



ECOLOGICAL IMPACT ASSESSMENT (EcIA) REPORT

Client: Beck Homes

Site: Station Road, Baldock

04.03.2026

Version 002



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DOCUMENT HISTORY AND STATUS

Document Control			
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Revision Details			
Version	Date of Issue	Pages affected	Comments
001	11.11.2025	N/A	Issued to client.
002	04.03.2026	1,8,32 and 61	Changes reflect current landscape plan.

Life Span of Survey Data and Report	
Report	This report remains valid for 12 to 18 months from date of issue. The report, conclusions and recommendations are valid for current development plans only. Should this change, the report should be reviewed and, if necessary, further survey work and desk study review undertaken.
Survey Data	Survey data are valid for 12 to 18 months from the date the survey was undertaken.

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The information which we have prepared and provided is true and has been prepared and provided in accordance with the Chartered Institute of Ecology and Environmental Management's Code of Professional Conduct.

Contents

1. Summary	1
2. Introduction	6
2.1 Site Details	6
2.2 Site Context.....	7
2.3 Ecological Background.....	7
2.4 Proposed Development.....	8
2.5 Development Layout Scheme	8
2.6 Survey Objectives	9
2.6.1 Bat Activity Surveys.....	9
2.6.2 Hazel Dormouse Presence/Absence Surveys.....	9
2.6.3 Ecological Impact Assessment	9
2.7 Survey Limitations	9
2.7.1 Bat Activity Surveys.....	9
2.7.2 Bat Data Analysis	10
2.7.3 Hazel Dormouse Presence/Absence Surveys.....	10
3. Relevant Legislation and Planning Policy.....	11
3.1 Bats	11
3.2 Hazel Dormouse	12
3.3 Breeding Birds.....	12
3.4 Brown Hare	12
3.5 Ecological Impact Assessment	12
4. Survey Methods	14
4.1 Bat Activity Surveys	14
4.1.1 NBW.....	14
4.1.2 Automated Static Detector Surveys	16
4.2 Hazel Dormouse Presence/Absence Survey	16
4.2.1 Footprint Tunnel Surveys.....	16
4.2.2 Nut Search	17
4.2.3 Natural Nest Search	17
5. Ecological Impact Assessment Methods	17
5.1.1 Zone of Influence.....	17
5.1.2 Criteria for Evaluating Ecological Features	17
5.1.3 Assessment of Significance	18
5.1.4 Characterising Ecological Impacts	19
5.1.5 Identification of Cumulative Impacts	20
5.1.6 Assessment of Residual Impacts	20
5.1.7 Avoidance, Mitigation, Compensation, and Enhancement	20
5.1.8 Identification of Ecological Monitoring.....	20
6.1 Bat Activity Surveys	21
6.1.1 NBW.....	21
6.1.2 Automated Static Detector Surveys	22
6.2 Hazel Dormouse Presence/Absence Survey	27
6.2.1 Footprint Tunnel Surveys.....	27

6.2.1	<i>Nut Search</i>	27
6.2.2	<i>Natural Nest Search</i>	27
6.3	Incidental Records	27
6.3.1	<i>Breeding Birds</i>	27
6.3.2	<i>Brown Hare</i>	27
7.	Evaluation of Ecological Importance	28
7.1	Bat Activity Surveys	28
7.1.1	<i>NBW</i>	28
7.1.2	<i>Automated Static Detector Surveys</i>	28
7.1.3	<i>Summary of Bat Activity</i>	29
7.2	Hazel Dormice Presence/Absence Survey	29
7.3	Incidental Records	29
7.3.1	<i>Breeding Birds</i>	29
7.3.2	<i>Brown Hare</i>	30
8.	Assessment of Likely Significant Effects	31
8.1	Mechanisms of Potential Significant Effects	31
8.1.1	<i>Foraging and Commuting Bats</i>	31
8.1.2	<i>Summary of Mechanisms of Potential Significant Effects</i>	31
9.	Avoidance, Mitigation, Compensation, and Enhancement	34
9.1	Foraging and Commuting Bats	34
9.2	CEMP (Biodiversity)	35
9.3	BEMMS	35
10.	Residual Effects	36
11.	Monitoring	36
12.	Conclusion	36
14.	Figures	40
14.1	Figure 1. Field Survey Map	40
14.2	Figure 2: NBW Stationary Positions & Route Map	41
14.3	Figure 3: Location of Static Bat Detectors	42
14.4	Figures 4a to 4e: Heatmaps	43
14.5	Figure 5: Results of Hazel Dormouse Presence/Absence Survey	48
15.	Appendix 1. Development Layout Scheme	49
16.	Appendix 2. EclA Checklist	50
17.	Appendix 3 – Legislation and Planning Policy	51
17.1	Habitats Directive, EC Council Directive 92/43/EEC	51
17.2	The Birds Directive 2009/147/EC	51
17.3	Conservation of Habitats and Species Regulations 2017 (as amended)	51
17.4	The National Parks and Access to the Countryside Act 1949	52
17.5	The Wildlife and Countryside Act, 1981 (as amended)	52
17.6	Countryside & Rights of Way Act, 2000	52
17.7	Hedgerow Regulations 1997	53

17.9	Natural Environment and Rural Communities (NERC) Act, 2006.....	53
17.10	National Planning Policy Framework (NPPF) 2024	53
17.11	Water Framework Directive.....	54
17.12	Bern Convention.....	55
18.1	NBW	56
18.1.1	<i>Transect 1 (May)</i>	56
18.1.2	<i>Transect 2 (June)</i>	56
18.1.3	<i>Transect 3 (August)</i>	56
18.1.4	<i>Transect 4 (September)</i>	57
18.2	Hazel Dormouse Presence/Absence Survey	58

List of Tables:

Table 1. Site Details	6
Table 2. Site Context.....	7
Table 3. Details of Stationary Positions of the NBW.....	14
Table 4. Details of Walked Transect of the NBW.....	14
Table 5. NBW Survey Details.....	15
Table 6. Automated Bat Detector Locations	16
Table 7. Automated Bat Detector Survey Dates	16
Table 8. Details of Footprint Tunnel Survey.....	17
Table 9. NBW Walking Transect Survey Results.....	21
Table 10. NBW Stationary Position Survey Results	22
Table 11. Combined Results of Automated Bat Detector Surveys	23
Table 12. Summary of Hazel Dormouse Presence/Absence Survey Results	27
Table 13. Summary of Geographic Frame of References for Bats.....	29
Table 14. Important Ecological Features	30
Table 15. Mechanisms of Potential Significant Effects	31
Table 16. Potential Effects Resulting from Construction and Operational Phases for Important Ecological Features.....	32

1. Summary

Site Details
- Site Address: Land at Station Road, Ashwell, Baldock, Hertfordshire, SG7 5RJ. - OS grid reference (Centre of Site): TL 2780 3970. - Approximate Area of Site: 30,000 m² (3 ha).
Scope of Works
- The following ecological surveys were commissioned by Beck Homes. The scope of ecological surveys was based on the recommendations of aLyne Ecology Ltd.'s Preliminary Ecological Appraisal and Ground Level Tree Assessment Report, Version 003, 1st October 2025 (aLyne Ecology Ltd., 2025): - Bat activity surveys, comprising deployment of static bat detectors and Night-time Bat Walkovers (NBW). - Hazel dormouse presence/absence (seven visits), comprising deployment of footprint tunnels, nut searches and natural nest searches. - This report also contains details of incidental records of other protected species noted during the survey, namely quails and brown hare. - The scope of this report is to provide the methods and results of the surveys, an evaluation of ecologically important features (specifically focusing on protected species subject to this report), an assessment of likely significant effects and recommendations for mitigation, compensation, and enhancement measures, in accordance with Guidelines for Ecological Impact Assessment in the UK and Ireland, (CIEEM, 2024).
Development Proposals
The proposals relate to the construction of a new residential housing development with associated gardens, driveways and landscaping. A proposed road will dissect the existing on-site woodland (a total area of 0.0177ha will be lost) and two small lengths of boundary hedgerow will be lost (a total of 12m). The majority of lost habitat for the proposed development will be existing ploughed arable field (2.66 ha). All remaining habitat areas will be retained and incorporated into the proposals (Barnes Walker, 2025). The pre-mitigation development layout scheme is shown in Appendix 1 (Barnes Walker, 2025).
Summary of Findings of Ecological Surveys
<u>Preliminary Ecological Appraisal</u> There is one statutory non-designated site within 1 km of the site known as Ashwell Springs Site of Special Scientific Interest (SSSI), located 760m to the west. There are also two non-statutory designated sites located within 1 km of the site, namely Ruddy Pit County Wildlife Site (CWS) located approximately 530 m to the east of the survey area and Ducklake Farm, Ashwell Local Wildlife Site (LWS) located approximately 830 m to the west of the survey area. There are no European designated sites located within 5 km of the site (aLyne Ecology Ltd., 2025).

- The following habitats were identified on site: modified grassland, other woodland; mixed, horticulture and arable, and species-rich native hedgerow. Figure 1 provides the results of the field survey (aLyne Ecology Ltd., 2025).
- During the survey the site was also found to have suitability for foraging and commuting bats, hazel dormice and badgers.

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Bat Activity Surveys

- Bats and their habitats are strictly protected under the Wildlife and Countryside Act 1981 (as amended) and the Section 2 of the Conservation of Habitats and Species Regulations 2017 (as amended) (HM Government, 2017). Some species of bats are also Priority Species as listed on Section 41 of the NERC Act, 2006 (HM Government, 2006).
- Night-time Bat Walkovers (NBWs) were conducted four times in total, including one NBW in the spring (May 2025), two NBWs in the summer (July and August 2025) and one NBW in the autumn (September 2025), in accordance with current best practice guidelines, to assess the importance of the site for foraging and commuting bats (NBW Stationary Positions & Route Map is provided in Figure 2) (Collins, 2023). Two static bat detectors were also deployed within the site on six separate occasions between May 2025 and October 2025 in accordance with current best practice guidelines to provide further information on the level of bat activity (the locations of the static bat detectors are provided on Figure 3) (Collins, 2023). Raw data is provided in Appendix 4.
- For the NBW (Walked Transects), in total, one hundred (100) passes, comprising at least six different species and *Myotis* sp., were recorded over the four visits between May to September. Figures 4a to Figure 4e provide heatmaps showing the distribution and level of activity on site for all recorded bat species. The heatmaps show species data from all four visits, displaying the distribution and level of foraging, and commuting activity of bat activity across the site where activity was most concentrated.
- For the NBW (Stationary Positions), activity of bats was low with only common pipistrelle and noctule recorded across all survey visits.
- In total, at least nine different species of bat and *Myotis* sp. were recorded during the automated static detector surveys, totalling eleven thousand and nine hundred and one (11,901) bat passes. Species recorded include common pipistrelle, soprano pipistrelle Nathusius' pipistrelle, noctule, serotine, Daubenton's bat, Natterer's bat, brown long-eared and barbastelle. A total of one hundred and twenty-six (126) calls were classified as *Myotis* sp. which could be identified to genus level only. Raw data is provided in Appendix 4.

Hazel Dormouse Presence/Absence Survey

- Hazel dormice and their habitats are fully protected under Schedule 5 of the Wildlife and Countryside Act, 1981 (as amended) (HM Government, 1981) and the Conservation of Habitats and Species Regulations 2017 (as amended) (HM Government, 2017). The hazel dormice are also Priority Species under Section 41 of the Natural Environment and Rural Communities Act 2006 (HM Government, 2006).
- Seven visits to check pre-deployed dormouse footprint tunnels were undertaken, with reference to the Hazel Dormouse Mitigation Handbook (Wells, D. Chanin, P., Gubert, L., 2025). Footprint tunnels (50) were deployed in June 2025 in suitable habitat as shown in Figure 5.
- Suitable habitat for hazel dormouse on site was inspected on 24th June and 7th July 2025 for natural nests. Searches for chewed hazel nuts were conducted between June to September, twice a month. Hazel dormice, or signs of hazel dormice, including natural nests and chewed hazel nuts were not identified during the surveys.

Breeding Birds

- Quail was recorded immediately off-site. Quails are protected from disturbance during breeding under schedule 1 of the Wildlife and Countryside Act 1981 (as amended) (HM Government, 1981).

Brown Hare

- Brown hare was noted on-site within the ploughed arable field. The brown hare is a Priority Species under Section 41 of the Natural Environment and Rural Communities Act 2006 (HM Government, 2006).

Evaluation of Ecological Importance

Foraging and Commuting Bats

- For the NBW (Walked Transects), common pipistrelle accounted for 83% of the total bat passes recorded on site, followed by noctule, which accounted for 9%, followed by Natterer's bat, *Myotis* sp. and serotine which accounted for 2% of passes each. Brown long-eared and soprano pipistrelle accounted for 1% of the total bat passes each.
- For the NBW (Stationary Positions), there were fewer passes consistently at the southern end of the site boundary at Stationary Position 1 with very few bats recorded over the four visits. No bats were seen or heard during Transect 2 at both Stationary Positions 1 and 2. At Stationary Position 2, common pipistrelle bats were seen and recorded on Transect 3 and Transect 4 actively foraging and commuting along the northern hedgerow where there are direct connections towards more optimal foraging habitats in the local rural landscape.
- Therefore, foraging/commuting bats are assessed as important at 'Local' context because mainly common species of bats were recorded, which are likely to be abundant in the local landscape and have potential to be significantly impacted in the absence of mitigation. Foraging and commuting bats have been scoped into the assessment and, measures for avoidance, mitigation and enhancement have been recommended in Section 9.1.

Hazel Dormouse

- Hazel dormice, or signs of hazel dormice were not identified during the surveys, and it can be reasonably concluded that hazel dormice are likely-absent from the site.
- Therefore, the hazel dormouse has been scoped out of the assessment and, measures for avoidance, mitigation are not required. Enhancements that would benefit hazel dormice have been recommended in Section 9.3.

Breeding Birds

- Quails were recorded adjacent to the site boundary, off-site in June 2025. There is a lack of suitable habitat for breeding quails on site given the habitats comprise ploughed arable fields with limited vegetation cover. During the breeding season for quails, it was noted that off-site adjacent habitats contained in-rotation fields with cereal crops which were suitable habitats for breeding quail, unlike the arable ploughed field on-site.
- Therefore, it can be reasonably concluded that quails are very unlikely to breed on-site and further avoidance and mitigation measures for quails are not required. Enhancement and protection measures for quails are provided in Sections 9.2 and 9.3.

Brown Hare

- Brown hare was recorded on-site in September 2025. The site contains habitats which could support the brown hare, including within the ploughed arable field, hedgerow and woodland.

However, given the extent of more suitable optimal habitats off-site for brown hare within arable fields and other hedgerows, it can be reasonably concluded that brown hares will not be significantly impacted by the proposed development as wider access to better quality habitats locally are available for brown hare. Further avoidance and mitigation measures are not required for brown hare, which is assessed as important at the 'site' context only. Enhancement and protection measures for brown hares are provided in Section 9.2 and 9.3.

Avoidance, Mitigation, Compensation, and Enhancement Measures

Foraging and Commuting Bats and Hazel Dormice

- Habitats that support foraging and commuting bats, including hedgerow and woodlands, should be retained, and protected. Any loss of these habitats will need to be compensated for.
- The minimal loss of hedgerows and woodland has been compensated for within the most updated development layout scheme by planting on-site, equitable to the amount lost on a 'like-for-like' basis (See Appendix 5) (Barnes Walker, 2025).
- A Sensitive Lighting Plan should be implemented.

Construction and Environmental Management Plan (CEMP)

- As per the recommendation in aLyne Ecology's Preliminary Ecological Appraisal and Ground Level Tree Assessment report (aLyne Ecology Ltd., 2025), a CEMP (Biodiversity) should be prepared, to ensure that retained habitats (including hedgerow and woodlands) and protected species such as [REDACTED] quail and brown hare are protected during site clearance and construction works. A CEMP (Biodiversity) will provide site specific procedures to monitor and mitigate any ecological impacts and provide details of responsible persons throughout the construction phases.

Biodiversity Enhancement, Management and Maintenance Scheme (BEMMS)

- A BEMMS should be prepared, detailing measures to ensure biodiversity on site is protected and enhanced as well as the parties responsible for the implementation of those measures. Measures would include the location and placement of bat and bird boxes as well as invertebrate and hedgehog refugia as recommended in aLyne Ecology's Preliminary Ecological Appraisal and Ground Level Tree Assessment (aLyne Ecology Ltd., 2025). Further enhancements for hazel dormice, quail and brown hare would include appropriate management techniques and maintenance prescriptions for the newly created hedgerows and newly-planted woodlands and how these should be established and protected.

Conclusion, Residual Effects and Monitoring

- Providing the avoidance and mitigation measures provided in Section 9 are adhered to, there are no predicted negative residual effect.
- As well as the avoidance and mitigation measures details in Section 9, the development scheme should also accord with relevant nature conservation legislation, as well as the local plan Policy NE4: Biodiversity and Geological Sites North Hertfordshire Local Plan 2011-2031 (adopted November 2022) (North Herts Council, 2022).

2. Introduction

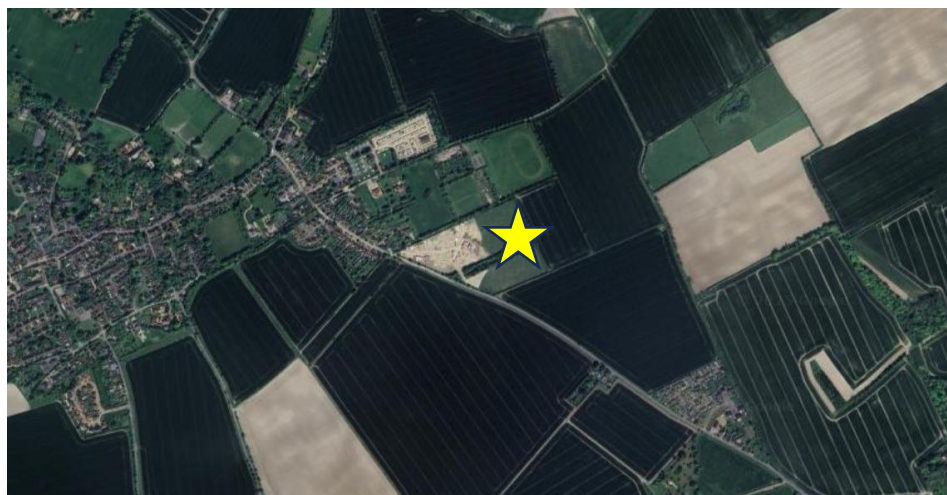
2.1 Site Details

Table 1 provides details of the site, intended as a summary of key features. Information provided in Table 1 and Table 2 have been derived from www.magic.gov.uk and aLyne Ecology Ltd.'s Preliminary Ecological Appraisal and Ground Level Tree Assessment Report, Version 003, 1st October 2025 (aLyne Ecology Ltd., 2025). As shown in Table 1.

Table 1. Site Details

Site Name	Station Road, Baldock
Site Address	Land at Station Road, Ashwell, Baldock, Hertfordshire, SG7 5RJ
OS Grid Reference (Centre of Site)	TL 2780 3970
Approximate Total Area of Site	30,000 m ² (3 ha)
Landowner and Local Authority	Beck Homes, North Herts District Council
Geology and Soils	Freely draining lime-rich loamy soils and clayey soils
Hydrology	Freely draining
Nature Conservation Designations	None on site
Other Designations	None on site
The Woodland Trust Ancient and Notable Tree Inventory	None on site
Biodiversity Opportunity Area	None on site
National Habitat Network	Network Enhancement Zone 1 -- Land connecting existing patches of primary and associated habitats, which is likely to be suitable for creation of the primary habitat. Action in the zone to expand and join up existing habitat patches and improve the connections between them can be targeted here (Natural England, 2020)
Current Land Use	Agricultural land, with a patch of woodland

An aerial plan showing the location of the site is provided below.



Site Location (© Google Earth Pro, accessed 17th September 2025).

Table 2. Site Context

Surrounding Habitats and Land Use	Agricultural fields and hedgerows surround the site on all aspects
Urban Context / Locality	The site is located to the east of Ashwell, in agricultural land, bordered by Station Road to the south
Connectivity to Wider Landscape	Hedgerows on site connect to a network of hedgerows in the wider landscape. Fragmented patches of woodland are also in the locality
Priority Habitats within 1 km	• Hedgerows • Traditional orchards • Lowland calcareous grassland • Deciduous woodlands • Pond • Rivers
Ancient Woodland within 1 km	The site is not located within an area of ancient woodland or plantation on ancient woodland. There are no parcels of semi-natural ancient woodland located within 1 km of the site
Non-Statutory Designated Sites within 1 km	• Ruddery Pit CWS located approximately 530 m to the east of the site • Ducklake Farm, Ashwell LWS, located approximately 830 m to the west of the site
Statutory Designated Sites within 1 km	• Ashwell Springs Site of SSSI is located approximately 760m to the west of the survey area
European Designated Sites within 5 km	None
EPSLs within 2 km	None

2.3 Ecological Background

In September 2020, aLyne Ecology Ltd. was commissioned to survey the site and prepare an updated Preliminary Ecological Appraisal. The mixed woodland and species-rich hedge and trees on site were assessed as Priority Habitats. Breeding birds were recorded on site within the woodland and badger activity was recorded on site, with a sett comprising seven entrances and snuffle holes. It was

recommended that the woodland and hedgerows should be enhanced and native trees retained. Clearance should be undertaken outside of breeding bird season; if this is not possible a check should be undertaken by an ecologist within 48 hours of works commencing. Due to the site having moderate suitability for the hazel dormouse (*Muscardinus avellanarius*), a licensed ecologist should carry out a check for dormouse nests prior to the removal of hedgerows. A Sensitive Lighting Plan for bats and further survey for badgers was recommended. (aLyne Ecology, 2020)

In October 2020, aLyne Ecology Ltd. prepared a Biodiversity Enhancement and Management Strategy which provided recommendations for improving the onsite habitats, including the retention of woodland and further planting of native trees, shrubs and ground flora. Native species-rich and native hedgerows were to be created, to increase the habitat connectivity within and across site for wildlife, including bats, hedgehogs (*Erinaceus europaeus*) and the hazel dormouse. It also recommended the installation of bird, bat and insect boxes in suitable locations around site (aLyne Ecology, 2020).



aLyne Ecology Ltd. was commissioned in May 2025 to produce a Preliminary Ecological Appraisal and Ground Level Tree Assessment Report. This report identified the need for badger sett monitoring, as well as surveys for hazel dormice and bat activity on site. The following habitats were identified on site: species-rich native hedgerow, other woodland; mixed; mainly broadleaved, horticulture and arable and modified grassland. Figure 1 shows the field survey map. (aLyne Ecology Ltd., 2025).



aLyne Ecology Ltd. was commissioned to undertake a Biodiversity Net Gain (BNG) Assessment in May 2025, later revisions in August and October 2025 and March 2026 were conducted (aLyne Ecology Ltd., 2026).

2.4 Proposed Development

The proposals relate to the construction of a new residential housing development with associated gardens, driveways and landscaping. A proposed road will dissect the existing on-site woodland (a total area of 0.0177ha will be lost) and two small lengths of boundary hedgerow (a total of 12m). The majority of lost habitat for the proposed development will be an existing ploughed arable field (2.66 ha). All remaining habitat areas will be retained and incorporated into the proposals (Barnes Walker, 2025).

2.5 Development Layout Scheme

In the absence of mitigation and avoidance measures, as shown in the M3942-SD-V01 Sketch Layout by Barnes Walker (Barnes Walker, 2025), the ploughed arable field will be lost to residential development with associated road access, parking and bin storage. The existing woodland on site will be dissected to create road access. Small lengths of hedgerow will be dissected in two locations for access. The initial layout plan for the proposed development is provided in Appendix 1.

2.6 Survey Objectives

aLyne Ecology Limited was commissioned to carry out surveys for protected species, as detailed below. The scope of ecological surveys was based on the recommendations of aLyne Ecology Ltd.'s Preliminary Ecological Appraisal and Ground Level Tree Assessment Report, Version 003, 1st October 2025 (aLyne Ecology Ltd., 2025):

- Bat activity surveys, comprising NBW, and deployment of static bat detectors.
- Hazel dormouse presence/absence survey, comprising deployment of footprint tunnels, nut searches and natural nest searches.

2.6.1 Bat Activity Surveys

The objective of the Bat Activity Surveys was to:

- Check for evidence of bat species to be present within the survey area, including species and abundance.
- Identify the ecological impacts of the development on foraging and commuting bats.
- Provide recommendations for avoidance, mitigation, enhancement, and compensation, where applicable.

A data search for known bat roosts within 1 km of the site was carried out. However, as there were no known roosts less than 10 years old, it was not possible to determine the Core Sustenance Zones (CSZs) element of the bat activity survey. Therefore, CSZs are not discussed further in this report.

2.6.2 Hazel Dormouse Presence/Absence Surveys

The objective of the Hazel Dormouse Presence/Absence Survey was to:

- Check for evidence of hazel dormice on site, including distribution and abundance.
- Identify the ecological impacts of the development on hazel dormice.
- Provide recommendations for avoidance, mitigation, enhancement, and compensation, where applicable.

2.6.3 Ecological Impact Assessment

The aim of this report is to deliver an Ecological Impact Assessment (EclA) in relation to the development and surveyed protected species, in accordance with Guidelines for Ecological Impact Assessment in the UK and Ireland (CIEEM, 2024). This assessment has been informed by ecological information collected in 2025. An EclA Checklist is provided in Appendix 2 to ensure conformity to BS42020:2023 - Biodiversity Code of practice for planning and development (BSI, 2013).

2.7 Survey Limitations

2.7.1 Bat Activity Surveys

There were no limitations to the surveys in terms of the following:

- The site could be fully accessed.
- Weather conditions.
- Personal competence (qualifications, training, skills, and experience).
- Time spent surveying.
- Resources (equipment and personnel).

- Data (e.g., arising from incomplete or inappropriate surveys).
- Timing or seasonal constraints and suboptimal survey periods.

Bat surveys undertaken using bat detectors are inherently biased, as bats with louder calls (such as the *Nyctalus* species) will be recorded at a greater distance (and therefore more frequently) than species, which use quiet calls such as *Plecotus* sp.

Long-eared bat (*Plecotus* spp.) is a genus that generally only emerges in full darkness, and which has a very quiet echolocation call, generally not detectable in the open if more than 3-5 m from the bat detector. As a result, long-eared bats are difficult to detect during activity surveys, and it is likely this genus is under-recorded during such surveys.

Due to the technical failure of an automated static bat detector in May 2025 at Location 2, only one static location could be collected. A second attempt was initiated to compensate for failed static in May 2025, but this was also found to have failed. This is not considered a significant limitation as all other deployments of statics across the site were successful and four NBW within the 2025 period were undertaken. Location 2 has the most calls over the survey period and an absence of data during May for Location 2 is not likely to have changed the overall assessment.

2.7.2 Bat Data Analysis

Species identification by sonogram is limited (to a certain extent) by similarities in call structure. In addition, all bats can modulate their calls according to the habitats they are navigating, their behaviour and the information they require at the time. This imposes limitations on reliable analysis particularly between species in the genera *Plecotus*, *Myotis*, and *Nyctalus*.

The above survey limitations are unavoidable, and it is considered that they have not affected the robustness of the bat activity survey results for the purposes of this study.

2.7.3 Hazel Dormouse Presence/Absence Surveys

There were no limitations to the surveys in terms of the following:

- The site could be fully accessed.
- Weather conditions.
- Survey effort in line with guidance
- Personal competence (qualifications, training, skills, and experience).
- Time spent surveying.
- Resources (equipment and personnel).
- Data (e.g., arising from incomplete or inappropriate surveys).
- Timing.

3. Relevant Legislation and Planning Policy

Full details of legislation and planning policy are provided in Appendix 3.

3.1 Bats

All UK bat species and their roosts are fully protected under Schedule 5 of the Wildlife & Countryside Act 1981 (as amended) (HM Government, 1981). All bats are also included in Schedule 2 of the Conservation of Habitats and Species Regulations 2017 (as amended) (HM Government, 2017), which defines "European protected species of animals" and are afforded further protection through the Countryside and Rights of Way (CRoW) Act, 2000 (HM Government, 2000).

The combined legislation makes it illegal to:

- Intentionally kill, injure, or capture bats.
- Deliberately disturb bats (whether in a roost or not).
- Damage, destroy or obstruct access to bat roosts.
- Possess or transport a bat or any part of a bat, unless acquired legally.
- Sell, barter or exchange bats, or parts of bats.

As a signatory to the Bonn Convention (Agreement of Bats in Europe), the UK is also required to protect their habitats, requiring the identification and protection from damage or disturbance of important feeding areas.

In this interpretation, a bat roost is "*any structure or place which any bat uses for shelter or protection*". Because bats tend to reuse the same roosts, legal opinion is that the protection of bat roosts are considered to apply regardless of whether bats are present or not. There is currently no guidance on when a roost ceases to be protected if it is not used by bats.

Under S.9(4)(b) of the Wildlife and Countryside Act 1981 (as amended) (HM Government, 1981) it is an offence to intentionally or recklessly disturb a bat '*while it is occupying a structure or place which it uses for shelter or protection*'. However, R.39(1)(b) of the Habitats Regulations (HM Government, 2017) states: '*A person commits an offence if they - (b) deliberately disturb animals of any such species (including bats) in such a way as to be likely significantly to affect — (i) the ability of any significant group of animals of that species to survive, breed, or rear or nurture their young, or (ii) the local distribution or abundance of that species*'. The loss or damage of habitats, which are important for foraging and commuting bats, could result in roosts being abandoned and bats not being able to forage. Therefore, it can be concluded that the Habitat Regulations affords protection to bat foraging and commuting habitats.

If planned works would constitute an offence, they may only be carried out under licence from Natural England. Works or mitigation activities involving interference with bats or bat shelters must be carried out by a licensed bat worker (with a Natural England Bat Licence).

Furthermore, the Natural Environment and Rural Communities Act (NERC Act) 2006 (HM Government, 2000), requires due consideration be given to biodiversity and its potential enhancement when considering proposed developments. Several bat species are listed as species of principal importance.

The National Planning Policy Framework, 2024 (NPPF) (HM Government, 2024) sets out government policy on biodiversity in planning decisions. Under the NPPF, the presence of a protected species is a material consideration when a planning authority is considering a development proposal.

3.2 Hazel Dormouse

Hazel dormice are listed on Schedule 5 of the Wildlife and Countryside Act, 1981 (as amended) (HM Government, 1981), and are subject to the provisions of Section 9, which makes it an offence to:

- Intentionally kill, injure, or take a hazel dormouse ((Section 9(1))).
- Possess or control any live or dead specimen or anything derived from a hazel dormouse ((S 9(2))) (unless it can be shown to have been legally acquired).
- Intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection by a hazel dormouse ((S 9(4)(a))).
- Intentionally or recklessly disturb a hazel dormouse while it is occupying a structure or place which it uses for that purpose ((S9(4)(b))).

The hazel dormouse is included in Section 2 of the Conservation of Habitats and Species Regulations 2017 (as amended) (HM Government, 2017), which makes it an offence to:

- Deliberately capture or kill a hazel dormouse (Regulation 39(1)(a)).
- Deliberately disturb a hazel dormouse (R. 39(1)(b)).
- Damage or destroy a breeding site or resting place of a hazel dormouse (R. 39(1)(d)).

Keep, transport, sell or exchange, or offer for sale or exchange alive or dead hazel dormouse or any part of a hazel dormouse (R. 39(2)). The hazel dormice are also Priority Species under Section 41 of the Natural Environment and Rural Communities Act 2006 (HM Government, 2006).

3.3 Breeding Birds

The Wildlife and Countryside Act 1981 (as amended) is the principal legislation affording protection to all wild birds in the UK. Additionally, species listed on Schedule 1, Part 1 of the Act are protected by special penalties at all times.

In addition to legal protection, some bird species are classified according to their conservation status. This includes their inclusion on the Red and Amber lists of Birds of Conservation Concern (BoCC) in the UK which was updated in December 2021 (JNCC, 2021), and whether they have been identified as Priority Species listed on Section 41 of the NERC Act, 2006.

3.4 Brown Hare

The brown hare is a Priority Species as listed under Section 41 of the NERC Act, 2006.

3.5 Ecological Impact Assessment

Ecological Impact Assessments (EclAs) provide the ecological component of Environmental Impact Assessment (EIA), required under the EIA Regulations.

EIAs are carried out to meet the requirements of Council Directive 85/337/EEC (European Commission, 1985) on the assessment of the effects of certain public and private projects on the environment, as amended by Council Directives 97/11/EC, 2003/35/EC and 2009/31/EC and redrafted in a codified version Directive 2011/92/EU. The amended Environmental Impact Assessment (EIA) Directive 2014/52/EU (European Commission, 2014) entered into force in 2014 to simplify the rules for assessing the potential effects of projects on the environment and Member States had to apply these rules from May 2017. The Directive requires EIA to be carried out before development consent is granted for projects that are likely to have significant environmental effects. EIA is a mandatory requirement for projects listed in Annex I of the Directive. It is also required for projects that meet the criteria for Annex

It development and are likely to have significant environmental effects (as defined in Annex III of the Directive).

4. Survey Methods

4.1 Bat Activity Surveys

4.1.1 NBW

Four NBWs were completed in total following best practice guidelines (Collins, 2023), including one NBW in the spring (May 2025), two NBWs in the summer (July and August 2025) and one NBW in the autumn (September 2025). The NBW comprised surveyors remaining stationary in pre-determined stationary positions on site for 45 minutes recording all bat activity. The surveyors then walked a pre-determined transect route around the site focusing on suitable foraging and commuting habitats for bats for a further 1 hour and 30 minutes (see Figure 2). Each transect route was completed twice by two surveyors equipped with an Elekon BatLogger M bat detector. NBW routes and stationary positions are provided in Figure 2. Heat maps have been produced which show species data from all four visits, displaying the distribution and level of foraging, and commuting activity of bats across the site where activity was most concentrated. Figure 4e shows the species data heatmaps for all four visits combined.

Descriptions of the pre-determined stationary positions are shown in Table 3, descriptions of the walked transect routes are shown in Table 4, and the NBW survey details are shown in Table 5. Raw data is provided in Appendix 4.

Table 3. Details of Stationary Positions of the NBW

Stationary Position	Habitat and Potential Bat Feature Details	Time Elapsed (minutes)
1	South-western corner of the site alongside the boundary hedgerow beside the arable field, looking across the arable field towards the woodland and hedgerows on the western boundary.	45
2	North-western corner of the site alongside the boundary hedgerow beside the arable field, looking towards the woodland.	45

Table 4. Details of Walked Transect of the NBW

Description of Walked Transect	Time Elapsed (minutes)
Walking beside the boundary hedgerows, edge of the woodland and within the arable land across the site.	90

Table 5. NBW Survey Details

		Survey Visit 1	Survey Visit 2	Survey Visit 3	Survey Visit 4
Date:		22.05.2025	07.07.2025	13.08.2025	15.09.2025
Surveyors ¹ :		JBr, SP	CG, MR	MR, JNB	CG, MB
Weather conditions:	Start:	10°C, dry, 0% cloud cover, wind force 0	17° C, 20% cloud cover, wind force 2	22°C, dry, 100% cloud cover, wind force 3	16° C, 20% cloud cover, wind force 2
	End:	5°C, dry, 0% cloud cover, wind force 0	12° C, 10% cloud cover, wind force 2	10°C, dry, 0% cloud cover, wind force 0	11° C, dry, 20% cloud cover, wind force 2
Sunset time:		20:58	21:21	20:39	19:15
Start time:		20:43	21:06	20:24	19:00
Finish time		23:28	23:51	23:09	21:45

¹Surveyors: Charlie Gardiner BSc (Hons) ACIEEM; JBr – Josh Brown BSc (Hons) ACIEEM; JNB - Jess Neil-Boss BSc (Hons) MSc; MR – Martin Roche BSc (Hons) ACIEEM; SP – Steve Preston; Megan Beard BSc (Hons).

Bat echolocation calls were analysed using BatExplorer software and bat species identified by comparison of sonograms with a reference of echolocation call parameters and library of known echolocation calls. Echolocation calls were assigned to species level where possible. Where this was not deemed possible identification to genus level was made.

4.1.2 Automated Static Detector Surveys

In addition to manually walked bat activity transects, two automated Elekon S2 static bat detectors were installed on site for a period of a minimum of five consecutive nights (Table 6). Six visits were carried out, one month apart between May and October 2025 (Table 7).

The static detectors were installed in locations that were likely to provide suitable foraging and commuting habitat for bats (e.g., woodland, lines of trees, and scrub). Static detector locations are shown in Figure 3. The weather conditions were largely optimal for recording bat activity during the period of the survey.

Table 6. Automated Bat Detector Locations

Location	Description
1	A detector was placed high on a tree amongst woodland. As part of the proposals, a section of the woodland will be lost for the creation of a road.
2	A detector was placed on a tree within the retained hedgerow on the eastern boundary facing the arable field.

Table 7. Automated Bat Detector Survey Dates

Visit	Dates	Number of Nights
1	22 nd May – 30 th May 2025	5
2	3 rd June – 10 th June 2025	5
3	7 th July – 16 th July 2025	5
4	5 th August – 12 th August 2025	5
5	2 nd September – 9 th September 2025	5
6	3 rd October-10 th October 2025	5

4.2 Hazel Dormouse Presence/Absence Survey

A hazel dormouse presence/absence survey was undertaken, with reference to the Hazel Dormouse Mitigation Handbook (Wells, D. Chanin, P., Gubert, L., 2025) and Dormouse Conservation Handbook (Bullion, 2025).

4.2.1 Footprint Tunnel Surveys

Fifty (50) footprint tunnels were deployed on 13th June 2025 by Martin Roche BSc (Hons) ACIEEM (NE Hazel Dormouse Class Licence: WML-CL10a Registration Number: 2019-39316-CLS-CLS). The footprint tunnels were deployed in suitable interconnected habitat within the site boundary where hazel dormice could potentially commute and forage. The locations of the footprint tunnels were recorded using QGIS 3.22 'Białowieża' (see Figure 5). In line with best practice guidelines (Wells, D. Chanin, P., Gubert, L., 2025) (Bullion, Wolton & White, 2025), the footprint tunnels were left to bed in for two weeks before the first visit was completed to allow for neophobia (fear of anything unfamiliar) to settle. Ink was replenished on each visit and any papers that contained prints (both hazel dormouse or non-hazel dormouse prints) were collected for analysis and replaced. All dormouse footprint tunnels were collected on 16th September 2025, following the final visit.

Survey dates and personnel are given in Table 8. Raw data is provided in Appendix 4.

Table 8. Details of Footprint Tunnel Survey

Visit Number	Survey Date	Surveyors*	Weather Conditions
1	26.06.2025	LB	23°C, dry, 10% cloud cover, wind force 1
2	07.07.2025	CG, MR	25°C, dry, 20% cloud cover, wind force 1
3	21.07.2025	MB	18°C, dry, 100% cloud cover, wind force 1
4	05.08.2025	MB	21°C, recent rainfall, 80% cloud cover, wind force 1
5	19.08.2025	MB	19°C, dry, 100% cloud cover, wind force 1
6	03.09.2025	JNB	20°C, dry, 50% cloud cover, wind force 1
7	16.09.2025	CG, MB	16°C, 50% cloud cover, wind force 1

*Surveyors: CG – Charlie Gardiner BSc (Hons) ACIEEM; JBr – Josh Brown BSc (Hons); LB – Lucie Bloomfield BA (Hons); MR – Martin Roche BSc (Hons) ACIEEM; JNB – Jess Neil-Boss BSc (Hons) MSc, MB – Megan Beard BSc (Hons)

4.2.2 Nut Search

The recommended protocol is to carry out surveys between September and February, if possible, collecting 100 hazel nuts with evidence of feedings signs by hazel dormice, *Apodemus* sp., or *Myodes* sp. (excluding caches) (Bullion S. W., 2025) (Wells, D. Chanin, P., Gubert, L., 2025). If 100 hazel nuts opened by small rodents (except squirrels) have been collected, but none were opened by hazel dormice, the probability of absence is >99%, which is accepted as evidence of likely absence (Wells, D. Chanin, P., Gubert, L., 2025).

Nut searches were carried during each of the seven-dormouse footprint tunnel check between June to September 2025, (twice a month). Fallen hazel nuts were inspected for evidence of feeding signs and any hazel nuts with evidence of feedings signs by hazel dormice, *Apodemus* sp., or *Myodes* sp. were collected. In line with best practice guidelines, any hazel nuts with evidence of grey squirrel (*Sciurus carolinensis*) feeding signs and any hazel nuts found within a cache were disregarded. If any hazel nuts that showed evidence of hazel dormouse feeding signs were identified, their location was geo-tagged using QGIS 3.22 'Białowieża' (Wells, D. Chanin, P., Gubert, L., 2025).

4.2.3 Natural Nest Search

Hazel dormouse nests built above ground during the active season are usually sufficiently distinctive to be used as a means of detecting presence (Wells, D. Chanin, P., Gubert, L., 2025).

The suitable habitat for hazel dormouse on site was inspected on 24th June and 7th July by Martin Roche BSc (Hons) ACIEEM (NE Hazel Dormouse Class Licence: WML-CL10a Registration Number: 2019-39316-CLS-CLS) for natural hazel dormouse nests. If any natural hazel dormouse nests were identified, their location was recorded using QGIS 3.22 'Białowieża'.

5. Ecological Impact Assessment Methods

The evaluation and assessment within this report have been undertaken with reference to Guidelines for Ecological Impact Assessment in the UK and Ireland (CIEEM, 2024).

5.1.1 Zone of Influence

The Zone of Influence is defined, in this case, as the site and immediately adjacent habitats.

5.1.2 Criteria for Evaluating Ecological Features

A first step in EclA is determination of which ecological features (habitats, species, ecosystems, and their functions/processes) are important. The designation of a habitat (i.e., European designated sites, SSSIs and LNRs) and protection of a species/species groups (i.e., European protected species, species protected under the Wildlife and Countryside Act, 1981 and Priority Species) forms the starting point for identifying important ecological features that need to be scoped into an EclA.

Where protected species are present and there is the potential for a breach of the legislation, those species should always be considered as 'important' features.

Ecological features may also be important for the following reasons:

- They form a 'stepping-stone' between sites.
- They are rare or uncommon locally.
- They are irreplaceable.
- Naturalness.
- Diversity.
- Connectivity to the wider landscape.
- They are in decline.
- They are on the edge of their range.

The importance of an ecological feature is considered within a defined geographical context. The following frame of reference has been used for this report:

- International (European).
- National (England).
- Regional (East of England).
- County (Herefordshire).
- Local (Ashwell, Baldock).
- Site (the site and immediately adjacent areas).

Consideration of impacts at all scales is important, and essential if objectives for no net loss of biodiversity and maintenance of healthy ecosystems are to be achieved.

5.1.3 Assessment of Significance

For the purpose of EclA, 'significant effect' is an effect that either supports or undermines biodiversity conservation objectives for 'important ecological features' or for biodiversity in general. Effects can be considered significant at a wide range of scales from international to local.

Significant effects have been qualified with reference to an appropriate geographic scale.

The assessment of significance process involves:

- Identifying and characterising impacts and their effects.
- Incorporating measures to avoid and mitigate negative impacts and effects.
- Assessing the significance of any residual effects after mitigation.
- Identifying appropriate compensation measures to offset significant residual effects.
- Identifying opportunities for ecological enhancement

When assessing potential effects on conservation status, the known or likely background trends and variations in status have been taken into account. The level of ecological resilience or likely level of ecological conditions that would allow the population of a species or area of habitat to continue to exist at a given level or continue to increase along an existing trend or reduce a decreasing trend, has been estimated.

5.1.4 Characterising Ecological Impacts

This assessment includes potential impacts on each ecological feature determined as 'important' from all phases of the project, e.g., construction and operation. Both positive and negative impacts have been assessed.

When describing ecological impacts and effects, reference has been made to the following characteristics, as required:

- Positive or negative.
- Extent.
- Magnitude.
- Duration.
- Frequency and timing.
- Reversibility.

Examples of activities that can give rise to ecological impacts are as follows:

Pre-Construction Phase

- Vegetation clearance and tree felling.
- Demolition.

Construction Phase

- Access for construction vehicles.
- Storage areas for vehicles, materials, equipment, and site offices.
- Movement of materials around the site.
- Demolition activities.
- Ground excavation and landscaping.
- Drainage.
- Drilling operations.
- Waste disposal.
- Release of contaminants.
- Dust generation.
- Soil stripping.
- Environmental accidents and spillages.
- Lighting at night.
- Construction of structures and hard surfaces.

Operation Phase

- Access.
- Drainage.
- Implementation of landscaping and habitat management.
- Presence of people, recreational activities, vehicles, risk of fires.
- Lighting.
- Physical presence of roads and buildings.
- Presence of pets.
- Runoff of contaminants.

5.1.5 Identification of Cumulative Impacts

Cumulative effects can result from individually insignificant but collectively significant actions taking place over a period of time or concentrated in a location. Cumulative effects are particularly important in EclA as ecological features may be already exposed to background levels of threat or pressure and may be close to critical thresholds where further impact could cause irreversible decline. Cumulative effects can also make habitats and species more vulnerable or sensitive to change.

Projects, which have been included in the assessment of cumulative impacts are as follows:

- Proposals for which consent has been applied which are awaiting determination in any regulatory process (not necessarily limited to planning permission).
- Projects which have been granted consent (not limited to planning permissions) but which have not yet been started, or which have been started but are not yet completed (i.e., under construction).
- Proposals which have been refused permission, but which are subject to appeal, and the appeal is undetermined.
- To the extent that their details are in the public domain, proposed projects that will be implemented by a public body but for which no consent is needed from a competent authority.

5.1.6 Assessment of Residual Impacts

After assessing the impacts of the proposal, all attempts have been made to avoid and mitigate ecological impacts. Once measures to avoid and mitigate ecological impacts have been finalised, assessment of the residual impacts has been undertaken to determine the significance of their effects on ecological features. Any residual impacts that will result in effects that are significant, and the proposed compensatory measures, will be considered against ecological objectives (legislation and policy) in determining the outcome of the application.

In EclA it is only essential to assess and report significant residual effects that remain after mitigation measures have been taken into account.

5.1.7 Avoidance, Mitigation, Compensation, and Enhancement

The mitigation hierarchy has been adopted in this assessment. Following the application of avoidance measures, mitigation by design has been assessed.

Compensation describes measures taken to offset residual effects resulting in the loss of, or permanent damage to, ecological features despite mitigation. As a general rule, compensation should be focused on the same type of ecological features as those affected and equivalent levels of ecological 'functionality' sought. There will be cases when it is not possible to achieve ecological equivalence through compensation. Any replacement area should be similar in terms of ecological features and ecological functions that have been lost or damaged, or with appropriate management have the ability to reproduce the functions and conditions of those ecological features. Compensation should be provided as close as possible to the location where effects have occurred and benefit the same habitats and species as those affected.

5.1.8 Identification of Ecological Monitoring

The EclA should identify where monitoring is required for mitigation, compensation, and enhancement measures. It should set out the methods to be used, the criteria for determining success/failure, appropriate timing, mechanisms for implementation, frequency and duration of monitoring, and frequency of reporting. Monitoring should be secured through a planning condition or obligation built into legal agreements, which the proponent must implement fully.

6. Survey Results

6.1 Bat Activity Surveys

6.1.1 NBW

NBW (Walked Transect)

One hundred (100) passes were recorded from six different species and *Myotis* sp. during all four visits between May to September. Table 9 provides the results of the walked transects. Figures 4a to Figure 4d provides a heatmap for each transect. Figures 4e provides a heatmap showing all data from all transect combined into one.

NBW (Stationary Positions)

In the stationary positions, activity of bats was low with only common pipistrelle and noctule recorded. Visual sightings of common pipistrelle bats were seen foraging and commuting along the northern hedgerow during Transect 3 (August) and Transect 4 (September). Table 10 provides the results of the stationary positions.

Table 9. NBW Walking Transect Survey Results

Species	Spring	Summer		Autumn	Total
	Transect 1 – May 2025 (First Bat Pass)	Transect 2 – July 2025 (First Bat Pass)	Transect 3 – August 2025 (First Bat Pass)	Transect 4 – September 2025 (First Bat Pass)	
Common Pipistrelle (<i>Pipistrellus pipistrellus</i>)	11 (21:34)	3 (22:10)	53 (21:10)	16 (20:19)	83
Brown long-eared (<i>Plecotus auritus</i>)	0	0	1 (22:33)	0	1
Soprano pipistrelle (<i>Pipistrellus pygmaeus</i>)	0	0	1 (21:11)	0	1
Noctule (<i>Nyctalus noctula</i>)	0	3 (22:04)	6 (21:19)	0	9
Serotine (<i>Eptesicus serotinus</i>)	0	2 (22:19)	0	0	2
Natterer's bat (<i>Myotis nattereri</i>)	0	2 (22:42)	0	0	2
<i>Myotis</i> sp.	0	0	2 (21:32)	0	2
Total	11	10	63	16	100

Table 10. NBW Stationary Position Survey Results

Transect	Activity (Stationary Position)
1 (Spring - May 2025)	<u>Stationary Position 1</u> - Three passes of common pipistrelle heard but not seen between 21:31 and 21:35. <u>Stationary Position 2</u> - Seven passes of common pipistrelle bats heard but not seen between 21:24 and 21:28, believed to be off-site to the north.
2 (Summer 1 - July 2025)	<u>Stationary Position 1</u> - None recorded. <u>Stationary Position 2</u> - None recorded.
3 (Summer 2 - August 2025)	<u>Stationary Position 1</u> - One pass of common pipistrelle heard but not seen at 20:56. - One pass of noctule heard but not seen at 21:08. <u>Stationary Position 2</u> - Four passes of noctule heard but not seen between 20:54 and 20:52 - Twenty-five (25) passes of common pipistrelle seen foraging and commuting along the hedgerow on-site on the northern boundary between 20:52 and 21:09.
4 (Autumn - September 2025)	<u>Stationary Position 1</u> - None recorded. <u>Stationary Position 2</u> - Two passes of common pipistrelle seen foraging along the hedgerow on-site on the northern boundary between 19:40 and 19:41.

6.1.2 Automated Static Detector Surveys

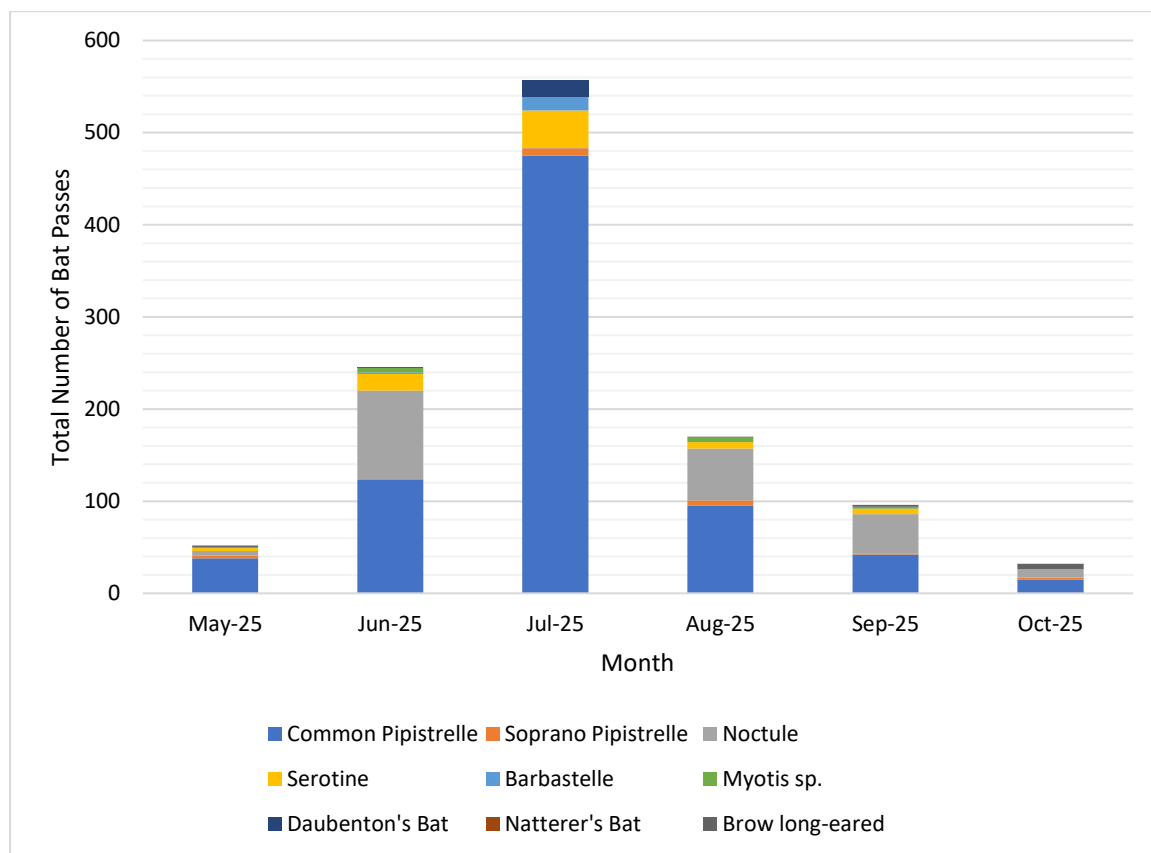
In total, at least nine different species of bat and *Myotis* sp. were recorded during the automated static detector surveys, totalling eleven thousand and nine hundred and one (11,901) bat passes. Species recorded include common pipistrelle, soprano pipistrelle, Nathusius' pipistrelle (*Pipistrellus nathusii*), noctule, serotine, Daubenton's bat (*Myotis daubentonii*), Natterer's bat, brown long-eared and barbastelle (*Barbastella barbastellus*). A total of one hundred and twenty (120) calls were classified as *Myotis* sp. which could be identified to genus level only.

A summary of the number of bat passes recorded over six visits, including the total number of calls for each species, the peak count, and the total number of hours the detectors were recording, and the bat passes per hour (calculated by dividing the number of species passes recorded, by the total duration of each survey, to give the mean number of passes per hour), are shown in Table 11. Figure 3 provides the locations of the automated static bat detectors.

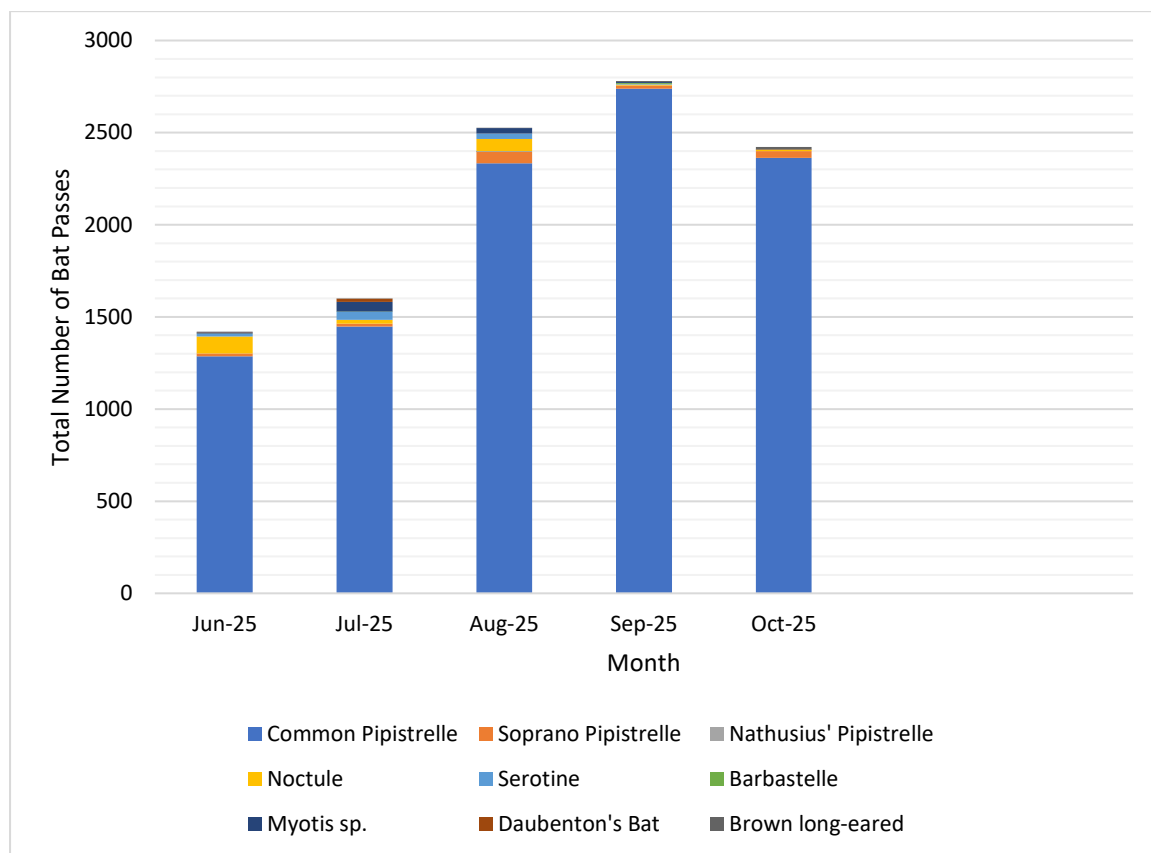
Table 11. Combined Results of Automated Bat Detector Surveys

Visit Number	Common Pipistrelle	Soprano Pipistrelle	Nathusius' Pipistrelle	Noctule	Serotine	Barbastelle	<i>Myotis</i> sp.	Daubenton's bat	Natterer's bat	Brown long-eared	Total Number
1 (May)*	38	3	0	5	3	0	1	0	0	2	52
2 (June)	1,409	17	0	188	32	3	12	2	1	2	1666
3 (July)	1,923	23	1	62	59	1	70	17	0	1	2157
4 (August)	2,428	71	2	121	37	0	34	0	0	3	2696
5 (September)	2,781	18	0	48	10	4	8	0	0	7	2876
6 (October)	2,379	37	0	18	0	0	1	1	0	18	2454
Total Number	10,958	169	3	442	141	8	126	20	1	33	11,901
Peak Count	2,781	71	2	188	59	4	70	17	1	18	N/A
Total Duration of Survey (Hours)	276.47	276.47	276.47	276.47	276.47	276.47	276.47	276.47	276.47	276.47	N/A
Bat Passes per Hour	39.63	<1	<1	1.59	<1	<1	<1	<1	<1	<1	N/A

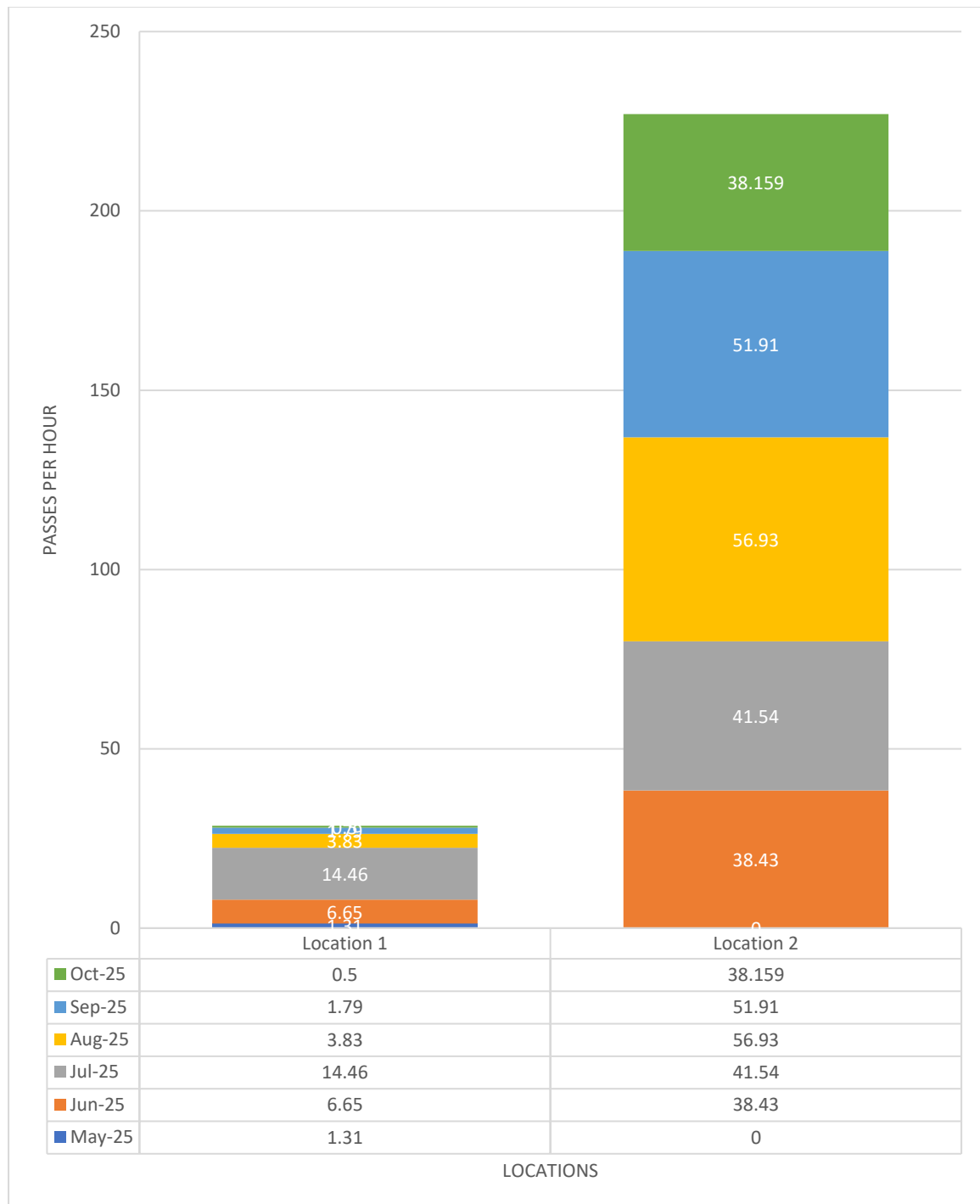
*Only one detector used during Visit 1 (May) due to technical failure.

Graph 1. Total Number of Bat Passes for Each Species at Location 1 throughout the Survey Period

As shown in Graph 1, at Location 1 total bat activity levels peaked in July 2025 (total of 557 passes for Location 1). Total number of bat passes were noticeably higher in June 2025 and July 2025 with number of passes recorded being higher than 200. Total number of bat passes were noticeably lower (less than 170 passes) in May 2025, August 2025, September 2025 and October 2025, with October 2025 being the lowest (32 passes in total).

Graph 2. Total Number of Bat Passes for Each Species at Location 2 throughout the Survey Period

As shown in Graph 2, at Location 2 total bat activity levels peaked in September 2025 (total of 2,780 passes for Location 2). The total number of bat passes were noticeably higher in August 2025, September 2025, and October 2025 with number of passes recorded being higher than 1,600 which is higher than the peak number of passes in Location 1. The total number of bat passes were at their lowest in June 2025 (1,420 passes). The data for May could not be collected due to technical failure with the detector.

Graph 3. Bat Passes per Hour by Static Detector Location During Each Survey Month

As shown in Graph 3, the month with the highest passes per hour for Location 1 was July 2025 (14.46) and the lowest was October 2025 (0.5). The month with the highest passes per hour for Location 2 was August 2025 (56.93) and the month with the lowest passes per hour was October 2025 (38.43). In Location 2 recorded higher passes per hour than Location 1 across all months (Graph 3).

6.2 Hazel Dormouse Presence/Absence Survey

6.2.1 Footprint Tunnel Surveys

No hazel dormice or evidence of hazel dormice was recorded during the seven visits. Wood mice or yellow necked mice (*Apodemus sp.*) footprints were recorded in all visits.

Full results of the hazel dormouse survey are provided in Table 12. A map showing the locations of nest tubes is included in Figure 5.

Table 12. Summary of Hazel Dormouse Presence/Absence Survey Results

Visit Number	Date of Survey	Evidence of Hazel Dormice	Other*
1	26.06.2025	None	<i>Apodemus sp.</i>
2	07.07.2025	None	<i>Apodemus sp.</i>
3	21.07.2025	None	<i>Apodemus sp.</i>
4	05.08.2025	None	<i>Apodemus sp.</i>
5	19.08.2025	None	<i>Apodemus sp.</i>
6	02.09.2025	None	<i>Apodemus sp.</i>
7	16.09.2025	None	<i>Apodemus sp.</i>

6.2.1 Nut Search

During Visits 1 to 6, five hazel nuts that showed evidence of *Apodemus sp.* feeding signs were recorded on site, but none showing evidence of hazel dormouse feedings signs were recorded.

6.2.2 Natural Nest Search

No natural hazel dormouse nests were recorded on site during the deployment of footprint tunnels on 13th June and Visit 3 on 7th July.

6.3 Incidental Records

6.3.1 Breeding Birds

During Visit 2 of the bat transect survey in June 2025, quail (*Synoicus ypsilophorus*) was recorded off-site but immediately adjacent to the site boundary in neighbouring arable cereal crop fields.

6.3.2 Brown Hare

During Visit 7 of the hazel dormouse presence/absence survey in September 2025, brown hare (*Lepus europaeus*) was noted on-site within the ploughed arable field.

7. Evaluation of Ecological Importance

7.1 Bat Activity Surveys

7.1.1 NBW

NBW (Walked Transect)

In the walked transects, one hundred (100) passes, comprising at least six (6) different species and *Myotis* sp., were recorded in total over the four visits. These include common pipistrelle, soprano pipistrelle, noctule, serotine, brown long-eared and Natterer's bats. Two passes were classified as *Myotis* bats which could be identified to genus level only. Common pipistrelle accounted for 83% of the total bat passes recorded on site, followed by noctule, which accounted for 9%, followed by Natterer's bat, *Myotis* sp. and serotine which accounted for 2% of passes each. Brown long-eared and soprano pipistrelle both accounted for 1% of the total bat passes recorded each. Bat activity peaked during Transect 3 (August) when sixty-three (63) passes were recorded. Figures 4a to Figure 4e provide heatmaps showing the distribution and level of activity on site for each species.

NBW (Stationary Positions)

There were fewer passes consistently at the southern end of the site boundary at Stationary Position 1 with very few bats recorded over the four visits. No bats were seen or heard during Visit 2 at both Stationary Position 1 and 2. At Stationary Position 2, common pipistrelle bats were seen and recorded on Visit 3 and Visit 4 actively foraging and commuting along the northern hedgerow where there are direct connections towards more optimal foraging habitats in the local rural landscape.

7.1.2 Automated Static Detector Surveys

The passes per hour indicate bat activity levels on site are moderate overall as common pipistrelle had the highest bat passes per hour on site with 39.63, followed by noctules (1.59). The bat passes per hour for Nathusius' pipistrelles, serotines, barbastelles, Daubenton's bat, Natterer's bat and brown long-eared bats was less than 1, indicating there are very low activity levels for these species on site. However, barbastelles, were recorded in three of the six months at Location 2, which indicates there could be a roost for these species off-site locally in the wider landscape and are foraging through along the northern hedgerow on occasion.

As shown in Graph 1, the highest number of bat passes at Location 1 was recorded in July 2025 with five hundred and seven (557) passes. This contrasts with Graph 2 as Location 2 had the highest number of passes in September 2025 with two thousand, seven hundred and eighty (2,780) passes. This could be an indication the habitats at Location 2 are more valuable for bats given the higher number of passes which was consistent throughout the six visits. Usually in September, bats are transitioning out of their maternity roosts and moving to their mating roosts and would be using landscape features such as the mature hedgerows on the northern and eastern boundaries as commuting and foraging routes. The noticeably lower total bat passes at Location 1, and the higher total bat passes at Location 2 could indicate the bats are favouring the habitats at Location 2 overall.

7.1.3 Summary of Bat Activity

Between both the NBW and the automated static detector surveys, common pipistrelle was the most common species recorded over the survey period between May and October. Although barbastelle was recorded passing at Location 2 over three of the six months surveyed, eight passes were recorded suggesting barbastelle are not roosting within the site or nearby and infrequently forage within the site. Species across the surveys most frequently recorded were common species which are likely abundant within the local landscape. Therefore, foraging and commuting bat activity has been assessed as important at the 'local' context.

See Table 13 for a summary of the significance of foraging and commuting habitats on site for all species recorded during the walked transects and automated static detector surveys.

Measures for avoidance, mitigation and enhancement for foraging and commuting bats have been recommended in Section 9.1.

Table 13. Summary of Geographic Frame of References for Bats

Geographic Frame of Reference (Commuting Routes)	Geographic Frame of Reference (Foraging Areas)
Local	Local

7.2 Hazel Dormice Presence/Absence Survey

Fifty footprint tunnels were deployed on site between June 2025 and September 2025 by aLyne Ecology following best practice guidelines (Wells, D. Chanin, P., Gubert, L., 2025), and no evidence of hazel dormice was recorded on site. In addition, during the presence/absence surveys carried out between June and September 2025:

- No evidence of hazel dormice was recorded on site.
- No hazel dormouse footprints were recorded on site.
- No hazel nuts with evidence of hazel dormouse feeding signs were recorded.
- No natural hazel dormouse nests were recorded on site.

Therefore, it can be reasonably concluded that hazel dormice are likely-absent from the site and further avoidance and mitigation measures for hazel dormice are not required. Further enhancement measures which would benefit small mammals, including hazel dormice are included, as for bats, in Section 9.1.

7.3 Incidental Records

7.3.1 Breeding Birds

Quails were recorded adjacent to the site boundary, off-site in June 2025. However, there is a lack of suitable habitat for breeding quails on site given the habitats comprise ploughed arable fields with limited vegetation cover. During the breeding season for quails, it was noted that off-site adjacent habitats contained in-rotation fields with cereal crops which were suitable habitats for quail, unlike the arable ploughed fields on-site. It is unlikely that quails are breeding on-site during the breeding season given the existing habitat type and condition of the on-site habitats.

Given the very limited suitability of on-site habitats for quails, it can be reasonably concluded that quails are not breeding on-site and further avoidance and mitigation measures for quails are not required. However, enhancement and protection measures for quails are provided in Section 9.2 and 9.3.

7.3.2 Brown Hare

Brown hare was recorded on site in September 2025. The site contains habitats which could support the brown hare, including within the ploughed arable field, hedgerow and woodland. Brown hares are likely using the site and surrounding off-site fields. No other field signs for brown hares were found on-site during the surveys.

However, given the extent of more suitable optimal habitats for brown hare off-site within fields and other hedgerows, it can be reasonably concluded that brown hares are more likely to use better quality habitats in the wider local landscape. Therefore, further avoidance and mitigation measures are not required for brown hare which is assessed as important at the 'Site' context only. Enhancement and protection measures for brown hares are provided in Sections 9.2 and 9.3.

7.4 Summary of Important Ecological Features

A summary of important ecological features, their geographic level of importance and whether they are likely to be impacted on by the development is provided in Table 14. Table 14 only includes ecological features scoped into the assessment, i.e., features, which will be affected by the development proposals and that have been assessed as ecologically important.

Table 14. Important Ecological Features

Ecological Feature	Geographic Level of Importance	Potential to be Significantly Impacted?
Hazel dormice	N/A	No
Foraging and commuting bats	Local	Yes
Brown hare	Site	No

Therefore, only foraging and commuting bats have been included in assessment of likely significant effects.

8. Assessment of Likely Significant Effects

8.1 Mechanisms of Potential Significant Effects

8.1.1 Foraging and Commuting Bats

Foraging and commuting habitats for bats on site, including hedgerows and woodland would be partially removed and then disturbed throughout the duration of the development as a result of noise and light pollution.

Therefore, foraging/commuting bats have been scoped into the assessment and, measures for avoidance, mitigation, and enhancement have been recommended in Section 9.1.

8.1.2 Summary of Mechanisms of Potential Significant Effects

Potential significant effects on important ecological and nature conservation features resulting from the construction and operational phases of the proposed development are summarised in Table 15.

Table 15. Mechanisms of Potential Significant Effects

Significant Effects	Mechanisms
<i>Pre-Construction and Construction Phases</i>	
Loss of hedgerows and woodland	Removal of hedgerows and woodland during site clearance, pollutants, soil compaction, biochemical changes.
<i>Operational Phase</i>	
Degradation and fragmentation of retained hedgerows and trees	Tree/scrub removal, depositing of garden waste, leading to establishment of invasive species, trampling, loss of ground flora.
Reduction in animal populations	Permanent partial loss of suitable foraging and commuting habitat.
Displacement of animals	Visual (through increased lighting), noise or vibration-related disturbance. Habitat loss and degradation (see above) may also displace resident animals.

8.2 Potential Significant Effects on Site

Table 16 describes the potential significant effects in the absence of mitigation resulting from the construction and operational phases of the proposed development, for each of the important ecological features identified in Table 16. The likely impacts are presented and characterised, where appropriate, in terms of their extent, magnitude, duration, frequency, timing and reversibility.

Table 16. Potential Effects Resulting from Construction and Operational Phases for Important Ecological Features

Feature	Potential Effect and Mechanism	Extent/Magnitude	Duration	Timing	Reversibility	Significance
Foraging/commuting bats	<i>Construction Impacts</i>					
	Partial removal of hedgerows and woodland with suitability for foraging and commuting bats.	Hedgerow (loss of 12m) and woodland habitats (loss of 0.0177ha) on site	For the duration of the construction period, estimated to be one year.	Commencing approximately 2026 - 2027.	Irreversible	Local
	Disturbance to foraging and commuting bats through noise and light pollution					
	<i>Operational Impacts</i>					
	Disturbance to foraging/commuting bats through noise and light pollution	Hedgerow (loss of 12m) and woodland habitats (loss of 0.0177ha) on site	For the duration of the construction period, estimated to be one year.	Commencing approximately 2026 - 2027.	Irreversible	Local

8.3 Cumulative Effects

In this section, we consider those effects that may arise cumulatively from the proposed development in combination with other plans and projects proposed/consented but not yet built and operational (i.e., those developments that are separate from the baseline).

A search for planning applications in Ashwell within 2 km of the proposed development site was carried out on the North Herts Council website (www.north-herts.gov.uk/planning). Most applications are for small-scale projects and tree works, such as extensions, repairs, and conversions. An application for the erection of a detached dwelling and detached garage (reference: 25/01929/FP) was granted permission on 8th October 2025 (North Herts Council, 2025). However, the creation of one detached dwelling and detached garage is unlikely to create a significant cumulative effect given the development is approximately 0.9 km from the site, separated by existing arable fields and Station Road.

Therefore, cumulative effects of the development in combination with other proposed developments is concluded to be a negligible level of impact.

9. Avoidance, Mitigation, Compensation, and Enhancement

9.1 Foraging and Commuting Bats

In the absence of mitigation, the development would result in the minor loss of foraging and commuting habitats that are assessed of local importance. In order to protect foraging/commuting bats, the following recommendations should be adhered to:

- Loss of habitats that support foraging and commuting bats, including hedgerows and woodlands, should be compensated for.
- The minimal loss of hedgerows and woodland on-site for access has been compensated for within the most-updated development layout scheme by planting on-site, equitable to the amount lost on a 'like-for-like' basis. (Barnes Walker, 2026). The mitigation and compensation measures are shown in Appendix 5.

Further recommendations to minimise the potential impacts of artificial external lighting on bat activity, are provided below (Bat Conservation Trust, 2023):

- Avoid prolonged use of outside lighting during the period dusk to dawn, particularly during the bat active season (April to October).
- Security lighting should be on a motion sensor and short duration timer (1 minute).
- Lighting that is required for security or safety reasons, should use a lamp of no greater than 2000 lumens (150 Watts) and should comprise sensor activated lamps.
- Red light bulbs should be used, where possible.
- LED luminaires with a warm white spectrum (<2700 Kelvin) are the preferred option and should be used where possible. Luminaires should feature peak wavelengths higher than 550 nm to minimise disturbance to bats. All luminaires should lack UV elements, metal halide and fluorescent sources should not be used.
- Lighting should be directed to where it is needed with minimal light spillage. This can be achieved by limiting the height of the lighting columns and by using as steep a downward angle as possible and/or a specialist bollard that directs the light below the horizontal plane (<90°).
- Internal luminaires should be recessed where installed in proximity to windows to reduce glare and light spill.
- Waymarking inground markers with a low output and with cowls should be used to delineate path edges.
- Artificial lighting should not directly illuminate any potential bat roosting features or habitats of value to foraging bats, i.e., woodland and hedgerows.

9.2 CEMP (Biodiversity)

As per the recommendation in aLyne Ecology's Preliminary Ecological Appraisal and Ground Level Tree Assessment report (aLyne Ecology Ltd., 2025), a CEMP (Biodiversity) should be prepared, to ensure that retained habitats (including on-site hedgerow and woodlands) and protected species such as [REDACTED], quail and brown hare are protected during site clearance and construction works. A CEMP (Biodiversity) will provide site specific procedures to monitor and mitigate any ecological impacts and provide details of responsible persons throughout the construction phases.

9.3 BEMMS

A BEMMS should be prepared, detailing measures to ensure biodiversity on site is protected and enhanced as well as the parties responsible for the implementation of those measures. Enhancement measures to benefit quail, brown hare and hazel dormice include the planting of species-rich native hedgerows and woodland of a suitable species composition for the site conditions. The BEMMS will outline management techniques and management prescriptions for each habitat to be created and how these should be established and protected.

Further measures to be included within the BEMMS include the location and placement of bat and bird boxes as well as invertebrate and hedgehog refugia as recommended in aLyne Ecology's Preliminary Ecological Appraisal and Ground Level Tree Assessment (aLyne Ecology Ltd., 2025).

10. Residual Effects

Providing the avoidance and mitigation measures provided in Section 9 are adhered to, there are no predicted negative residual effects on site.

11. Monitoring

Further monitoring is not required.

12. Conclusion

Providing the avoidance, mitigation and enhancement measures detailed in this assessment are implemented, the development scheme should accord with relevant nature conservation legislation, as well as local plan Policy NE4: Biodiversity and Geological Sites North Hertfordshire Local Plan 2011-2031 (adopted November 2022) (North Herts Council, 2022).

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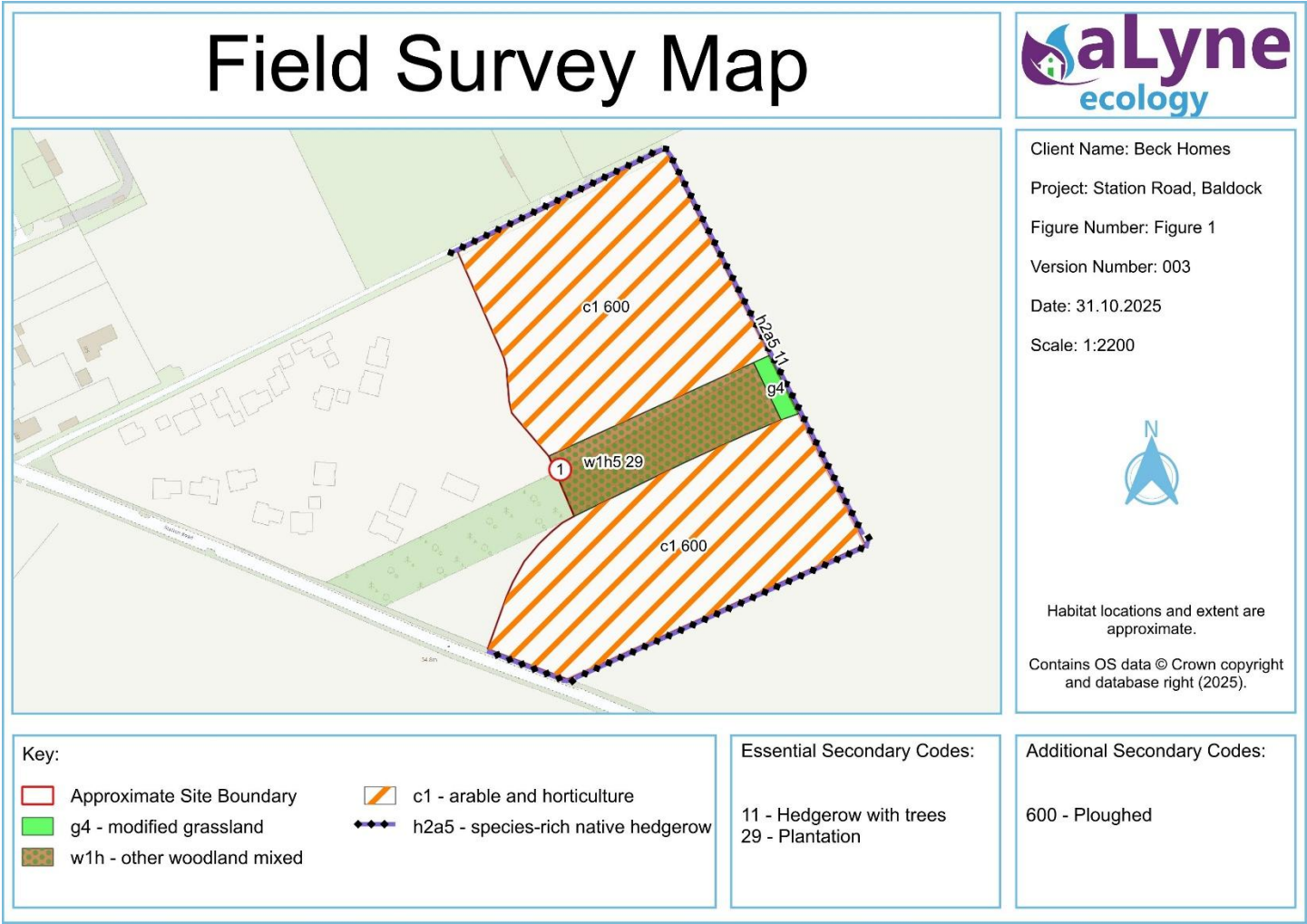
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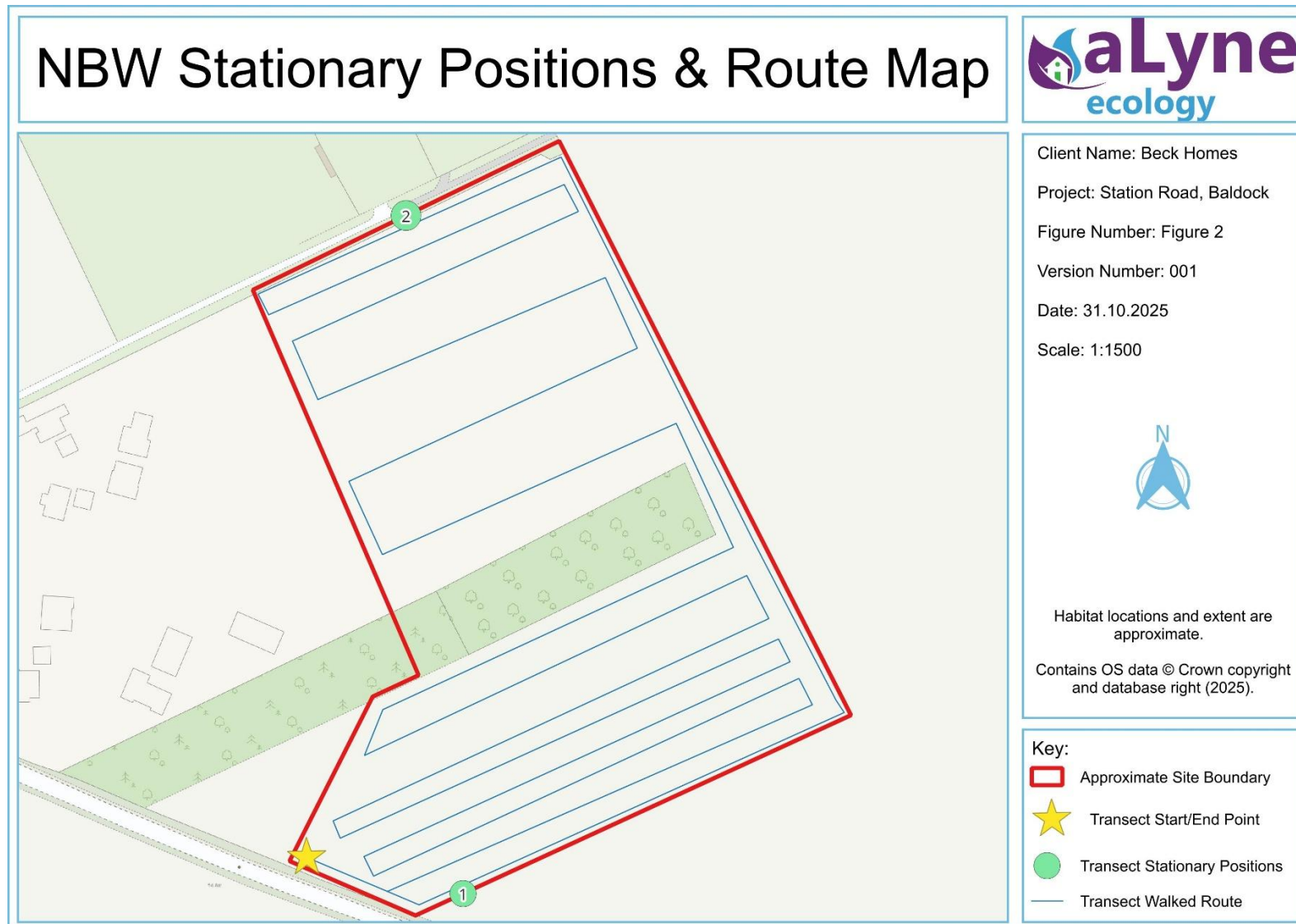
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14. Figures

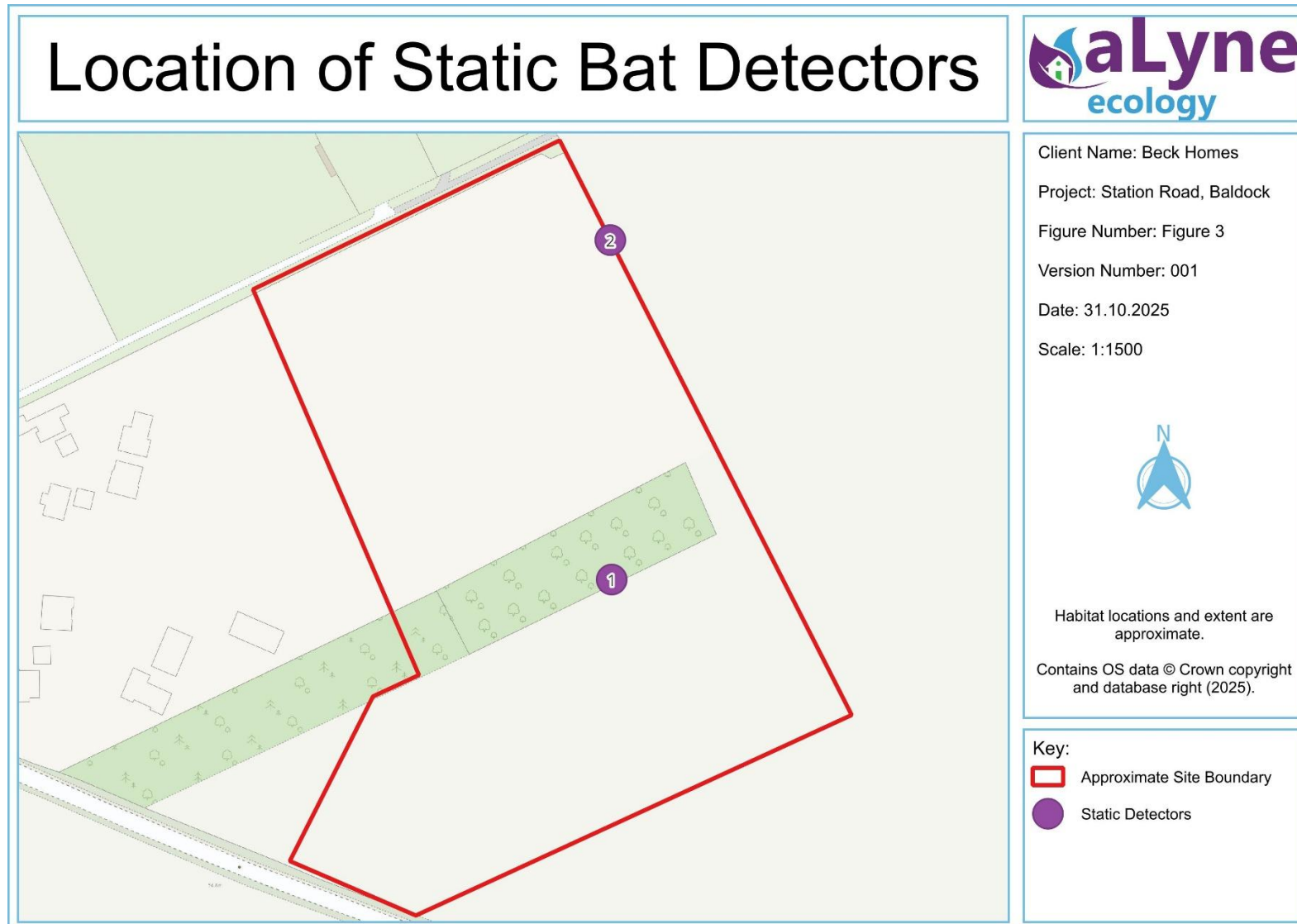
14.1 Figure 1. Field Survey Map



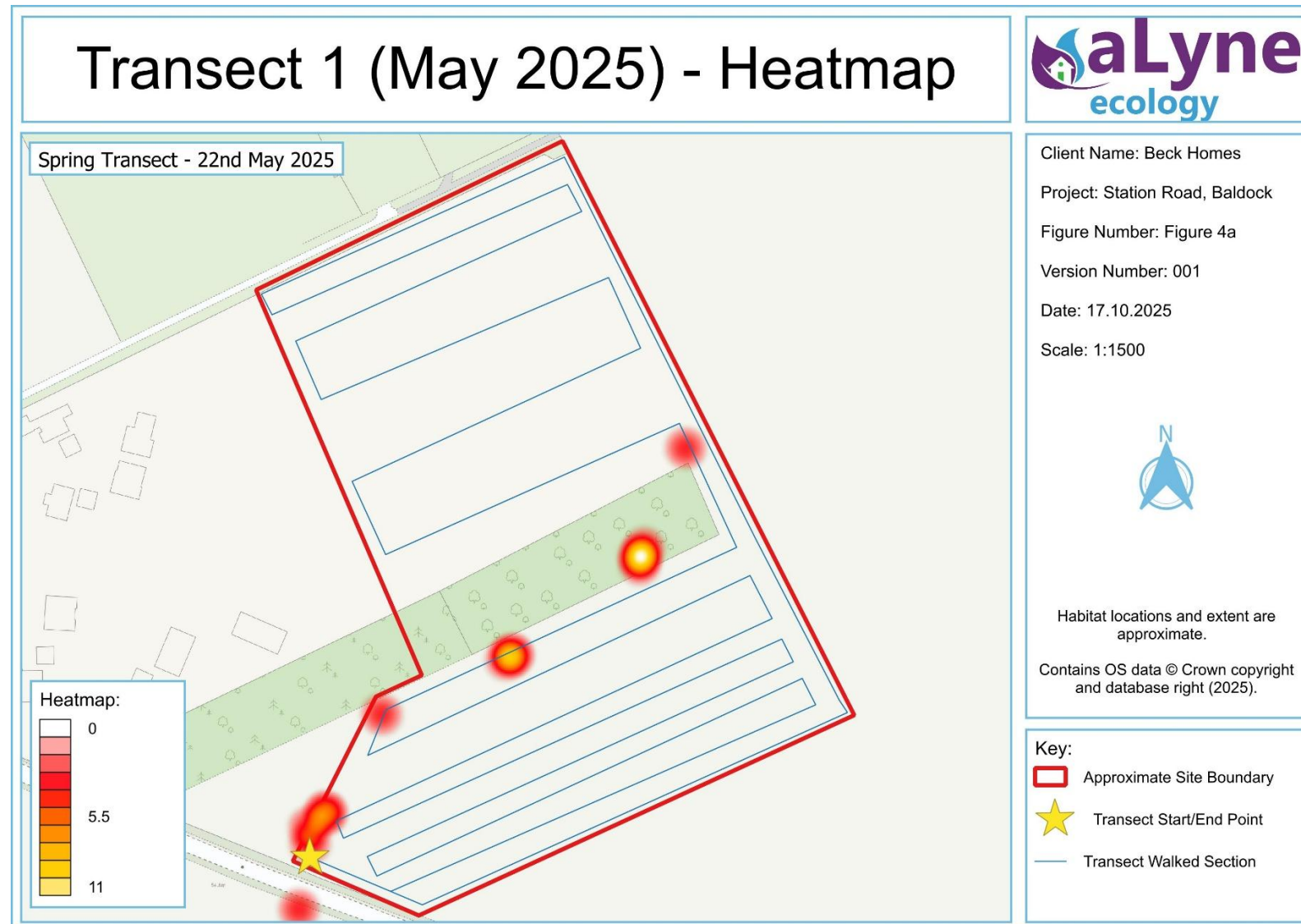
14.2 Figure 2: NBW Stationary Positions & Route Map



14.3 Figure 3: Location of Static Bat Detectors



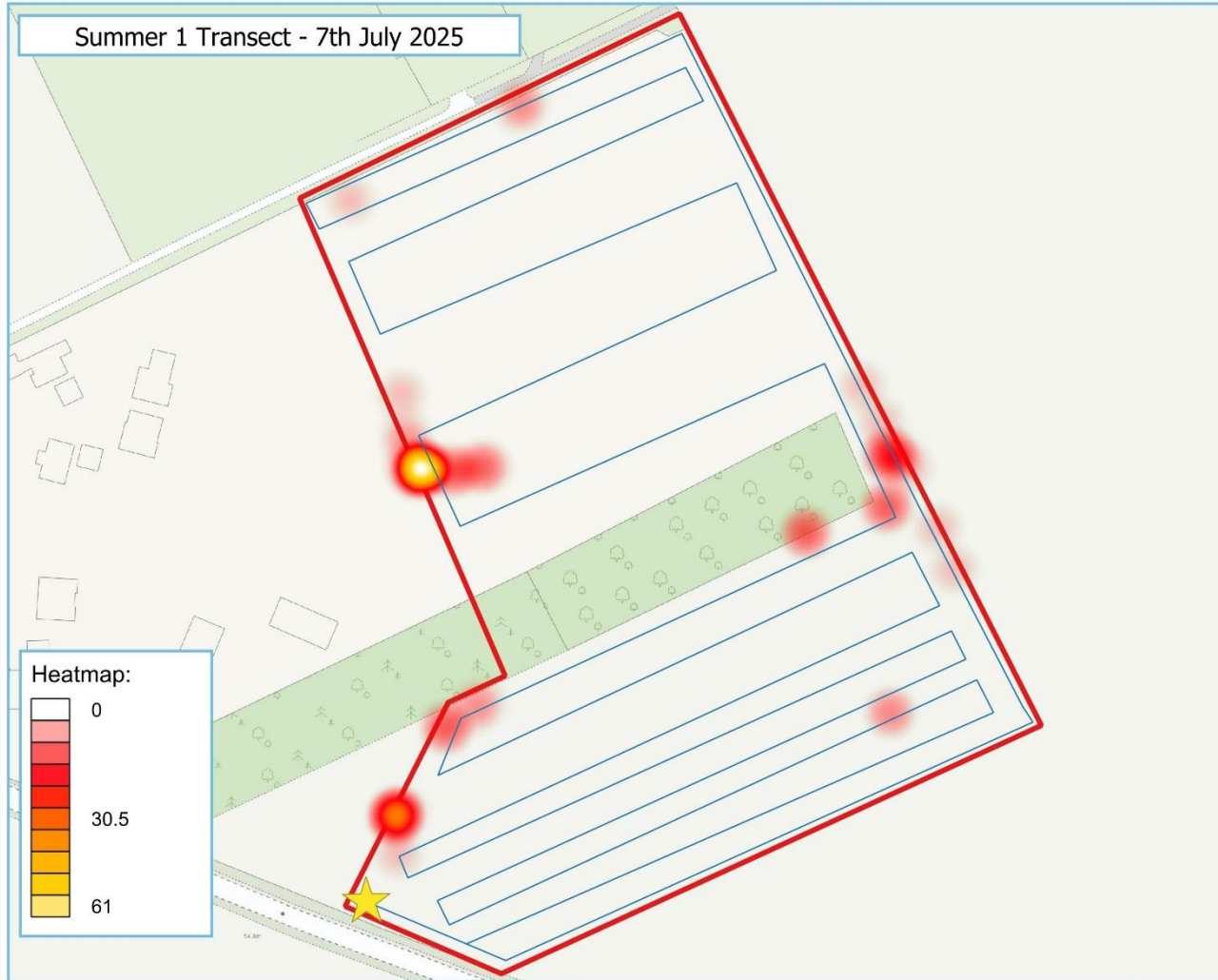
14.4 Figures 4a to 4e: Heatmaps



Transect 2 (July 2025) - Heatmap



Summer 1 Transect - 7th July 2025



Client Name: Beck Homes

Project: Station Road, Baldock

Figure Number: Figure 4b

Version Number: 001

Date: 17.10.2025

Scale: 1:1500



Habitat locations and extent are approximate.

Contains OS data © Crown copyright and database right (2025).

Key:

Approximate Site Boundary

Transect Start/End Point

Transect Walked Section

Transect 3 (August 2025) - Heatmap



Client Name: Beck Homes

Project: Station Road, Baldock

Figure Number: Figure 4c

Version Number: 001

Date: 17.10.2025

Scale: 1:1500



Habitat locations and extent are approximate.

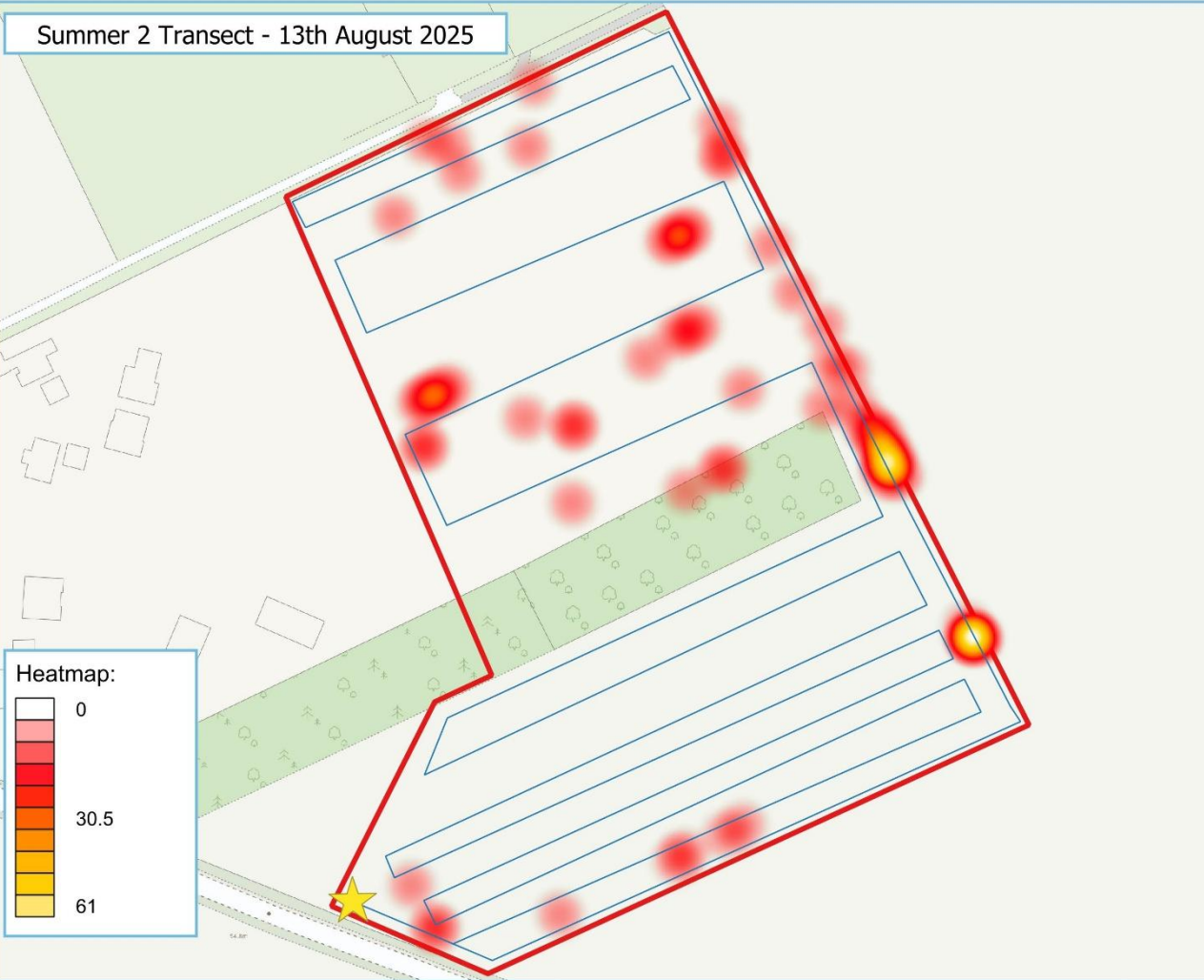
Contains OS data © Crown copyright and database right (2025).

Key:

Approximate Site Boundary

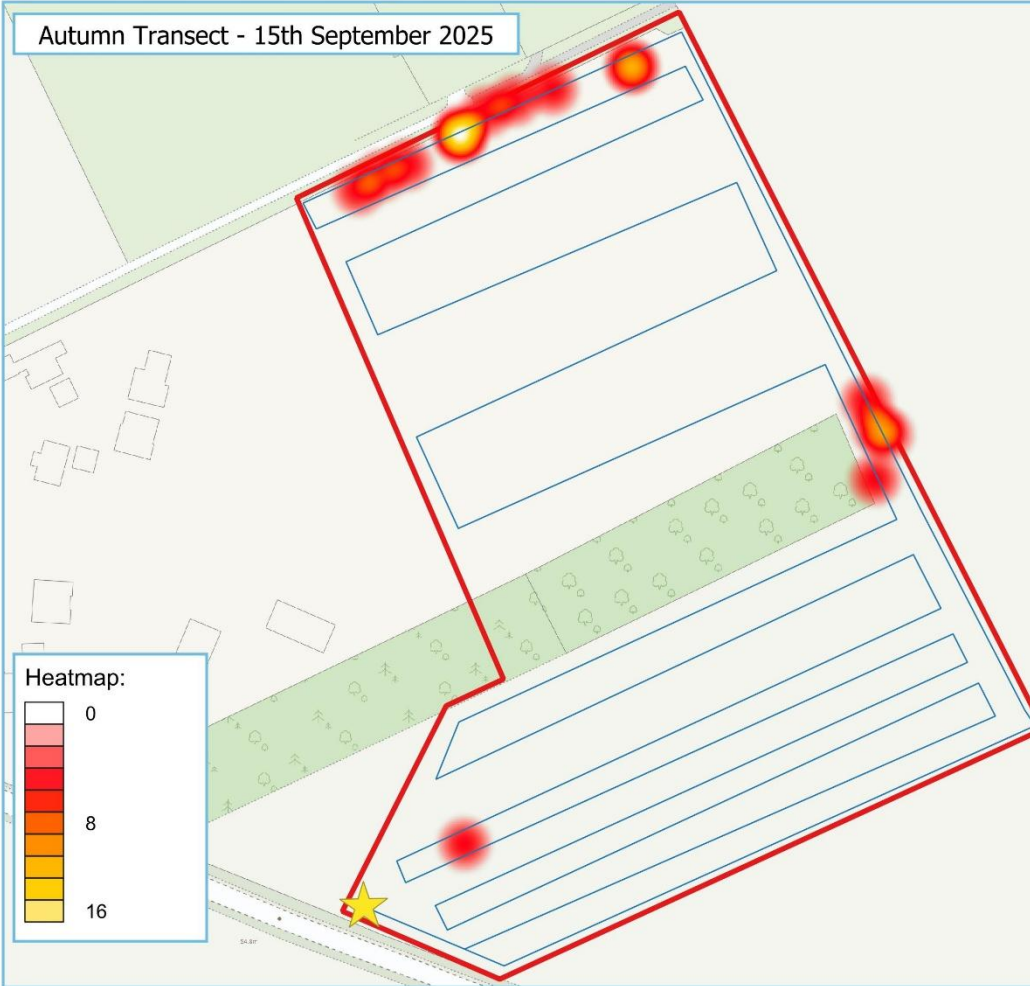
Transect Start/End Point

Transect Walked Section

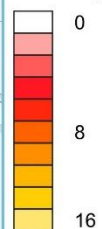


Transect 4 (September 2025) - Heatmap

Autumn Transect - 15th September 2025



Heatmap:



Client Name: Beck Homes

Project: Station Road, Baldock

Figure Number: Figure 4d

Version Number: 001

Date: 17.10.2025

Scale: 1:1500



Habitat locations and extent are approximate.

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Key:

-  Approximate Site Boundary
-  Transect Start/End Point
-  Transect Walked Section

All Transects (Combined) Heatmap



Client Name: Beck Homes

Project: Station Road, Baldock

Figure Number: Figure 4e

Version Number: 001

Date: 17.10.2025

Scale: 1:1500



Habitat locations and extent are approximate.

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Key:

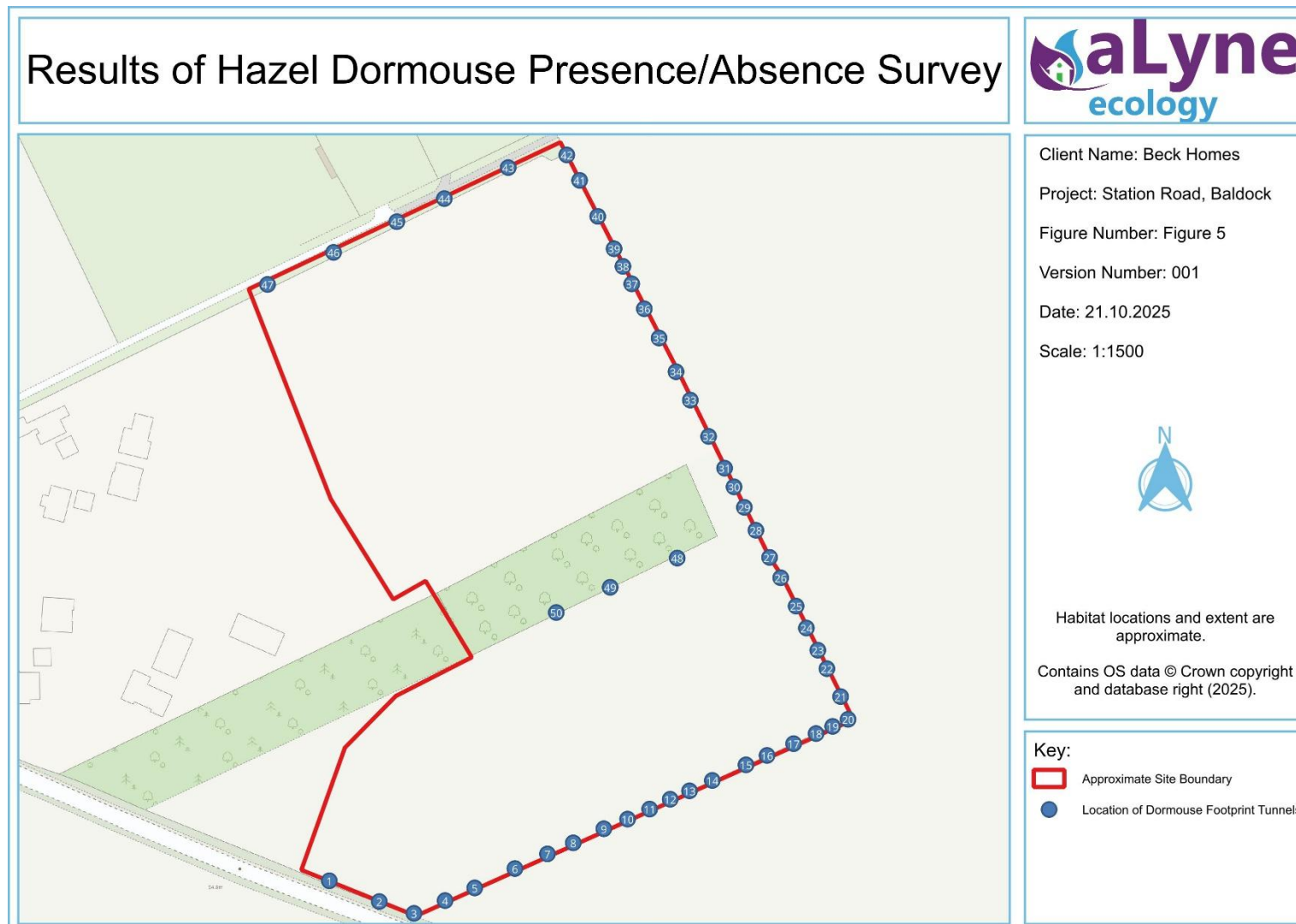
 Approximate Site Boundary

 Transect Start/End Point

 Transect Walked Section



14.5 Figure 5: Results of Hazel Dormouse Presence/Absence Survey



15. Appendix 1. Development Layout Scheme



16. Appendix 2. EcIA Checklist

EcIA Criteria (to ensure decisions are based on adequate information in accordance with Clauses 6.2 and 8.1 of BS42020:2013)		Yes No n/a
Pre-app/ scope	1. Where pre-application advice has been received from the Local Planning Authority and/or an NGO and/or statutory body (e.g. NE DAS, NRW DAS), it has been fully accounted for in the EcIA	✓
	2. The scope, structure and content of the EcIA is in accordance with published good practice ^{vi, vii and ix}	✓
Surveys, Sites, Species and Habitats	3. Adequate ^x and up-to-date ^{xi} : a. Desk study has been undertaken ^{xii} b. Phase 1 habitat survey (or equivalent) has been undertaken ^{xiii} c. Phase 2 ecology surveys have been undertaken (where necessary) ^{xiv}	✓
	4. All statutory and non-statutory sites likely to be significantly affected are clearly and correctly identified	✓
	5. All protected or priority species and priority habitats ^{xv} likely to be significantly affected are clearly and correctly identified, and adequate surveys have been undertaken to inform the baseline	✓
	6. Any invasive non-native plant species present are clearly and correctly identified	✓
	7. Where a separate PEA Report states that Phase 2 ecology surveys are required, these have been undertaken in full and results submitted with the application (or lack of such surveys is justified)	✓
	8. The assessment is based on clearly defined development proposals along with relevant drawings/plans (and any plans used are the same version number as those submitted with the application) or 9. The residual ecological effects are considered to be not significant at any geographical scale irrespective of the detailed development proposals, and the assessment is based on a worst-case-scenario	✓
	10. The report describes and assesses all likely significant ecological effects (including cumulative effects) clearly stating the geographical scale of significance (where relevant)	✓
Impacts and Effects	11. The mitigation hierarchy has been clearly followed ^{xvi}	✓
	12. The report: a. Clearly identifies the proposed mitigation and compensation measures, and explains how these will adequately address all likely significant adverse effects b. Includes, where necessary, proposals for post-construction monitoring c. Recommends how proposed measures may be secured through planning conditions/obligations and/or necessary licences	✓
	13. A summary table of proposed mitigation and compensation measures has been provided	✓
	14. The need for any mitigation licences required in relation to protected species is clearly identified	✓
	15. Proposals to deliver ecological enhancement/Biodiversity Net Gain have been provided	✓
Mitigation, Compensation and Enhancement	16. Limitations ^{xvii} of the ecological work have been correctly identified and the implications explained	✓
	17. All relevant key timing issues (e.g. site vegetation clearance or roof removal) that may constrain or adversely affect the proposed timing of development have been identified	✓
	18. All ecological work and surveys accord with published good practice methods and guidelines OR deviation from such guidelines is made clear and fully justified, and the implications for subsequent conclusions and recommendations made explicit in the report ^{xviii}	✓
	19. All ecologists and surveyors hold appropriate species licences (where relevant) and/or have all necessary competencies to carry out the work undertaken	✓
Competence/Good Practice	20. The report clearly identifies where the proposed development complies with relevant legislation and policy, highlighting any possible non-compliance issues, and highlighting circumstances where a conclusion cannot be drawn as it requires an assessment of non-ecological issues (such as socio-economic ones)	✓
	21. The report provides a clear summary of losses and gains for biodiversity, and a justified conclusion of an overall net gain for biodiversity	✓
	22. Justifiable conclusions ^{xix} based on sound professional judgement ^{xx} have been drawn as to the significance of effects on any designated site, protected or priority habitat/species or other ecological feature, and a justified scale of significance has been stated	✓
Conclusions		

17. Appendix 3 – Legislation and Planning Policy

17.1 Habitats Directive, EC Council Directive 92/43/EEC

Natura 2000 (European Commission, 1992) is a network of sites selected to ensure the long-term survival of Europe's most valuable and threatened species and habitats. How a site is chosen depends on what it aims to protect.

Under the Habitats Directive (Art. 3 and 4), Member States designate Special Areas of Conservation (SACs) to ensure the favourable conservation status of each habitat type and species throughout their range in the EU. Under the Birds Directive (Art. 4), the network must include Special Protection Areas (SPAs) designated for 194 particularly threatened species and all migratory bird species.

Member States designate Special Protection Areas (SPAs) according to scientific criteria such as '1% of the population of listed vulnerable species' or 'wetlands of international importance for migratory waterfowl'.

The choice of sites is based on scientific criteria specified in the directive, to ensure that the natural habitat types listed in the directive's Annex I and the habitats of the species listed in its Annex II are maintained or, where appropriate, restored to a favourable conservation status in their natural range.

17.2 The Birds Directive 2009/147/EC

The Birds Directive (European Commission, 2009) aims to protect all the 500 wild bird species naturally occurring in the European Union. The 500 wild bird species naturally occurring in the European Union are protected in various ways:

- **Annex 1:** 194 species and sub-species are particularly threatened. Member States must designate Special Protection Areas (SPAs) for their survival and all migratory bird species.
- **Annex 2:** 82 bird species can be hunted. However, the hunting periods are limited, and hunting is forbidden when birds are at their most vulnerable: during their return migration to nesting areas, reproduction, and the raising of their chicks.
- **Annex 3:** overall, activities that directly threaten birds, such as their deliberate killing, capture or trade, or the destruction of their nests, are banned. With certain restrictions, Member States can allow some of these activities for 26 species listed here.
- **Annex 4:** the directive provides for the sustainable management of hunting, but Member States must outlaw all forms of non-selective and large scale killing of birds, especially the methods listed in this annex.
- **Annex 5:** the directive promotes research to underpin the protection, management, and use of all species of birds covered by the Directive, which are listed in this annex.

17.3 Conservation of Habitats and Species Regulations 2017 (as amended)

Under these Regulations (HM Government, 2017), the UK Government and Devolved Administrations are required to establish a network of important high-quality conservation sites that will make a significant contribution to conserving the habitats and species identified in Annexes I and II, respectively, of European Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora, known as the Habitats Directive. The listed habitat types and species are those considered to be most in need of conservation at a European level (excluding birds). Of the Annex I habitat types, 78 are believed to occur in the UK. Of the Annex II species, 43 are native to, and normally resident in, the UK. Special Areas of Conservation (SACs), together with Special Protection Areas (SPAs), are the UK's contribution to the Bern Convention's Emerald Network of protected areas, known as Areas of Special Conservation Interest (ASCIs).

17.4 The National Parks and Access to the Countryside Act 1949

Section 21 of the National Parks and Access to the Countryside Act, 1949 (HM Government, 1949) provides discretionary powers to enable local authorities to establish and manage Local Nature Reserves (LNRs). Under the Conservation of Habitats and Species Regulations 2017 (as amended) (HM Government, 2017), these powers have been extended from preserving flora and fauna to include enabling or facilitating its recovery or increase.

17.5 The Wildlife and Countryside Act, 1981 (as amended)

The Wildlife and Countryside Act, 1981 (as amended) (HM Government, 1981) is the primary national legislation, which protected animals, plants, and habitats in the UK. The act contains four parts and 17 schedules, which cover:

- Part 1: Wildlife (includes protection of birds, animals, and plants; and measures to prevent the establishment of non-native species which may be detrimental to native wildlife).
- Part 2: Nature conservation, the countryside, and National Parks (including the designation of protected areas).
- Part 3: Public rights of way.
- Part 4: Miscellaneous provisions of the act.

All naturally occurring wild birds in Great Britain are protected from persecution. It is illegal to kill, injure or 'take' any wild bird, take, or damage the nest of any wild bird whilst in use or being built. The eggs of all wild birds are also protected. If you have in your possession any live wild birds, egg(s) or any part of a wild bird you are committing an offence. The birds listed in Schedule 1 of the Wildlife and Countryside Act 1981 (HM Government, 1981) are further protected by Special Penalties all year round for those in Part 1 and during a specified closed season for those listed in Part 2.

Schedule 5 lists Animals Species that are protected under Section 9. Section 9 prohibits the intentional killing, injuring, or taking of the species listed in Schedule 5 and also prohibits their possession and the trade in the wild animals listed. The species listed are also further protected from disturbance by prohibiting actions that affect places they use for shelter.

Animals listed in Schedule 6 are protected from being killed or taken by certain methods under Section 11(1) of the Wildlife and Countryside Act 1981 (HM Government, 1981). The methods listed are self-locking snares, bows, crossbows, explosives (other than ammunition for a firearm), or live decoys. The species listed are also protected from the following activities: trap, snare or net, electrical device for killing or stunning, poisonous, poisoned, or stupefying substances or any other gas or smoke, automatic or semi-automatic weapon, device for illuminating a target or sighting device for night shooting, artificial light, mirror or other dazzling device, sound recording, and mechanically propelled vehicle in immediate pursuit.

Under the Wildlife and Countryside Act 1981 (as amended) (HM Government, 1981), the country nature conservation bodies have a duty to notify any area of land which in their opinion is 'of special interest by reason of any of its flora, fauna, or geological or physiographical features' – these areas are known as Sites of Special Scientific Interest (SSSIs).

17.6 Countryside & Rights of Way Act, 2000

The CRoW Act (HM Government, 2000) gives a public right of access to land mapped as 'open country' (mountain, moor, heath and down) or registered common land. The protection of Sites of Special Scientific Interest (SSSIs) is strengthened in this legislation. The CRoW Act also allows for the prosecution of third parties that damage or destroy a SSSI.

17.7 Hedgerow Regulations 1997

The Hedgerow Regulations, 1997 (HM Government, 1997) regulations fall under the local authority and are intended to protect important hedgerows from removal. Owners and managers must request permission from their local authority before removing a hedgerow, and permission may not be granted if it supports a diverse range or protected species.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

17.9 Natural Environment and Rural Communities (NERC) Act, 2006

The site comprises deciduous woodland, which is a Priority Habitat. Priority Habitats are listed under Section 41 of the Natural Environment and Rural Communities (NERC) Act, 2006 (HM Government, 2006). Section 40 (1) of the NERC Act, 2006 imposes a duty to conserve biodiversity:

- *“Every public authority must, in exercising its functions, have regard, so far as is consistent with the proper exercise of those functions, to the purpose of conserving biodiversity.”*

Section 40(3) of the Act explains that:

- *“Conserving biodiversity includes, in relation to a living organism or type of habitat, restoring or enhancing a population or habitat”.*

The duty applies to all local authorities and extends beyond just conserving what is already there to carrying out, supporting, and requiring actions that may also restore or enhance biodiversity.

17.10 National Planning Policy Framework (NPPF) 2024

The National Planning Policy Framework sets out the Government’s planning policies for England and how these should be applied. It provides a framework within which locally prepared plans for housing and other development can be produced. So that sustainable development is pursued in a positive way, at the heart of the Framework is a presumption in favour of sustainable development.

Section 15 of the NPPF (paragraphs 187 to 195) considers the conservation and enhancement of the natural environment including habitats and biodiversity. Paragraph 187 states that planning and decisions should contribute to and enhance the natural and local environment by:

- “Protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan);
- Recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland; and
- Minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures”.

Paragraph 188 states that plans should distinguish between the hierarchy of international, national, and locally designated sites; allocate land with the least environmental or amenity value; take a strategic approach to maintaining and enhancing networks of habitats and green infrastructure; and plan for the enhancement of natural capital at a catchment or landscape scale across local authority boundaries.

Paragraph 192 states that in order to protect and enhance biodiversity and geodiversity, plans should:

- “Identify, map and safeguard components of local wildlife-rich habitats and wider ecological networks, including the hierarchy of international, national and locally designated sites of importance for biodiversity; wildlife corridors and steppingstones that connect them; and areas identified by national and local partnerships for habitat management, enhancement, restoration or creation; and
- Promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity.”

When determining planning applications, Paragraph 193 states that local planning authorities should aim to conserve and enhance biodiversity by applying the following principles:

- If significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;
- Development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest;
- Development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons, and a suitable compensation strategy exists; and
- Development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to improve biodiversity in and around developments should be integrated as part of their design, especially where this can secure measurable net gains for biodiversity or enhance public access to nature where this is appropriate.”

As stated in paragraph 194 the following should be given the same protection as habitats sites:

- Potential Special Protection Areas and possible Special Areas of Conservation;
- Listed or proposed Ramsar sites; and
- Sites identified, or required, as compensatory measures for adverse effects on habitats sites, potential Special Protection Areas, possible Special Areas of Conservation, and listed or proposed Ramsar sites.”

Paragraph 195 states that the presumption in favour of sustainable development does not apply where the planned project is likely to have a significant effect on a habitat site (alone or in combination with other plans or projects) unless an appropriate assessment has concluded the plan or project will not adversely affect the integrity of the habitats site.

17.11 Water Framework Directive

The Water Framework Directive (European Commission, 2000) became law in England and Wales in 2003 via the Water Environment (WFD) (England and Wales) Regulations. The Water Framework Directive has four main goals: (1) to prevent deterioration in water status, (2) all water bodies achieve

good ecological status, good chemical status and good groundwater status (or potential), (3) reduce and eliminate sources of pollution and (4) contribute to achieving objectives of sites protected by other EU legislation.

17.12 Bern Convention

The Convention on the Conservation of European Wildlife and Natural Habitats (the Bern Convention) was ratified by the UK Government in 1982 (European Commission, 1982). The principal aims of the Convention are to ensure conservation and protection of wild plant and animal species and their natural habitats (listed in Appendices I and II of the Convention), to increase cooperation between contracting parties, and to regulate the exploitation of those species (including migratory species) listed in Appendix III. To this end, the Convention imposes legal obligations on contracting parties, protecting over 500 wild plant species and more than 1,000 wild animal species.

18. Appendix 4 – Raw Data

18.1 NBW

18.1.1 Transect 1 (May)

Transect 1								
Location	Common pipistrelle	Brown long-eared	Soprano pipistrelle	Noctule	Serotine	Natterer's bat	<i>Myotis</i> sp.	Total
Stationary Position 1	3	0	0	0	0	0	0	3
Stationary Position 2	7	0	0	0	0	0	0	7
Walked Transect	11	0	0	0	0	0	0	11

18.1.2 Transect 2 (June)

Transect 2								
Location	Common pipistrelle	Brown long-eared	Soprano pipistrelle	Noctule	Serotine	Natterer's bat	<i>Myotis</i> sp.	Total
Stationary Position 1	0	0	0	0	0	0	0	0
Stationary Position 2	0	0	0	0	0	0	0	0
Walked Transect	3	0	0	3	2	2	0	10

18.1.3 Transect 3 (August)

Transect 3								
Location	Common pipistrelle	Brown long-eared	Soprano pipistrelle	Noctule	Serotine	Natterer's bat	<i>Myotis</i> sp.	Total
Stationary Position 1	1	0	0	1	0	0	0	2
Stationary Position 2	25	0	0	4	0	0	0	29

Walked Transect	53	1	1	6	0	0	1	63
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18.1.4 Transect 4 (September)

Transect 4								
Location	Common pipistrelle	Brown long- eared	Soprano pipistrelle	Noctule	Serotine	Natterer's bat	<i>Myotis</i> sp.	Total
Stationary Position 1	0	0	0	0	0	0	0	0
Stationary Position 2	2	0	0	0	0	0	0	0
Walked Transect	16	0	0	0	0	0	0	16

18.2 Hazel Dormouse Presence/Absence Survey

Visit 1			
Species	Footprint Tunnel Number	Notes	Total
<i>Apodemus</i> sp.	11 35	Prints	2

Visit 2			
Species	Footprint Tunnel Number	Notes	Total
<i>Apodemus</i> sp.	6 35	Prints	2

Visit 3			
Species	Footprint Tunnel Number	Notes	Total
<i>Apodemus</i> sp.	6 29 33 34 35 36 41 42 43 44 48 50	Prints	12

Visit 4			
Species	Footprint Tunnel Number	Notes	Total
<i>Apodemus</i> sp.	15 23 24 25 28 29 30 34 35 48	Prints	10

Visit 5			
Species	Footprint Tunnel Number	Notes	Total
<i>Apodemus</i> sp.	6	Prints	15
	8		
	10		
	12		
	14		
	15		
	16		
	17		
	18		
	19		
	34		
	35		
	40		
	42		
	43		

Visit 6			
Species	Footprint Tunnel Number	Notes	Total
<i>Apodemus</i> sp.	1	Prints	18
	2		
	4		
	6		
	7		
	8		
	9		
	11		
	12		
	13		
	18		
	20		
	21		
	22		
	24		
	26		
	27		
	39		
	49		

Visit 7			
Species	Footprint Tunnel Number	Notes	Total
<i>Apodemus</i> sp.	2	Prints	19
	4		
	5		
	6		
	7		
	11		
	13		
	15		
	16		
	18		
	24		
	26		
	27		
	29		
	33		
	35		
	36		
	42		
	50		

19. Appendix 5 – Mitigation and Compensation Layout Scheme

