BAT SURVEY AND ASSESSMENT

Croxlea, Parsonage Lane, Winford, Bristol. BS40 8DH

A REPORT FOR MS LYNETTE PORTER

This report provides an independent assessment of the status of bats within the site alongside a determination of likely constraints and opportunities for enhancement

Linda Kerrison MSc ACIEEM

Surveys completed August and September 2023 and Assessment completed January 2024.

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Table 0.1 - Document and Version Control

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Type	Bat Survey & Assessment		
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V1	Giles Coe BSc (hons) MCIEEM	Georgie Baulcomb MSc ACIEEM	22/01/2023

Copyright and guidance

This report has been written to provide an objective assessment of the ecological constraints and opportunities that were considered to be present at the site at the time the survey/s were conducted and, should be used solely for the purpose for which it was designed. The copyright must be considered to rest with Co-ecology Ltd whilst use of the report is for the commissioning party and their client only, unless with the express and written consent of Co-ecology Ltd.

The surveys and assessment have been drafted to be in accordance with; Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd edition), British Standard for Biodiversity BS42020:2013, Biodiversity - Code for planning and development and; the Code of Professional Conduct published by the Chartered Institute of Ecology and Environmental management.

N.B. It must be noted that investigations of this sort provide only a snapshot in time of the ecological conditions of a site, are limited in extent and cannot capture the full picture of the biodiversity interests at the given location.

Contents

1 Summary of Assessment

Co-ecology Ltd were commissioned by Ms Lynette Porter to undertake provide advice and support relating to the proposed re-development of the buildings at Croxlea, Parsonage Lane, Winford, Bristol. The following points summarise the main results of the bat surveys and assessment.

1.1. The client's proposals for the development site are to demolish all onsite buildings and replace them with a new residential property, an office, gym space and associated landscaping.

1.2. There are three internationally important and protected sites within a 10km radius of the site, Chew Valley Lake Special Protected Area (SPA) 4.7km south east, North Somerset and Mendip Special Area of Conservation - Bats (SAC) 6.6km west, and the Avon Gorge Woodland SAC 8.7km north. However, due to the size and distance from these sites, it is unlikely that this development will directly or indirectly impact these designated sites.

1.3. After assessing the scheme against the supplementary planning document (SPD) for the North Somerset and Mendip Bats SAC, the proposals at Croxlea should not be considered to result in a likely effect on the SAC and no additional surveys or other measures are required.

1.4. The Felton Common Local Nature Reserve (LNR) lays 1.97km to the west, this site is designated for the mosaic of habitats present from acidic and calcareous grassland to scrub, including limestone heath, which supports a variety of plants, invertebrates, and birds.

1.5. There are seven Sites of Special Scientific Interest (SSSI) with in the 2km radius of the development site. The closest is Hartcliffe Rocks Quarry SSSI lies 1.52km north of the site. The main reason for this sites designation is due to its geology comprising exposures of Triassic Dolomitic conglomerate overlying carboniferous limestone.

1.6. There are eight non-statutory Local Wildlife Sites (LWS) within 2km of the development site, the closest is Land around Redding Pit Lane LWS which lays approximately 0.53Km to the south.

1.7. A search of Natural England's accessible data for bat mitigation licenses within a 2km radius of the site recorded four granted applications. The closest being 556m northeast and impacted the breeding site for Brown long-eared bats *Plecotus auritus* and Serotine *Eptesicus serotinus*.

1.8. A data search for bat records from the Bristol Region Environmental records Centre Returned 191 records from eight different species within 2km of the site boundary. The most pertinent of these records included a maternity roost for 27 lesser horseshoe bats *Rhinolophus hipposideros* recorded in 2011, 1km south of the site, and a hibernation roost for 35 lesser horseshoe bats in 2004 approximately 1km south.

1.9. A Preliminary Roost Assessment (PRA) survey was undertaken by Co-ecology on 9th August 2023, of the nine buildings on site, only four buildings had suitability for roosting bats and were subjected to the assessment. The assessment concluded that two buildings, B1 the bungalow and B2 the existing garage, had low suitability to support roosting bats and one presence/likely absence survey on each building was recommended.

1.10. To complete the assessment, one bat emergence/re-entry survey was carried out in August 2023 and a second in September 2023 after the first survey found a roost to be present.

1.11. **B1,** the bungalow, was **confirmed** as a bat roost and had five common pipistrelle *Pipistrellus pipistrellus* emerge from the northern gable end during the emergence surveys. On the balance e of probability it is considered that this is a day roost used by individual bats as opposed to a maternity colony due to the northern elevation of the roost feature likely resulting in lower levels of insolation.

1.12. This building is not suitable for hibernation due to the materials used in it's construction and likely dry conditions with fluctuating temperatures.

1.13. **B2**, the existing double garage, no bats were seen or suspected to have emerged during the surveys.

1.14. The proposals are predicted to result in the permanent loss of a day roost used by multiple common pipistrelles and in the absence of mitigation could result in the death or injury of any bats roosting there.

1.15. In order for the proposed works to proceed a bat mitigation licence from Natural England will be required, this can be applied for once full planning permission has been granted with a third and final evening survey carried out in June 2024.

1.16. To mitigate the predicted impacts of construction to the bats in **B1** the following measures would need to be implemented;

- A Natural England bat Mitigation Licence must be obtained;
- works would be constrained to avoid the hibernation season, mid-November to March;
- to reduce the risk further, works must also avoid the maternity season of May to the end of August;
- the preferred window for demolition is April or September to November;
- a pre-works inspection by a licensed bat ecologist;
- the hand removal of all identified or potential roost features;
- the capture by hand of any bats within the roost area and their release to a pre-erected bat box within the site;
- the provision of compensatory roost features, such as a building integrated bat tube;
- The avoidance of standard breathable roof membranes in any locations where bats could come into contact with them with the use of Type 4 bitumen felt as a preference.

1.17. To enhance the site and provide suitable opportunities for bats to use the property for roosting in future, it is recommended that a series of bat boxes of different design are installed in a variety of locations within the ownership boundary.

1.18. Additional efforts to improve the overall biodiversity on site and the local landscape could include planting of native flowering plants within the landscape plan as well as the installation of integrated Bee Bricks on the building to provide suitable alternative shelter for invertebrates.

2 Background

Overview of the commission and the proposals

2.1. Co-ecology Ltd were commissioned by Ms Lynette Porter to provide ecological advice and support relating to the proposed development at Croxlea, Parsonage Lane, Winford, Bristol, BS40 8DH. The following points summarise the main results of the bat surveys and assessment.

2.2. The clients proposals are to demolish all on site structures and replace them with a four bed residential property, garden office and gym and detached double garage.

2.3. The ecology investigations required to inform the proposals are to determine the status of bats within the structures to be demolished, this process comprises the following elements –

- A desk study and a 2km data search with the local environmental records centre;
- A 2km search for contextual information regarding surrounding habitats, protected sites and extant Natural England Mitigation Licences for bats;
- a Preliminary Roost Assessment[1];
- evening emergence surveys[2]
- an evaluation of the status and relative conservation value of any roosts, if present;
- an initial assessment of likely impacts and opportunities; and
- recommendations for further surveys or assessments that may be necessary.

Objectives

2.4. To use the process outlined above to assess the status and value of any roosts on site and the likely constraints to the proposed works. To determine an initial assessment of impact to those roosts and to devise measures to off-set impacts and provide enhancements in line with National and local planning policies.

2.5. The primary aim is to ensure that all impacts are correctly identified, and to provide an outline of appropriate measures for mitigation, compensation and enhancement. The results of the emergence surveys will ascertain bat roost specification and inform appropriate mitigation and the Natural England bat licence application which will be required for construction works to commence on site.

Site description

2.6. The site is located in a rural area on the outskirts of Winford village, located to the south-west of Bristol, National grid reference ST 53395 64550. Directly north of the site lies both planted deciduous and coniferous woodland habitat. To the south the site borders Parsonage Lane, beyond which agricultural fields and residential/farm buildings are present. To the east and west lie further farm buildings and fields, interspersed with conifer trees.

2.7. The site itself is within the curtilage of the residential property of Croxlea. The site consists of nine structures; the main property, a double garage, a block of dog kennels, and a porta cabin as well as three storage containers and two small wooden sheds. The main property consisted of a small brick-built bungalow, circa 1950s, with pitched roof, concrete tiles, chimney with lead flashing and a roof

[1] Essentially a detailed inspection of the building

[2] These surveys can be used as Roost Characterisation Surveys should bats be found to be present

void. The double garage was of similar construction, the dog kennels were metal construction and open fronted, the porta cabin was timber with metal internal structure.

2.8. The adjacent garden within the property is dominated by an open area of bare ground, scrub and vegetable patch.

Legislative and policy context

2.9. The following pieces of legislation and National policy are relevant to this appraisal and have been used to inform this appraisal;

- Environmental Act (2021)
- Conservation of Habitats and Species Regulations 2017(as amended)
- Wildlife and Countryside Act 1981 (as amended)
- The National Planning Policy Framework 2019
- Biodiversity and geological conservation: circular from the ODPM 06/2005

The following local policies are extracted from the North Somerset Council Core Strategy [3]

- Policy CS4: Nature Conservation
- Policy CS9: Green Infrastructure

2.10. An extract of the key relevant sections of these policies is provided below whilst the full policies themselves are available online following the link provided in the footer.

2.11. Policy CS4:

"*The biodiversity of North Somerset will be maintained and enhanced by:*

1) seeking to meet local and national Biodiversity Action Plan targets taking account of climate change and the need for habitats and species to adapt to it;

2) seeking to ensure that new development is designed to maximise benefits to biodiversity, incorporating, safeguarding and enhancing natural habitats and features and adding to them where possible, particularly networks of habitats. A net loss of biodiversity interest should be avoided, and a net gain achieved where possible;

3) seeking to protect, connect and enhance important habitats, particularly designated sites, ancient woodlands and veteran trees;

4) promoting the enhancement of existing and provision of new green infrastructure of value to wildlife;

5) promoting native tree planting and well targeted woodland creation, and encouraging retention of trees, with a view to enhancing biodiversity.

2.12. Policy CS9:

"*The existing network of green infrastructure will be safeguarded, improved and enhanced by further provision, linking in to existing provision where appropriate, ensuring it is a multi-functional, accessible network which promotes healthy lifestyles, maintains and improves biodiversity and landscape character and contributes to climate change objectives*."

[3] https://n-somerset.gov.uk/sites/default/files/2022-06/A1%20-%20North%20Somerset%20core%20strategy.pdf

2.13. Additionally, the supplementary planning document (SPD) for the North Somerset and Mendip Bats SAC[4] has been consulted in regards of possible impacts and any additional survey requirements.

[4] Microsoft Word - FULL Adopted SPD, Word version (n-somerset.gov.uk)

3 Methodology

Personnel

3.1. The bat surveys were carried out by the following:

- Giles Coe BSc Hons MCIEEM (level 2 class licence for bats and registered BMCL consultant)
- Robin Searle BSc ACIEEM
- Fran Coe

3.2. The appraisal and reporting were carried out by Linda Kerrison ACIEEM (level 2 class licence for bats). Linda is an ecologist with nine years commercial experience in quantitative field surveys and assessments and with expertise in habitats and mitigation for impacts to legally protected species. Giles has acted as named ecologist on Mitigation Licences for bats, badgers, and great crested newts since 2015, is a Registered Consultant on the earned recognition class licence scheme for bats and badgers.

Contextual information and data records

3.3. Contextual information on the site was gathered from freely available on-line resources including a 10km search for European protected sites and 5km for Nationally important sites and records for any European Protected Species Mitigation licences for bats. This was carried out using Magic Map hosted by DEFRA. On-line aerial imagery was used to make an assessment of the sites position within the wider landscape including connectivity and potential corridors for movement. A 2km standard data search for protected species was commissioned from the Sussex Biodiversity Records Centre, the most pertinent results are summarised in this report.

Preliminary Roost Assessment

3.4. The surveyor (Giles Coe) carried out a detailed inspection of the building on the site to locate any roosting bats and/or any secondary evidence of bats such as droppings and feeding remains. The inspection sought to identify any actual or potential roosting locations and assign an overall classification of likely presence based on number and type of any potential roost features that were located. The survey consisted of a close inspection of all exterior features using close focussing binoculars where necessary to inspect the structure at height. An internal inspection was carried out with the surveyor conducting a methodical search of the roof voids with emphasis on rafters and supporting timbers and any other suitable features.

Emergence Surveys

3.5. Following established methodology, surveyors were situated so as to have a good view of all elevations of the target building and were equipped with full spectrum heterodyne detectors (Elekon Batlogger M2) to identify bats in the field and record bat calls for later evaluation. The surveys started 15 minutes prior to sunset and continued until 90 minutes past sunset with the surveyors making a note of weather conditions and the time, activity and species of any bats that were heard and/or observed. Two evening surveys were carried out.

3.6. To augment the survey effort a Helion 2 XP 50 and two Canon XA10 Infrared cameras were used to aid the surveyors view of the building after nightfall and provide greater coverage around each structure. The footage from these cameras/scopes was viewed in full at a later date. Each of the night vision aids were paired with an Elekon full spectrum detector and the calls analysed using Bat Explorer proprietary software.

Evaluation & Impact Assessment

3.7. If any roosts were identified during the surveys their relative value was assessed against published criteria as set out in Table 3.2 of the Bat Mitigation Guidelines (Reason et al, 2023) and a simple assessment compiled to determine any likely impacts that could arise from the proposals. The impact assessment is based on the relevant chapter of the Bat Mitigation Guidelines.

Constraints

3.8. The surveys were carried out later into the survey season with only one during the peak period (May to August).

4 Results

Contextual information and biological records

4.1. The tables below set-out the pertinent findings from the desk study and data search.

Table 4.1 Internationally important and protected sites within a 10km radius of the development site and nationally important within 5km

Type	Site	Reason for Citation	Distance and orientation
SPA, SSSI	Chew Valley Lake	*The site consists of an expanse of open water (the largest artificial freshwater lake in South West England) with peripheral areas of reedbed, carr, woodland and neutral grassland. The sparse submerged vegetation is composed largely of Fennel Pondweed Potamogeton pectinatus, Lesser Pondweed Potamogeton pusillus, Opposite-leaved Pondweed Groenlandia densa and Water Crowfoots Ranunculus spp.* *The site is an internationally important staging post for migratory birds, especially waders, terns, warblers and hirundines. The grasslands and reedbeds are a critical autumn feeding ground for Reed Warblers Acrocephalus scirpaceus and Sedge Warblers A. schoenobaenus,*	4.65km South east
SAC (bats)	North Somerset & Mendip	*The Cheddar complex and Wookey Hole areas support a wide range of semi natural habitats including semi-natural dry grassland and scrubland. The site is important for a number of rare plants which are associated with Carboniferous limestone habitats.* *The limestone caves of the Mendips provide a range of important hibernation sites for lesser horseshoe bat Rhinolophus hipposideros and the greater horseshoe bat R.ferrumequinum.* *The site represents 3% of the UK greater horseshoe population and it has good conservation of structure and function, having both maternity and hibernation sites.*	6.6km West 8.87km South west
SAC	Avon Gorge Woodland	*Avon Gorge is representative of Tilio-Acerion forests in south-west England on the limestone cliffs and screes of a large river gorge. It is important because of the high concentration of small-leaved lime Tilia cordata, compared with other sites in the region, the presence of rare whitebeams Sorbus spp., including two unique to the Avon Gorge (S. bristoliensis and S. wilmottiana), and other uncommon plants, such as green hellebore Helleborus viridis.*	8.7km North
SSSI	Hartcliffe Rocks Quarry	*The main reason for its designation is due to its geology comprising exposures of Triassic Dolomitic conglomerate overlying carboniferous limestone.*	1.52km N

Table 4.1 Internationally important and protected sites within a 10km radius of the development site and nationally important within 5km

Type	Site	Reason for Citation	Distance and orientation
SSSI	Lulsgate Quarry	*. The site is renowned for its excellent exposure of an irregular unconformity surface lying between inclined Lower Carboniferous (Dinantian) Black Rock limestones and flat-bedded Upper Triassic ('Rhaetian') strata*	2.03km North-west
SSSI	Barns Batch Spinney	*This site is important because of the exposures which it provides of the lower part of the classic Inferior Oolite limestone sequence of the Dundry area.*	2.65km West
SSSI	Dundry Main Road South Quarry	*Renowned as one of the world's most fossiliferous exposures with well over two hundred species recorded. The Main Road Quarry exposes a fine section in the Middle and Upper Inferior Oolite.*	3.35km East
SSSI	Plaster's Green Meadow	*The unimproved and traditionally managed species-rich meadows at Plaster's Green support a neutral grassland community of a type which is now rare throughout Britain.*	3.29km South
SSSI	Blagdon Cake	*This site consists of a large freshwater reservoir with peripheral areas of reedbed, carr, woodland and natural grassland. Blagdon Lake has an average depth of only 5m, reaching 13m at its deepest point. The moderately nutrient-rich and alkaline waters stratify during the summer.*	4.40km South west
LNR	Felton Common	*The site comprises a remnant expanse of common land, of the once former extensive Broadfield Down. A mosaic of habitats from acidic and calcareous grassland to scrub, including limestone heath, which supports a variety of plants, invertebrates, and birds. Bird species include kestrel, sky lark, song thrush, willow warbler, spotted flycatcher.*	1.07km west

4.2. The North Somerset & Mendip SAC has been designated specifically for bats and is located 6.6km west with a further section 8.8km south-west of the stie. The site represents 3% of the UK greater horseshoe population and it has good conservation of structure and function, having both maternity and hibernation sites. The site is within Consultation Zone C and adjacent to Consultation Zone B as presented in the relevant SPD.

4.3. The site lies within the Impact Risk Zone for the Chew Valley Lake, Plaster's Green Meadow and Blagdon Lake; however, the development does not fall under the categories that require consultation with Natural England.

4.4. The data search from Bristol Region Environmental Records Centre returned a total of 191 records from eight different species within 2km of the site boundary. Species included serotine, greater and lesser horseshoes, and common pipistrelle.

4.5. There were 162 records for roosts within the 2km radius of the site, 50 of which had more than 5 bats present and were visited over several years. The most pertinent of these records included a maternity roost for 27 lesser horseshoe bats *Rhinolophus hipposideros* recorded in 2011, 1km south of the site, and a hibernation roost for 35 lesser horseshoe bats in 2004 approximately 1km south.

4.6. Four EPSM licences have been issues within 2km of the development site, table 4.2 below summaries the relevant information.

Table 4.2. A summary of the EPSM licences issues within 2km of the development site.

Licence number	Species	Reason	Distance and orientation of closest
EPSM2010-2305	Brown long eared Serotine	Destruction of breeding site	556m North east
2019-42661-EPS-BDX	Soprano Pipistrelle	Destruction of breeding site	669m South
2020-48580-EPS-MIT	Brown long eared Common pipistrelle	Destruction of resting place	984m South west
EPSM2010-2194	Common pipistrelle Soprano pipistrelle Brown long eared	Destruction of resting place	1.69km South west

4.7. Multiple areas of suitable roosting and foraging habitats are located within the wider landscape of the site including nine blocks of deciduous woodland priority habitats within 2km of the site, the closest is adjacent to the development site to the north. There are a further 9 areas of traditional orchards, the closest is 45m east of the site. There is also a large area of lowland dry acid grassland 1.1km west of the site.

Building descriptions

4.8. The curtilage of Croxlea encompasses four buildings, as well as three storage containers and two small wooden sheds. The four main buildings were subjected to a detailed PRA inspection for bat roosting potential (1-4) are described below:

4.9. ***B1 -*** The main bungalow (Building 1) circa 1950s, single storey residential property with a half-height storage area underneath. Brick-built structure and had a pitched roof covered with concrete tiles. The fascia and soffits were timber, well-sealed with no obvious gaps or points of ingress. Windows and doors were also timber.

4.10. The internal roof void was lined with fibre glass insulation. There were two small vents, either end of the property which provide suitable access into the void.

4.11. ***B2*** - The double garage (Building 2) was of a similar construction to the main bungalow consisted of a double garage with storeroom. The roofing tiles were well sealed and the ridge tiles intact. Guttering was UPVC. The garages were filled with farm materials at the time of the survey.

4.12. ***B3*** – Dog kennels (Building 3) was present to the rear of the main bungalow property and at the time of the survey they were not in use. This was a single skinned metal and timber open fronted structure with corrugated metal roof. Plastic sheeting covered the fronts providing some weather protection.

4.13. ***B4*** – Porta cabin (Building 4) was of timber and metal structure. It had a flat roof and was missing the door. The structure was overgrown with ivy and full of farm equipment and materials at the time of the survey.

Buildings results

4.14. **B1 –** Externally B1 had gaps along the gable ends and some gaps under tiles on the roof. Internally the roof void contained a scattering of old bat droppings (c4) of a size and morphology indicative of pipistrelle bats. This building was considered to have **Low** potential for roosting bats. One emergence/re-entry survey is required.

4.15. **B2 –** the roof was in good condition with few access points. The building in general was in good repair. This building was considered to have **Low** potential for roosting bats. One emergence/re-entry survey is required.

4.16. **B3 –** The building was open fronted allowing access to the main structure, however the light levels in the building made the structure unsuitable for bats. This building was considered to have **Negligible** potential for roosting bats. This building will not require any further survey effort.

4.17. **B4 –** the structure was missing the door providing easy access to the internal void of the structure. No evidence of bats was found. This building was considered to have **Negligible** potential for roosting bats. This building will not require any further survey effort.

Bat Emergence surveys

Survey 1

4.18. Carried out on 20th August 2023, survey start was at 20:00 and continued until 21:53, 90 minutes past sunset which was at 20:23. The temperature at start was 20°C falling to 17 °C when the survey ended. The cloud cover was 40%, wind speed with 3m/s and there was no rain. Two surveyors equipped with Night Vision Aids (NVAs, one thermal and two infra-red kits) were deployed around B1 and B2 with a clear view of all potential access features.

4.19. No bats were seen or suspected to have emerged from B2.

4.20. Five common pipistrelle bats emerged from the northern gable end of B1, these were captured on an Thermal Imaging camera. The first emerged at 20:43, 20 minutes after sunset with subsequent emergences at 21:01, 21:02 (x2) and 21:08 with one bat seen to re-enter the roost at 21:01. This species was then captured foraging around the site until 21:43.

4.21. Common pipistrelle, soprano pipistrelle *Pipistrellus pygmaeus,* Noctule *Nytalus noctule* and a myotis species were recorded foraging around the site. The first was a soprano pipistrelle at 20:38 and a lesser horseshoe was heard at 21:34 and a single pass from a greater horseshoe at 20:55 and 21:48, neither bat was not observed and there was only the single registration.

4.22. Several passes from a Myotis sp bat were recorded at 20:57 around B2.

Survey 2

4.23. Carried out on the 22nd September 2023, survey start was at 18:50 and continued until 20:40, 90 minutes past sunset which was at 19:10. The temperature at start was 16°C falling to 15 °C when the survey ended. The cloud cover was 90%, there was light wind (2m/s) and no rain. Two surveyors equipped with Night Vision Aids (NVAs, one thermal and two infra-red kits) were deployed around B1 with a clear view of all potential access features.

4.24. A second survey was conducted to ascertain a better understanding of the roost in B1 to inform on roost status.

4.25. No bats were seen or suspected to have emerged from the building.

4.26. There was very little foraging activity during this survey, the first recording was 19:42.

Roost Characterisation

4.27. The table below provides a simple assessment of the status of any bat roosts located within the site boundary and their classification following accepted guidance and terminology[5].

[5] The classification of roost type follows that set-out by Natural England in their method statement for a bat Mitigation Licence: Day, Night, Feeding Perch, Transitional, Satellite, Maternity, Hibernation.

Table 4.3. The status and type of any bats roosts confirmed or likely to be present at the site

Building	Species	Likelihood	Status	Location	Conservation significance
B1	Common pipistrelle	Confirmed	Day	Northern gable end	Low
B2	N/A	Negligible	N/A	N/A	N/A

Evaluation

4.28. The results of the Preliminary Roost Assessment (PRA) and the emergence surveys confirmed presence of a bat roost on site in B1 for at least five common pipistrelle bats and on the balance of probability this represents a day roost used by multiple individuals. The roost itself is believed to be a small space between timber batters and accessed from between the concrete tile edges and the north gable end wall. Due to the materials and the elevation this roost is thought unlikely to provide the higher stable temperatures needed by maternity colonies.

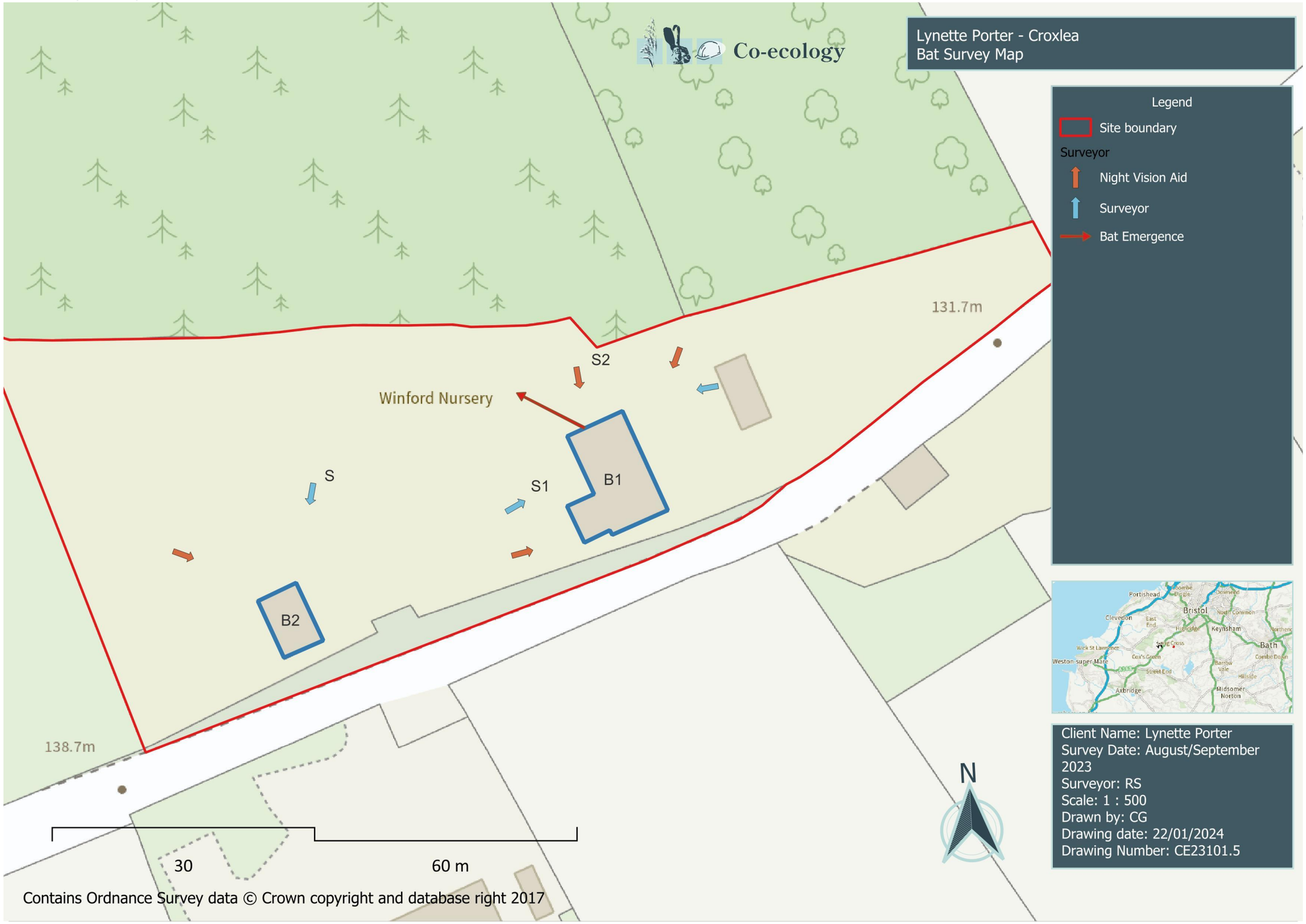
4.29. The identified roost in B1 is considered to be of **Site Level Importance** for a widespread species**.**

4.30. B2 had no bats emerging during the survey, and a roost is considered to be likely absent.

4.31. Croxlea was assessed as having negligible suitability to support hibernating bats due to the presence of insulation, concrete tiles and the property not having suitable hibernating features.

4.32. Following the results of the Preliminary Roost Assessment (PRA) and the emergence surveys and by considering all evidence including the presence of a roost for a common and widespread species, the poor-quality of the foraging habitat on site and the likely functionality the site provides to the wider bat population, the overall suitability of the site is considered to be **Low** and of site value only.

Survey Maps


Co-ecology
Lynette Porter - Croxlea
Bat Survey Map
Legend
Site boundary
Surveyor
Night Vision Aid
Surveyor
Bat Emergence
131.7m
S2
Winford Nursery
S
S1
B1
B2
138.7m
30
60 m
N
Client Name: Lynette Porter
Survey Date: August/September 2023
Surveyor: RS
Scale: 1 : 500
Drawn by: CG
Drawing date: 22/01/2024
Drawing Number: CE23101.5
Contains Ordnance Survey data © Crown copyright and database right 2017

5 Impacts and Opportunities

Impacts

5.1. Protected sites – There is one protected site that is cited for its bat interest within 10km of the development site, North Somerset and Mendip SAC. It is considered that the development of Croxlea site will have no impact on the bat population within the wider landscape due to the size of the site and habitats present. This assessment is based on the site being with Band C consultation zone (although adjacent to B), the very low number of calls from horseshoe bats (3) and the relatively poor quality/value of the habitats within the site. It is possible that horseshoe bats are traversing through the client's landholding to reach better foraging habitats elsewhere. There are no plans for the extensive removal of woody habitats during the construction process and negative impacts to these two key species would not reasonably be predicted.

5.2. Priority habitats in the wider landscape including broadleaved woodland and mature hedgerow boundaries which offer suitable opportunities for foraging bats in the local area. These are not expected to be impacted by the proposed works which will be limited to the buildings contained within the curtilage of Croxlea.

5.3. Habitats – The proposals will not result in the loss or disturbance of any suitable foraging habitats.

5.4. Bat Roosts – B1, Bungalow. In the absence of mitigation the demolition would result in the permanent loss of a day roost used by multiple common pipistrelle bats and could cause the death or injury of any bats present at the time.

Opportunities

5.5. There are opportunities to ensure no net loss of potential roosting locations and improve the suitability of the site for roosting bats through the provision of a bat roost box on mature trees within the site garden. The replacement building is oriented in the same way as the extant bungalow and therefore may provide an opportuni9ty to replace the roost at the same height and location.

6 Recommendations

Recommendations for surveys to inform the proposals

6.1. No further surveys are considered necessary for the purposes of this current planning application.

6.2. If the project is delayed 12 months or more past the date of the final survey, then the site would require a repeat building inspection and emergence surveys due to the high mobility of bat species.

Recommendations for surveys prior to construction

6.3. Prior to a consent application to Natural England a third emergence surveys should be carried out. Whilst the current assessment is that the roost in B1 is for individual bats and not a colony, to provide additional confidence of this assessment the survey should be carried out in June or July 2024.

6.4. Prior to demolition a final precautionary inspection of the onsite buildings should be completed by a suitably qualified ecologist.

6.5. A pre-works check for nesting birds must be carried out if works occur between March and August (inclusive).

Mitigation

6.6. The following points describe the preferred practicable mitigation measures that will be followed for works at Croxlea.

6.7. B1, the bungalow – A mitigation licence must be obtained from Natural England once full planning permission has been granted and once the third evening survey has been completed.

6.8. *Timing*: Although the building isn't particularly suitable for hibernation and the identified roost is likely not a maternity colony, following the precautionary principle works should be constrained to avoid the hibernation season, mid-November to March and the maternity season May to the end of August. Demolition would be best scheduled for September/October or April the following year.

6.9. *Pre-works inspection and roost exclusion*: Prior to the start of works, the Licenced Ecologist would carry out an inspection of the buildings with particular emphasis on the identified roosting locations with any bats observed captured by hand or static net. If any bats were in an inaccessible location such as deep within a timber joint that an exclusion device such as thick acetate or an open ended polyethene bag would be fixed to the roost exit. This would be left in-situ for five or more nights until the bats had left the building.

6.10. *Capture*: Any bats that are located will be captured by hand and placed into dedicated bat care boxes before being released shortly after into a tree mounted box, such as the Schwegler 2FN or Eco Kent Bat Box, installed specifically for this purpose.

6.11. *Compensation*: The common pipistrelle roost in B1 should be fully compensated for with a replacement feature built into the same elevation and the same height as currently found with the preferred location close the apex of the eaves on the north elevation of the new build. The recommended artificial boxes are either the Schwegler 2FN[6] or the Bat Habitat Box[7]. It is important

[6] 2FR Schwegler Bat Tube | NHBS Practical Conservation Equipment

[7] Habibat 001 | Habibat

to stress that wherever bats can come into contact with roof membranes that the use of modern breathable membranes must be avoided with traditional Type 4 bitumen felt used instead.

6.12. Additional efforts to improve the overall biodiversity on site and the local landscape could include planting of native flowering plants within the landscape plan as well as the installation of integrated Bee Bricks on the building to provide suitable alternative shelter for invertebrates.

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Photographs

Picture 1
The front view of Building 1 residential bungalow property

Picture 2
Front gable end of bungalow property (Building 1) with small vent space leading to the internal void. Arrow showing the roost location.

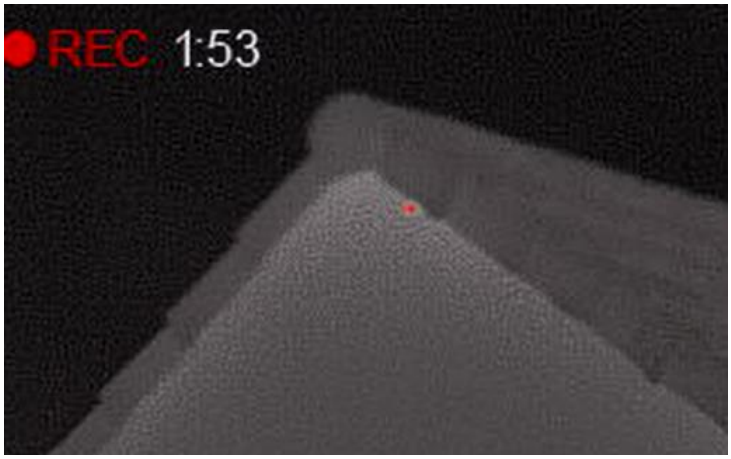
Picture 3
B2 – Double garage, showing similar structure as the bungalow, B1

Picture 4
Soffits and guttering on the double garage, B2

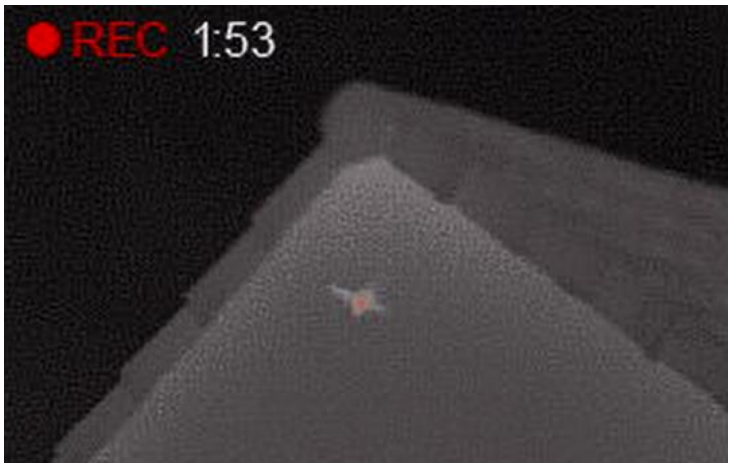
Picture 5
B3, Dog kennels and shed. Disused.

Picture 6
B4 Shed/Porta Cabin located towards the western of the property.

Picture 7
Bat emerging from roost.



Picture 8
Bat emerging from roost.



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