary, Red Line Boundary and a 6km buffer.

Figure 1-1 – A map displaying the Red line boundary and Site Boundary



Figure 1-2 – A map displaying the Location references



Figure 1-3 – A map displaying the Designated sites with bats included within designation



Figure 1-4 – A map displaying the Summer Automated Static Detector Locations



Figure 1-6 – A map displaying the Vantage point locations



Figure 1-7 – A map displaying the Barbastelle roosts from the desk study



Figure 1-8 – A map displaying the Barbastelle roosts survey results

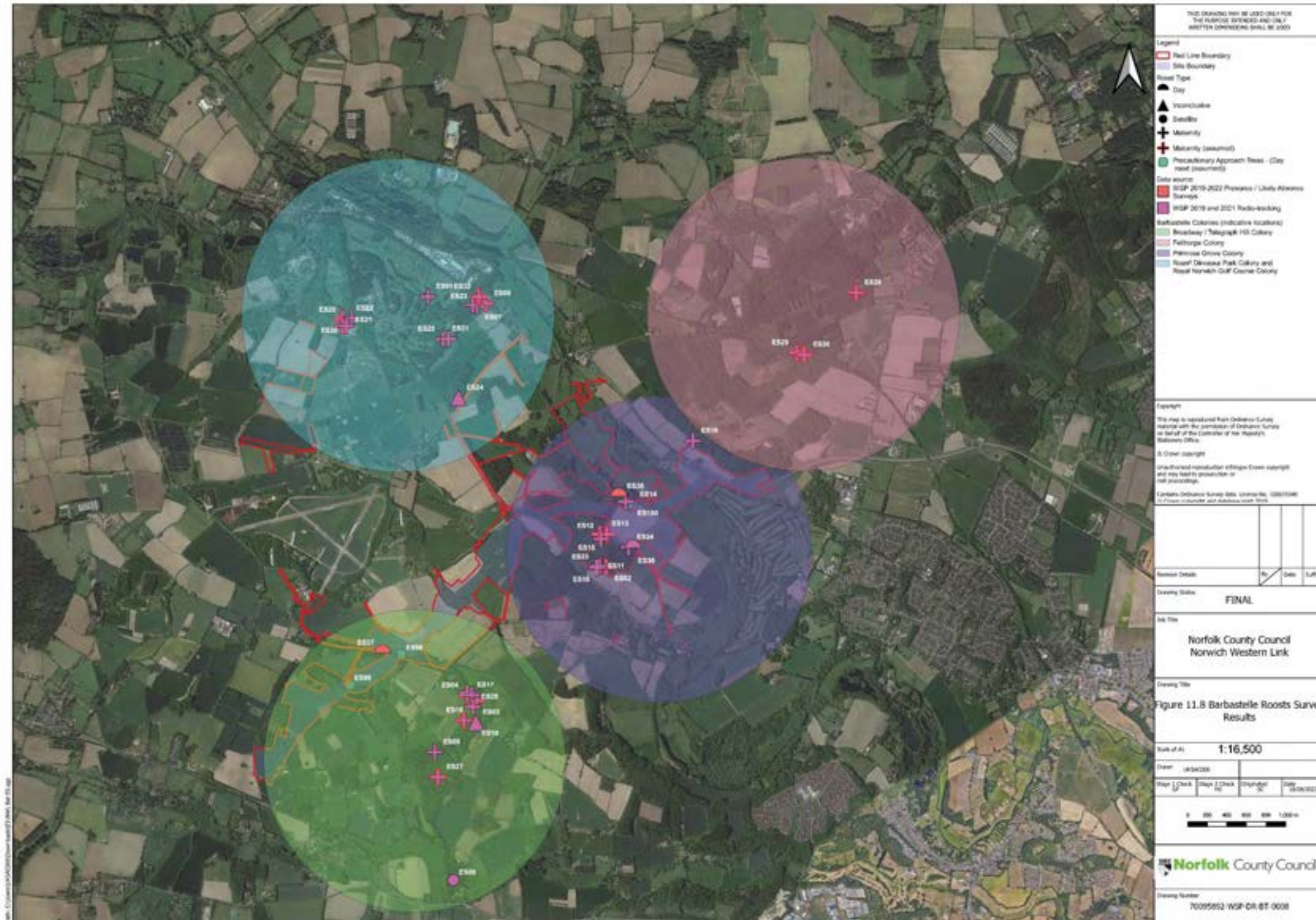


Figure 1-10 – A map displaying the Automated static detector surveys (winter deployment) for Barbastelle



Figure 1-11 – A map displaying the Brown long-eared bat roosts from the desk study



Figure 1-12 – A map displaying the automated static detector surveys (summer deployment) for Brown long-eared bat

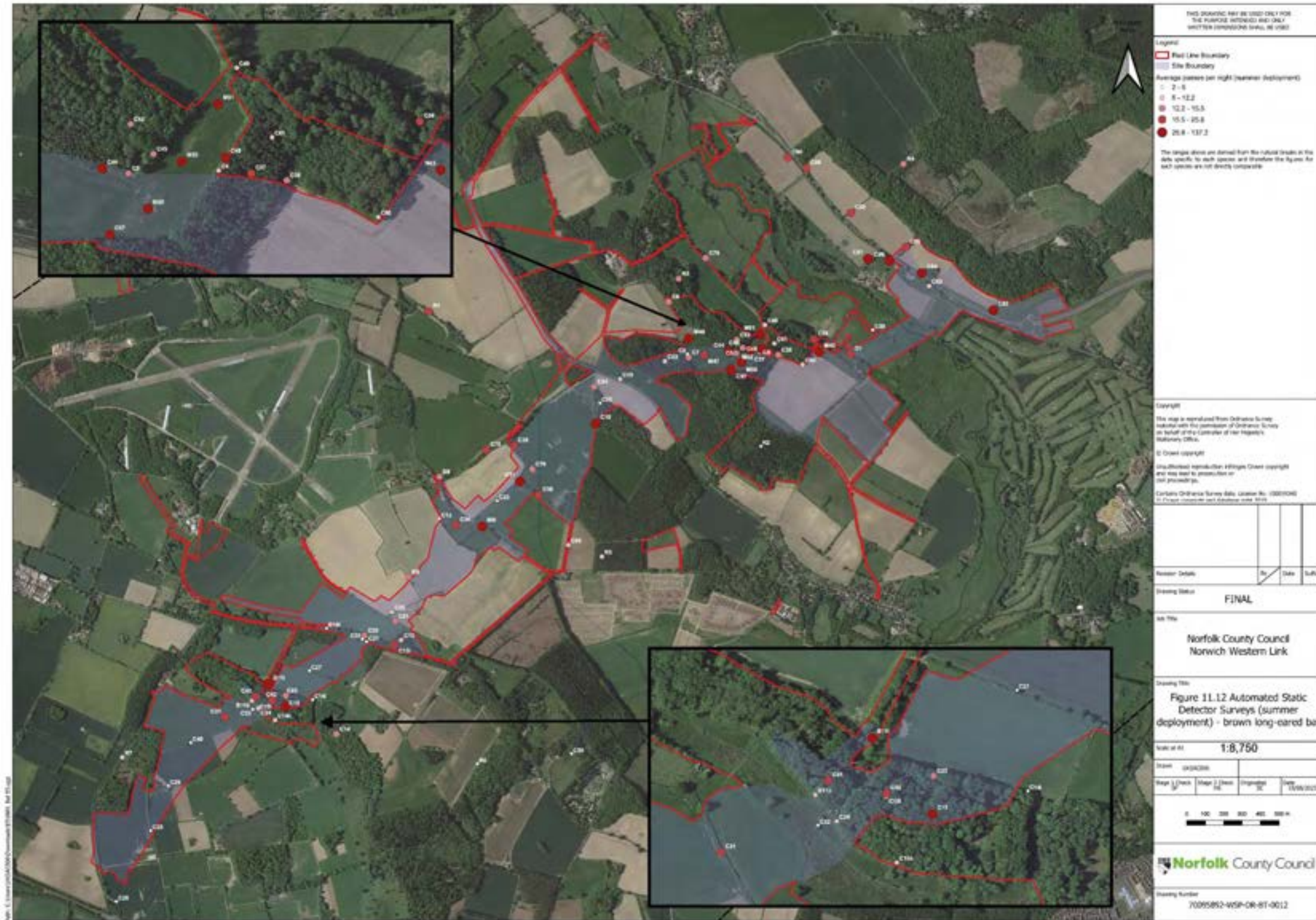


Figure 1-13 – A map displaying the automated static detector surveys (winter deployment) for Brown long-eared bat



Figure 1-14 – A map displaying the Myotis roosts from the desk study



Figure 1-15 – A map displaying the automated static detector surveys (summer deployment) for *Myotis* species



Figure 1-16 – A map displaying the automated static detector surveys (winter deployment) for Myotis species



Figure 1-17 – A map displaying the Soprano pipistrelle roosts from the desk study



Figure 1-18 – A map displaying the automated static detector surveys (summer deployment) for Soprano pipistrelle



Figure 1-19 – A map displaying the automated static detector surveys (winter deployment) for Soprano pipistrelle



Figure 1-20 – A map displaying the Common pipistrelle roosts from the desk study

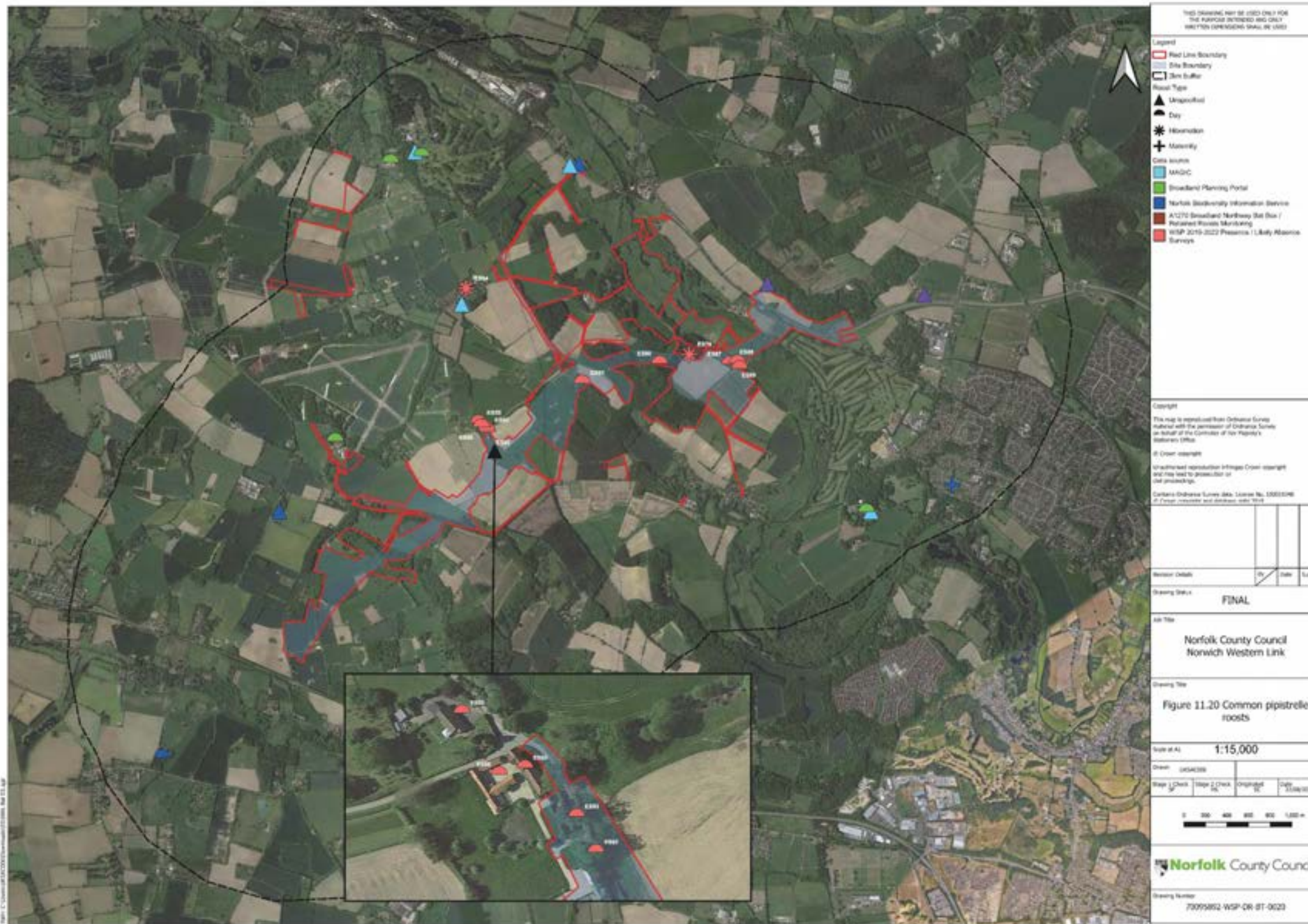


Figure 1-21 – A map displaying the automated static detector surveys (summer deployment) for common pipistrelle

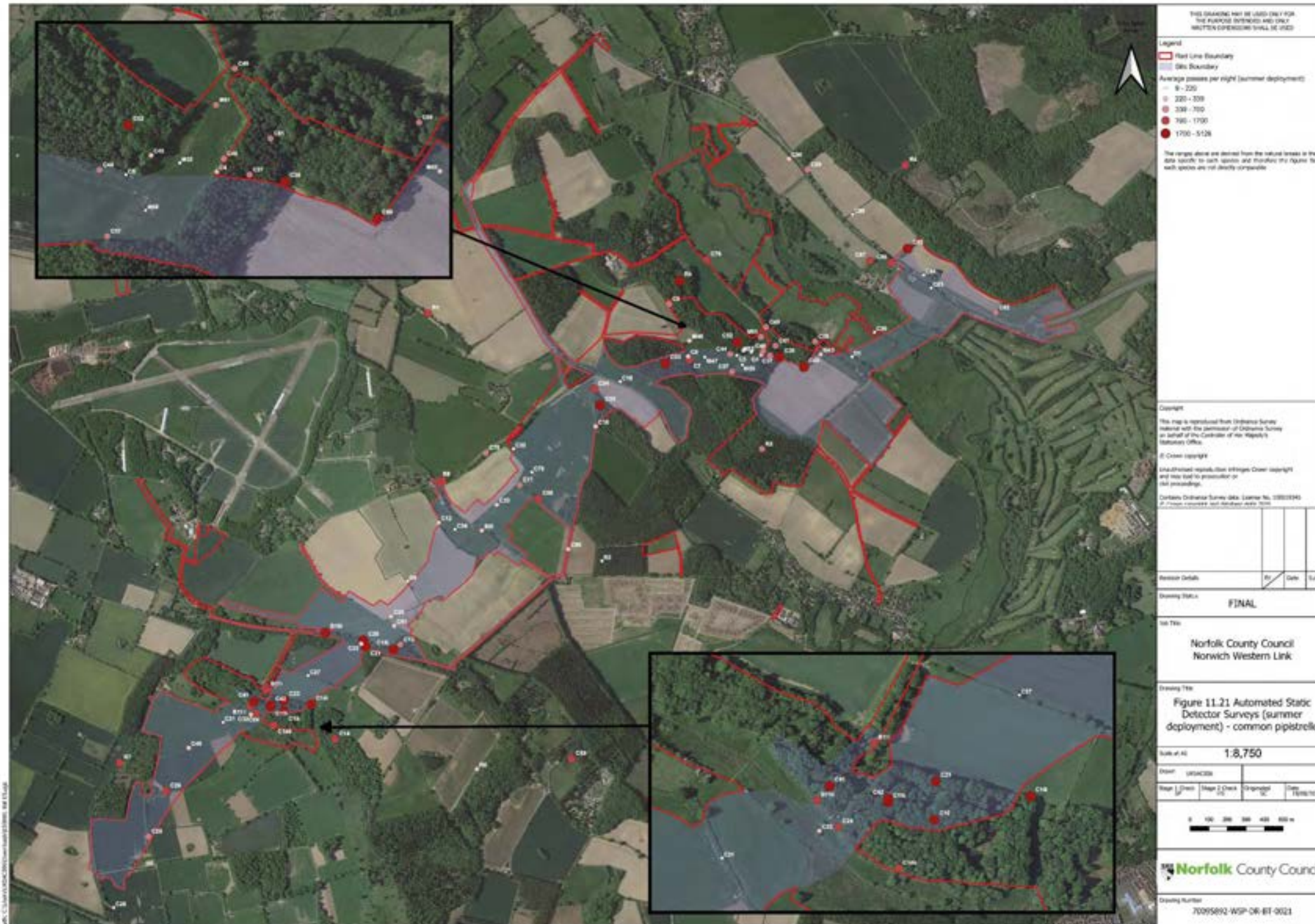


Figure 1-22 – A map displaying the automated static detector surveys (winter deployment) for common pipistrelle



Figure 1-23 – A map displaying the Nathusius’ pipistrelle roosts from the desk study



Figure 1-24 – A map displaying the Noctule and serotine roosts from the desk study





Figure 1-26 – A map displaying the Bat mitigation locations



Figure 1-27 – A map displaying the Bat monitoring locations



Figure 1-28 – A map displaying the committed development short list

