

Back from the Brink – Species summary

Brown Long-eared Bat

BftB project: IPO6 Roots of Rockingham

Project lead organisation: Butterfly Conservation

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Partner organisation for species: Bat Conservation Trust

Species name – common & scientific	Brown long-eared bat (<i>Plecotus auritus</i>)
Photograph	 <p style="text-align: right; font-size: small;">(c) Hugh Clark</p> <p style="text-align: center;">© Hugh Clark, BCT / Back from the Brink</p>
Taxon group	CHIROPTERA
Conservation status	IUCN Red List (GB: LC; England: [LC]; Scotland: [LC]; Wales: [LC]; Global: LC). National Conservation Status (Article 17 overall assessment 2013. Annex IV; UK: Favourable; England: Favourable; Scotland: Favourable; Wales: Favourable).
UK distribution	Taken from A Review of the Population and Conservation Status of British Mammals: Technical Summary. MATHEWS, F., KUBASIEWICZ, L. M., GURNELL, J., HARROWER, C., MCDONALD, R. A. & SHORE, R. F. 2018. A review of the population and conservation status of British Mammals. A report by The Mammal Society under contract to Natural England, Natural Resources Wales and Scottish Natural Heritage.

	 <p>Figure 10.17a Current range of the brown long-eared bat in Britain. Range is based on presence data collected between 1995 and 2016. Areas that contain very isolated records may not have been included in the area of distribution — see Methods, Section 2.5, for more details.</p>
<p>Habitat associations</p>	<p>High forest, veteran trees, wood-pasture, parkland, dead wood, edges, closed canopy, and wet woodland. Forms maternity colonies and hibernates in tree crevices, rot hollows, etc (as well as buildings). When foraging, it favours deciduous woodland with well-developed shrub layers but it will also feed in a wide range of habitats. It also feeds in orchards, brownfield sites, wetlands and parks; also alongside hedgerows, tree lines and herb-rich meadows, gardens and wetlands.</p>
<p>BftB work carried out:</p>	
<p>Survey & Monitoring</p>	<p>NBMP roost surveys were carried out during 2019 and 2021 of known brown long-eared bat (BLE) roosts located within buildings at key primary sites. The 3 roosts were surveyed, and the results were submitted, so will feed into the population trends for BLE. Current plans are for FE, the local bat group and NT staff to continue with the surveys using the NBMP roost survey methodology.</p> <p>A woodland transect survey following the NBMP Woodland Survey methodology was carried out at 10 primary and secondary sites from 2018 to 2020. This was primarily focused on Barbastelle but also had the potential to record BLE calls if they were present, although they are a much quieter bat and therefore harder to pick up on acoustic equipment. Acoustic surveys were carried out at 11 primary and secondary woodland sites from 2018 – 2020, using AudioMoths. Two primary sites were also monitored using acoustic surveys (SM2) to look at impact of ride widening work on project bat species.</p> <p>Some sites have never been surveyed, so these surveys have given the project a better understanding of brown long-eared distribution in the Rockingham Forest area.</p>

	<p>In total 22 sites were monitored by volunteers - 17 woodland sites (primary and secondary) and 5 woodland edge/hedgerow surveys.</p> <p>Trapping was carried out by Cambridgeshire Bat Group at 2 sites to ground truth the data collected by the project. They also monitored bat boxes at one of the primary sites.</p>
Site habitat management works	<p>Further enhancements were installed during summer 2020 in ten air raid shelters at one site to provide additional crevices and gaps for bats like BLE to hibernate in. Improvements to one air raid shelter were carried out at a second site by the landowner in 2021.</p> <p>Veteranisation techniques were trialled at Fineshade Wood within a minimum intervention area - a method where habitats and features (such as woodpecker holes and lightning strikes) that develop on ancient and veteran trees are created with handheld tools on young healthy trees (to give them a better chance of surviving) over a much shorter space of time – so using tools instead of time. Work on 9 young trees was carried out during winter 2020 and will be monitored by FE staff to see how the trees develop over time and by the local bat group with support from BCT, to see if the features are used by bats over time.</p> <p>Pinch points and scalloped edges were included in ride widening work carried out in Old Sulehay Wood, Southwick Wood (FE) and Castor Hanglands NNR, providing shelter for invertebrates, and therefore a potential foraging area for bats.</p>
Technical advice provision	<p>Summary reports were produced for each site surveyed, together with habitat recommendations and links to further information including BCT Advice sheets and the Woodland Wildlife Toolkit. Advice provided on conversion of air raid shelters to bat hibernacula. Section on managing woodland for bats was included in each of the three landowner workshops and in the video 'Managing woodlands for nature' available on YouTube.</p>
Links made with other taxa / conservation work?	<p>Veteranisation trial will benefit other taxa including birds, fungi and a variety of invertebrates. Creation of scallops provides additional habitat for Lepidoptera, including Chequered Skipper, Dingy Skipper and Grizzled Skipper as well as a variety of invertebrates and the species that feed on them.</p>
Wider engagement & advocacy activities?	<p>Guided bat walks, bat & moth nights, children's activities, and family engagement events focused on bats, creative writing workshop focused on project bat species, species mentioned in talks</p>
BftB results obtained:	
Recorded Distribution (in BftB focal areas)	<p>In total, brown long-eared was recorded on 17 sites, through acoustic surveys and trapping/bat box checks. 3 BLE roosts were also monitored. Acoustic surveys recorded BLE in 10 (of 17) woodlands surveyed and 5 (of 5) woodland edges/hedgerows surveyed. It was also recorded from 2 additional project woodlands through trapping & bat box checks carried out by Cambridgeshire Bat Group.</p>
Recorded Abundance of species populations	<p>N/A It is not possible to estimate absolute bat abundance from acoustic data, as individual animals cannot be identified. Abundance data collected from roost surveys can be used to look at changes over time once roosts have been monitored for a sufficient period (only 2 counts took place in 2019 & 2021 during project lifetime).</p>

<p>Species Recovery Curve progress made</p>	<p>Species recovery curve moved from 4 to 6. Recovery solutions being trialled across some sites including tree veteranisation and improvements to air raid shelters to increase availability of roost sites and scalloping to improve foraging habitat.</p>
<p>Recommendations for future work:-</p>	<p>Long term monitoring - Continuation of the NBMP roost surveys at the three BLE roost sites. Converted air raid shelters should be monitored by bat volunteers using the NBMP hibernation survey methodology.</p> <p>Pinch points and scallops should continue to be incorporated into forestry operations where rides are being widened.</p> <p>Veteranisation techniques trialled at Fineshade. Results won't be immediate, but monitoring should be carried out by FE and the local bat group long term with support from BCT.</p>