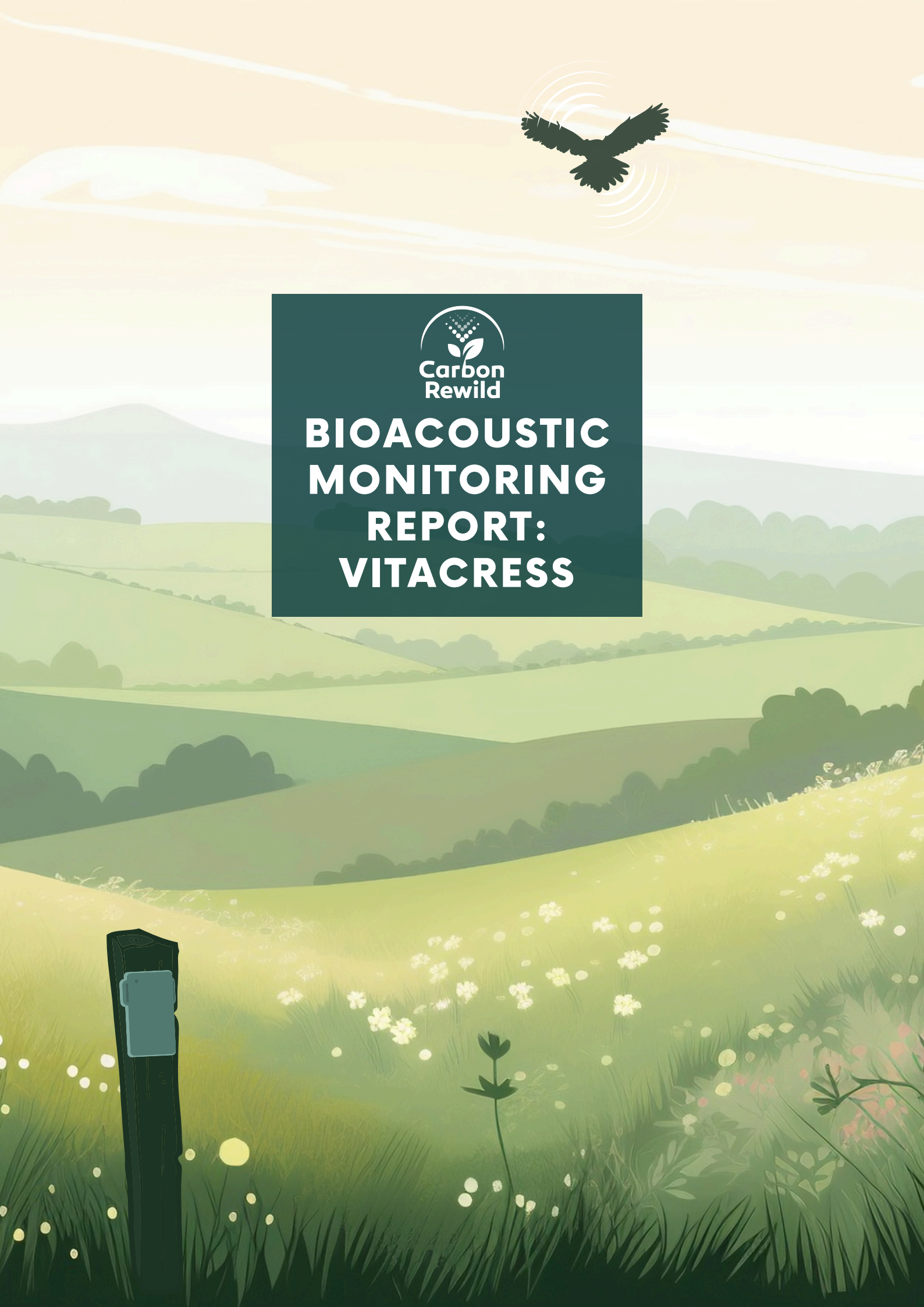




BIOACOUSTIC MONITORING REPORT: VITACRESS



SURVEY OVERVIEW

This report presents the findings of our recent bioacoustic survey conducted to assess the biodiversity within the designated survey areas. Bioacoustic monitoring involves analysing the sounds produced by different species, serving as reliable indicators of their presence, behaviour, and activity trends.

The aims of the survey is to identify bird and bat species and highlight those of conservation importance. The surveys took place on varying dates between 1st May - 8th August 2024, recording at the same time intervals every day during the survey period. 26 recording units were deployed across 5 survey sites, although one unit was not turned on during the survey period.

The report includes the following sections:

- Survey overview and highlights (survey dashboard)
- Map of survey site(s), highlighting species richness per recording location
- Identified bird species and activity breakdown
- Bird species of conservation concern
- Identified bat species and activity breakdown
- Site breakdown of species identified

Further insights can be also be found on your Nature Dashboard, via **Carbon Rewild Core**. The dashboard hosts all of your survey results, with some additional features beyond the information within this report:

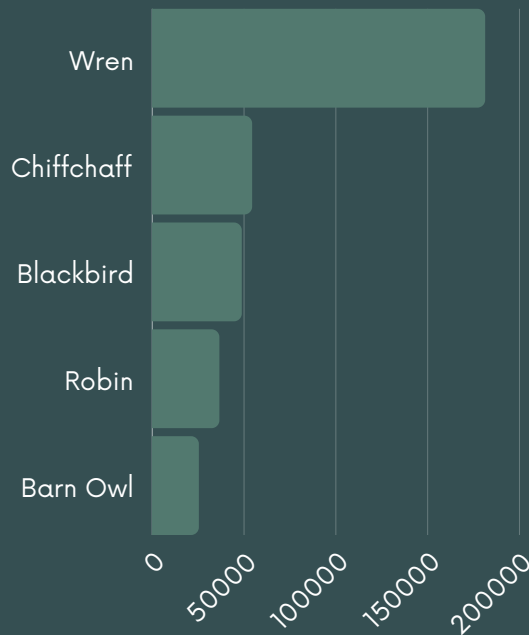
- Temporal Species Trends (daily/hourly identifications data)
- Site Biodiversity timelines and multi-survey trends.
- Species list filtering:
 - Filter Bird Species by primary habitat
 - Filter Bird species by Conservation Status (BoCC5) and Indicator Group (JNCC Species indicator groups)

91 species were identified across all surveys, several of which can be considered key indicator species whose presence or abundance can reflect the health of the ecosystem. Species of interest that were identified include: Barbastelle bat, Tree Sparrow, Yellowhammer. Additional species were also identified through the survey, although due to insufficient evidence, they have been removed from validated results. These species can be found in Appendix B.

SURVEY DASHBOARD

BIRDS OVERVIEW (ALL SURVEY SITES)

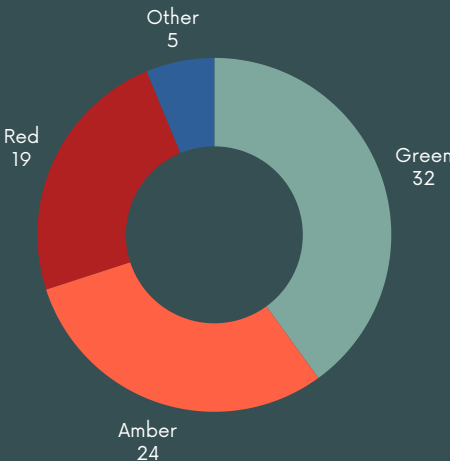
MOST FREQUENTLY IDENTIFIED BIRD SPECIES



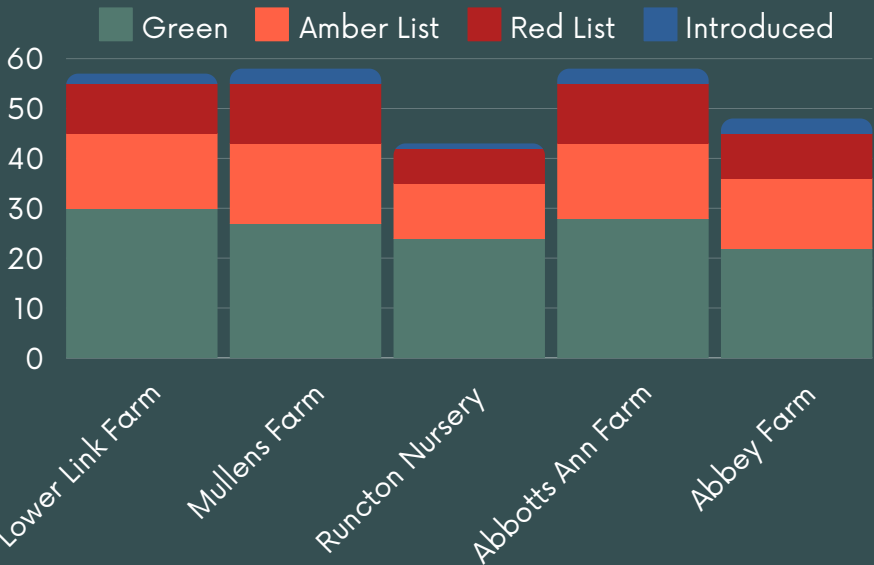
577390 CALLS FROM IDENTIFIED BIRD SPECIES

80 BIRD SPECIES

CONSERVATION STATUS OF BIRDS IDENTIFIED



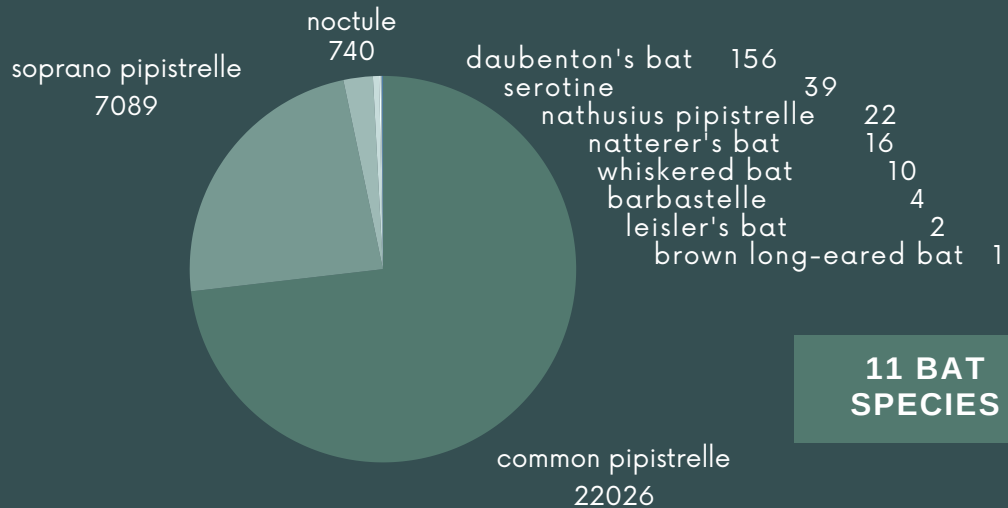
BIRD SPECIES RICHNESS AND CONSERVATION STATUS PER SURVEY SITE



SPECIES DASHBOARD

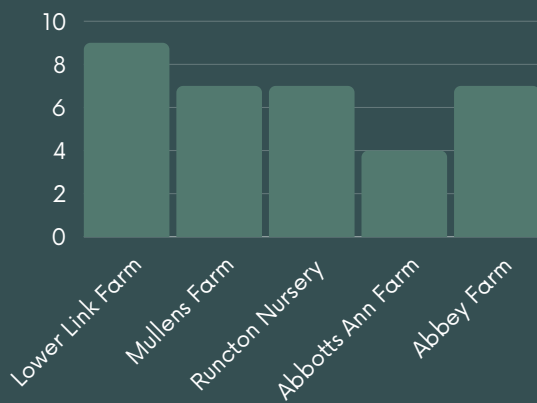
BAT SPECIES OVERVIEW

IDENTIFIED BAT CALLS

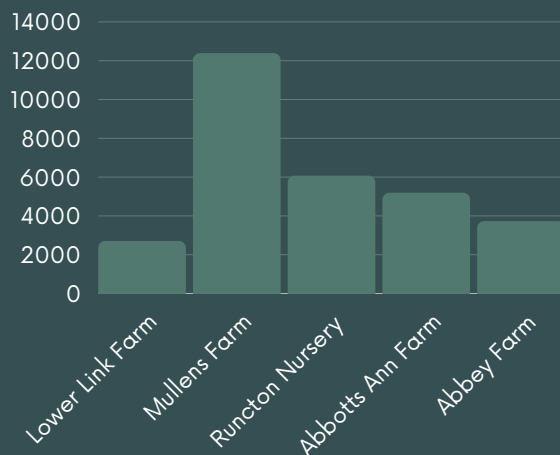


11 BAT SPECIES

BAT SPECIES RICHNESS PER SURVEY SITE



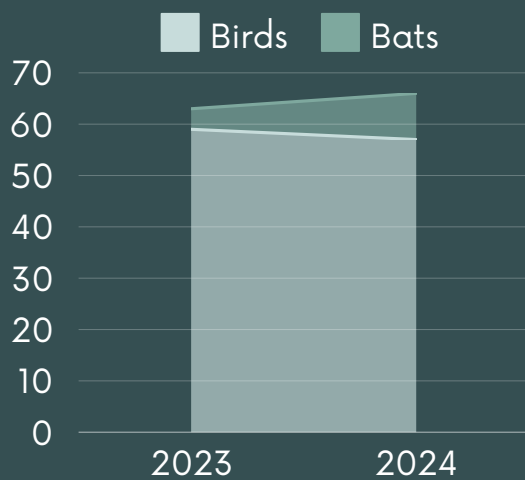
NUMBER OF BAT IDENTIFICATIONS PER SURVEY SITE



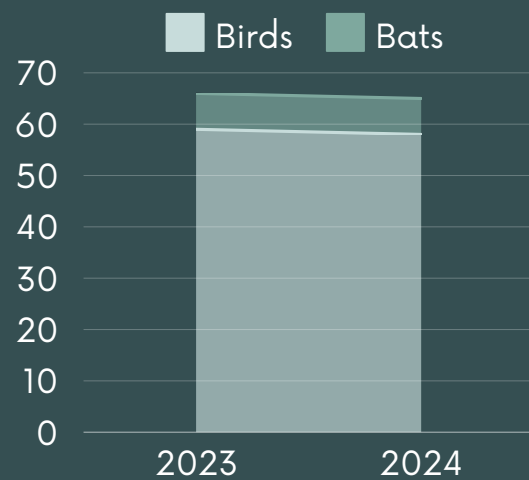
SPECIES TIMELINES

2023 VS 2024 COMPARISON

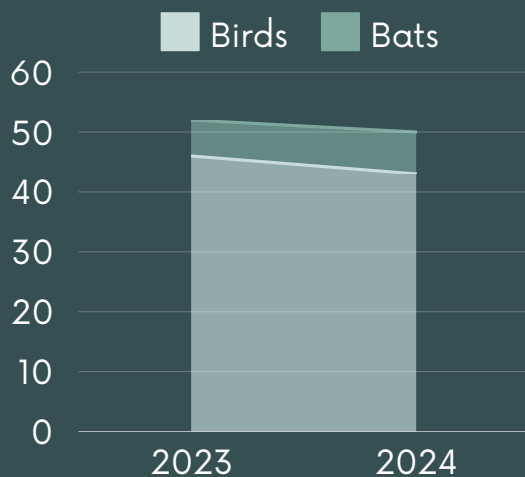
LOWER LINK FARM



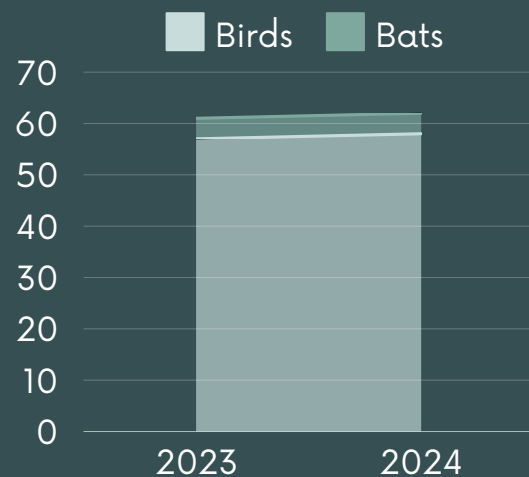
MULLENS FARM



RUNCTON NURSERY



ABBOTTS ANN FARM



SURVEY SITE FINDINGS



SURVEY SITE: ABBOTTS ANN FARM

BIRDS OVERVIEW

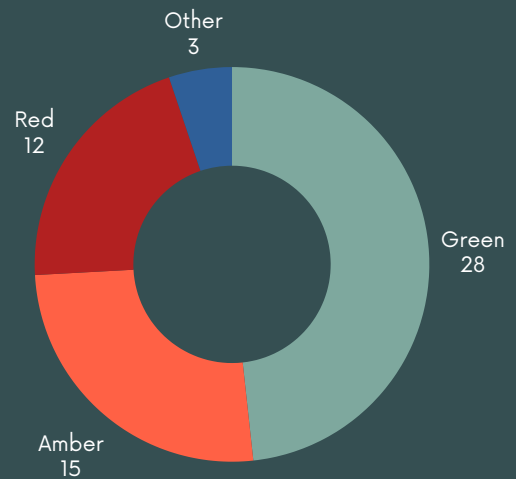
MOST FREQUENTLY IDENTIFIED BIRD SPECIES



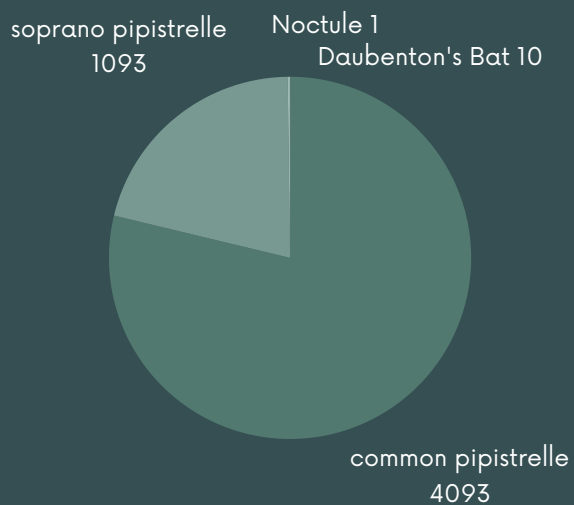
156618 CALLS FROM IDENTIFIED BIRD SPECIES

58 BIRD SPECIES

CONSERVATION STATUS OF BIRDS IDENTIFIED



BATS OVERVIEW



4 BAT SPECIES

ABBOTTS ANN FARM

NUMBER OF SPECIES IDENTIFIED PER RECORDING DEVICE

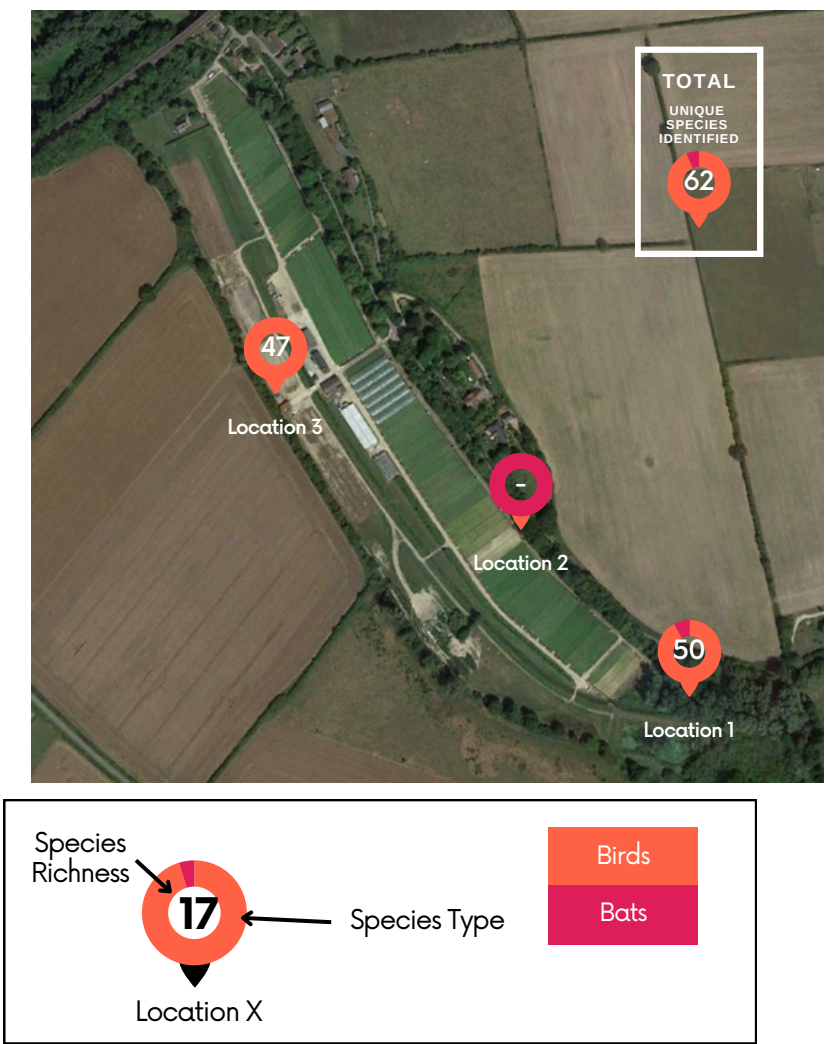
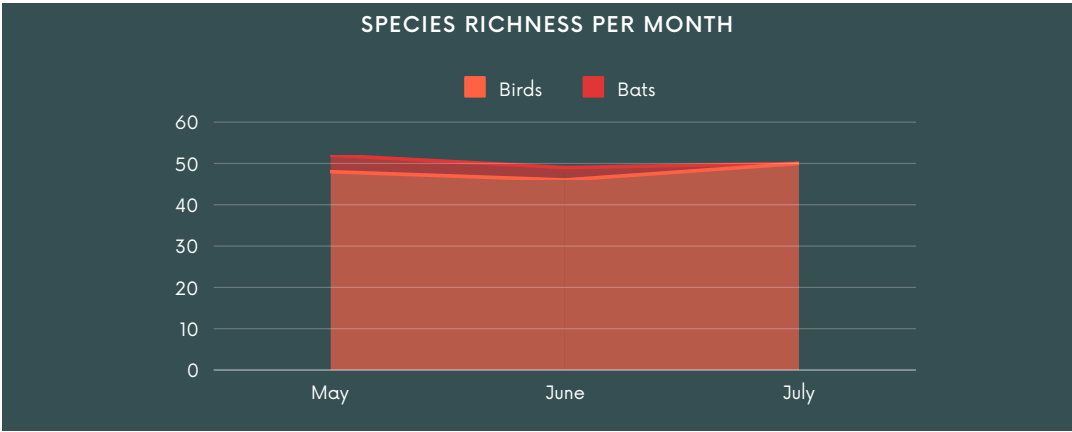


IMAGE © GOOGLE EARTH, © AIRBUS

NO RESULTS AVAILABLE AT LOCATION 2 DUE TO
INCORRECT SETUP



BIRDS IDENTIFIED AT SITE

A full list of bird species identified at the site can be found below:

Species	Scientific Name	Month 1 Acoustic Identifications	Month 2 Acoustic Identifications	Month 3 Acoustic Identifications	Conservation Status (BoCC5)
Wren	<i>Troglodytes troglodytes</i>	27939	33895	15228	amber
Blackbird	<i>Turdus merula</i>	5622	4770	931	green
Tawny Owl	<i>Strix aluco</i>	12	2360	5726	amber
Treecreeper	<i>Certhia familiaris</i>	1226	2427	3620	green
Goldfinch	<i>Carduelis carduelis</i>	474	2110	3616	green
Robin	<i>Erithacus rubecula</i>	2574	1946	1210	green
Spotted Flycatcher	<i>Muscicapa striata</i>	393	2931	1610	red
Blackcap	<i>Sylvia atricapilla</i>	2784	1189	87	green
Long-tailed Tit	<i>Aegithalos caudatus</i>	826	711	1661	green
Chaffinch	<i>Fringilla coelebs</i>	1520	1085	59	green
Blue Tit	<i>Cyanistes caeruleus</i>	769	1146	598	green
Dunnock	<i>Prunella modularis</i>	594	944	582	amber
Great Tit	<i>Parus major</i>	1456	336	280	green
Magpie	<i>Pica pica</i>	246	921	866	green
Chiffchaff	<i>Phylloscopus collybita</i>	500	407	938	green
Jackdaw	<i>Corvus monedula</i>	864	510	127	green
Carrion Crow	<i>Corvus corone</i>	534	390	296	green
Song Thrush	<i>Turdus philomelos</i>	476	577	131	amber
Goldcrest	<i>Regulus regulus</i>	389	293	446	green
Green Woodpecker	<i>Picus viridis</i>	189	351	419	green
Cetti's Warbler	<i>Cettia cetti</i>	834	121	4	green
Woodpigeon	<i>Columba palumbus</i>	67	65	662	amber
Sparrowhawk	<i>Accipiter nisus</i>	0	0	627	amber
Grey Wagtail	<i>Motacilla cinerea</i>	100	126	391	amber
Bullfinch	<i>Pyrrhula pyrrhula</i>	223	230	160	amber

BIRDS IDENTIFIED AT SITE

Species	Scientific Name	Month 1 Acoustic Identifications	Month 2 Acoustic Identifications	Month 3 Acoustic Identifications	Conservation Status (BoCC5)
Moorhen	<i>Gallinula chloropus</i>	206	202	172	amber
Skylark	<i>Alauda arvensis</i>	112	122	317	red
Pheasant	<i>Phasianus colchicus</i>	29	184	289	introduced
Reed Warbler	<i>Acrocephalus scirpaceus</i>	166	196	116	green
Great Spotted Woodpecker	<i>Dendrocopos major</i>	117	140	220	green
Whitethroat	<i>Curruca communis</i>	0	441	0	amber
Grey Heron	<i>Ardea cinerea</i>	63	162	164	green
Buzzard	<i>Buteo buteo</i>	133	132	71	green
Firecrest	<i>Regulus ignicapilla</i>	304	0	0	green
Red-legged Partridge	<i>Alectoris rufa</i>	56	91	148	introduced
Kingfisher	<i>Alcedo atthis</i>	0	0	212	green
Red Kite	<i>Milvus milvus</i>	99	73	8	green
Mistle Thrush	<i>Turdus viscivorus</i>	120	0	31	red
Mallard	<i>Anas platyrhynchos</i>	60	39	23	amber
Greenfinch	<i>Chloris chloris</i>	48	42	27	red
Barn Owl	<i>Tyto alba</i>	18	26	62	green
Swallow	<i>Hirundo rustica</i>	10	23	69	green
Pied Wagtail	<i>Motacilla alba</i>	25	28	25	green
Jay	<i>Garrulus glandarius</i>	7	23	43	green
Cuckoo	<i>Cuculus canorus</i>	20	47	0	red
Gadwall	<i>Mareca strepera</i>	65	0	0	amber
Swift	<i>Apus apus</i>	7	15	26	red
Grasshopper Warbler	<i>Locustella naevia</i>	0	0	44	red
Coot	<i>Fulica atra</i>	22	0	19	green
Kestrel	<i>Falco tinnunculus</i>	0	0	23	amber
Linnet	<i>Linaria cannabina</i>	0	20	0	red

BIRDS IDENTIFIED AT SITE

Species	Scientific Name	Month 1 Acoustic Identifications	Month 2 Acoustic Identifications	Month 3 Acoustic Identifications	Conservation Status (BoCC5)
Herring Gull	<i>Larus argentatus</i>	7	9	4	red
House Sparrow	<i>Passer domesticus</i>	0	14	3	red
Teal	<i>Anas crecca</i>	0	16	0	amber
Yellowhammer	<i>Emberiza citrinella</i>	0	0	15	red
Canada Goose	<i>Branta canadensis</i>	12	0	0	introduced
Stock Dove	<i>Columba oenas</i>	0	0	7	amber
Starling	<i>Sturnus vulgaris</i>	2	0	0	red

BATS IDENTIFIED AT SITE

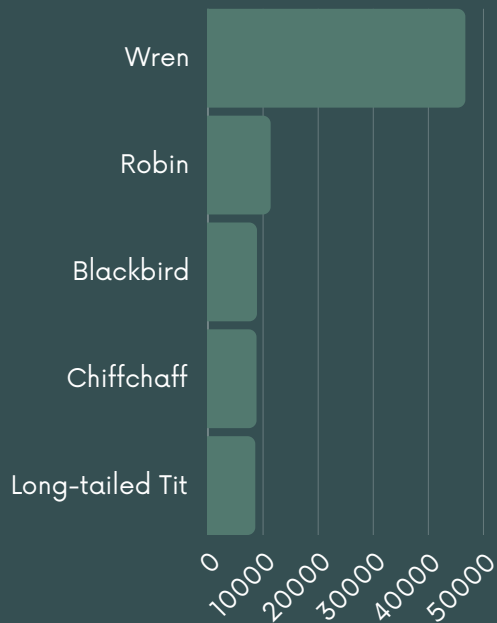
A full list of bat species identified at the site can be found below:

Species	Scientific Name	Month 1 Acoustic Identifications	Month 2 Acoustic Identifications	Month 3 Acoustic Identifications
common pipistrelle	<i>Pipistrellus pipistrellus</i>	3982	111	0
soprano pipistrelle	<i>Pipistrellus pygmaeus</i>	1079	14	0
daubenton's bat	<i>Myotis daubentonii</i>	9	1	0
noctule	<i>Nyctalus noctula</i>	1	0	0

SURVEY SITE: LOWER LINK FARM

BIRDS OVERVIEW

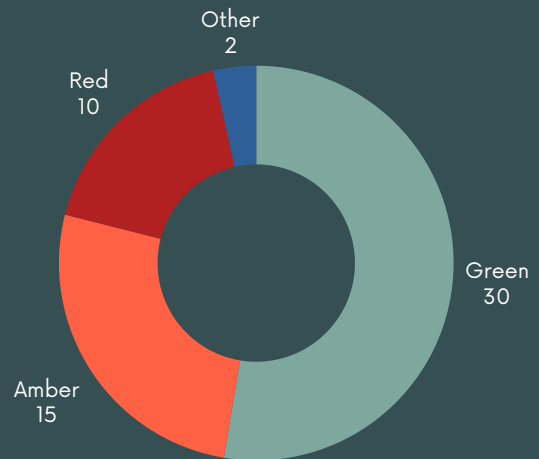
MOST FREQUENTLY IDENTIFIED BIRD SPECIES



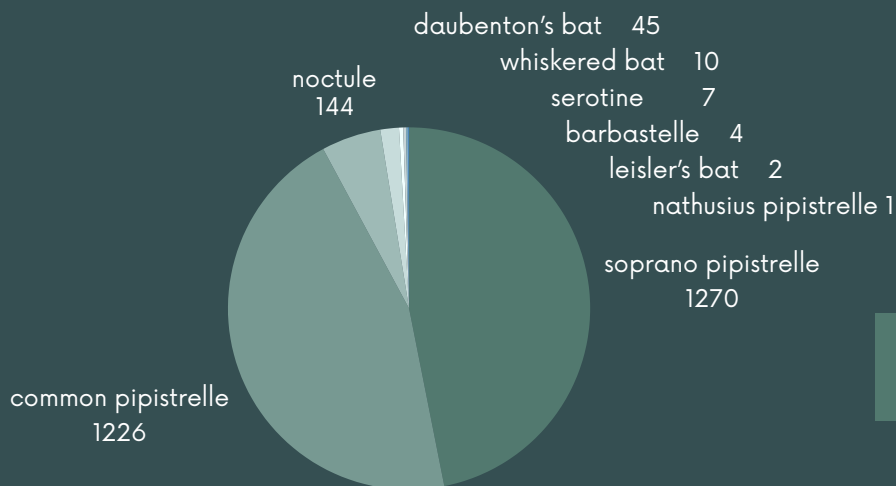
143660 CALLS FROM IDENTIFIED BIRD SPECIES

57 BIRD SPECIES

CONSERVATION STATUS OF BIRDS IDENTIFIED



BATS OVERVIEW



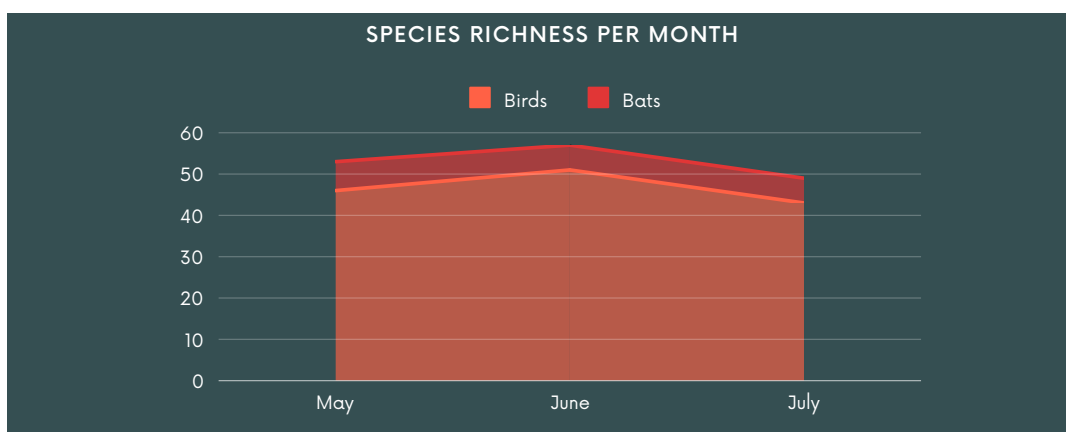
9 BAT SPECIES

LOWER LINK FARM

NUMBER OF SPECIES IDENTIFIED PER RECORDING DEVICE



IMAGE © GOOGLE EARTH, © AIRBUS



BIRDS IDENTIFIED AT SITE

A full list of bird species identified at the site can be found below:

Species	Scientific Name	Month 1 Acoustic Identifications	Month 2 Acoustic Identifications	Month 3 Acoustic Identifications	Conservation Status (BoCC5)
Wren	<i>Troglodytes troglodytes</i>	18396	22607	5713	amber
Robin	<i>Erithacus rubecula</i>	7395	2443	1537	green
Blackbird	<i>Turdus merula</i>	4417	2964	1514	green
Chiffchaff	<i>Phylloscopus collybita</i>	2210	4058	2546	green
Long-tailed Tit	<i>Aegithalos caudatus</i>	2416	3259	2914	green
Barn Owl	<i>Tyto alba</i>	30	594	6571	green
Blackcap	<i>Sylvia atricapilla</i>	2791	3241	833	green
Blue Tit	<i>Cyanistes caeruleus</i>	1716	1987	1646	green
Dunnock	<i>Prunella modularis</i>	1803	1745	1399	amber
Chaffinch	<i>Fringilla coelebs</i>	1942	1912	158	green
Spotted Flycatcher	<i>Muscicapa striata</i>	0	2950	670	red
Song Thrush	<i>Turdus philomelos</i>	1358	1365	658	amber
Sedge Warbler	<i>Acrocephalus schoenobaenus</i>	1543	812	521	amber
Goldfinch	<i>Carduelis carduelis</i>	261	1543	336	green
Magpie	<i>Pica pica</i>	124	650	1295	green
Goldcrest	<i>Regulus regulus</i>	1038	749	238	green
Great Tit	<i>Parus major</i>	970	348	519	green
Treecreeper	<i>Certhia familiaris</i>	360	882	549	green
Great Spotted Woodpecker	<i>Dendrocopos major</i>	662	310	450	green
Tawny Owl	<i>Strix aluco</i>	710	219	222	amber
Jackdaw	<i>Corvus monedula</i>	457	543	105	green
House Martin	<i>Delichon urbicum</i>	195	464	174	red
Buzzard	<i>Buteo buteo</i>	143	229	382	green
Pheasant	<i>Phasianus colchicus</i>	468	149	43	introduced

BIRDS IDENTIFIED AT SITE

A full list of bird species identified at the site can be found below:

Species	Scientific Name	Month 1 Acoustic Identifications	Month 2 Acoustic Identifications	Month 3 Acoustic Identifications	Conservation Status (BoCC5)
Woodpigeon	<i>Columba palumbus</i>	172	325	144	amber
Cetti's Warbler	<i>Cettia cetti</i>	366	249	0	green
Moorhen	<i>Gallinula chloropus</i>	348	126	133	amber
Carrion Crow	<i>Corvus corone</i>	100	182	194	green
Tree Pipit	<i>Anthus trivialis</i>	96	206	0	red
Red Kite	<i>Milvus milvus</i>	86	73	104	green
Kingfisher	<i>Alcedo atthis</i>	0	31	218	green
Grey Heron	<i>Ardea cinerea</i>	27	114	84	green
Greenfinch	<i>Chloris chloris</i>	150	29	31	red
Gadwall	<i>Mareca strepera</i>	172	0	0	amber
Pied Wagtail	<i>Motacilla alba</i>	45	75	49	green
Mallard	<i>Anas platyrhynchos</i>	49	58	60	amber
Stock Dove	<i>Columba oenas</i>	79	42	37	amber
Grey Wagtail	<i>Motacilla cinerea</i>	54	42	49	amber
Coal Tit	<i>Periparus ater</i>	0	51	65	green
Yellowhammer	<i>Emberiza citrinella</i>	0	90	0	red
Swallow	<i>Hirundo rustica</i>	24	31	35	green
Coot	<i>Fulica atra</i>	60	27	0	green
Reed Bunting	<i>Emberiza schoeniclus</i>	47	38	0	amber
Green Woodpecker	<i>Picus viridis</i>	0	41	33	green
Canada Goose	<i>Branta canadensis</i>	42	0	31	introduced
Whitethroat	<i>Curruca communis</i>	62	0	0	amber
Firecrest	<i>Regulus ignicapilla</i>	25	0	0	green
Swift	<i>Apus apus</i>	0	9	14	red
Skylark	<i>Alauda arvensis</i>	0	17	5	red
Reed Warbler	<i>Acrocephalus scirpaceus</i>	0	20	0	green
Kestrel	<i>Falco tinnunculus</i>	6	2	9	amber

BIRDS IDENTIFIED AT SITE

A full list of bird species identified at the site can be found below:

Species	Scientific Name	Month 1 Acoustic Identifications	Month 2 Acoustic Identifications	Month 3 Acoustic Identifications	Conservation Status (BoCC5)
Rook	<i>Corvus frugilegus</i>	0	3	14	amber
Cuckoo	<i>Cuculus canorus</i>	13	0	0	red
House Sparrow	<i>Passer domesticus</i>	7	5	0	red
Jay	<i>Garrulus glandarius</i>	0	7	0	green
Nuthatch	<i>Sitta europaea</i>	0	6	0	green
Herring Gull	<i>Larus argentatus</i>	1	0	0	red

BATS IDENTIFIED AT SITE

A full list of bat species identified at the site can be found below:

Species	Scientific Name	Month 1 Acoustic Identifications	Month 2 Acoustic Identifications	Month 3 Acoustic Identifications
soprano pipistrelle	<i>Pipistrellus pygmaeus</i>	893	289	88
common pipistrelle	<i>Pipistrellus pipistrellus</i>	763	262	201
noctule	<i>Nyctalus noctula</i>	116	12	16
daubenton's bat	<i>Myotis daubentonii</i>	35	6	4
whiskered bat	<i>Myotis mystacinus</i>	10	0	0
serotine	<i>Eptesicus serotinus</i>	6	0	1
barbastelle	<i>Barbastella barbastellus</i>	3	1	0
leisler's bat	<i>Nyctalus leisleri</i>	0	0	2
nathusius pipistrelle	<i>Pipistrellus nathusii</i>	0	1	0

SURVEY SITE: MULLENS FARM

BIRDS OVERVIEW

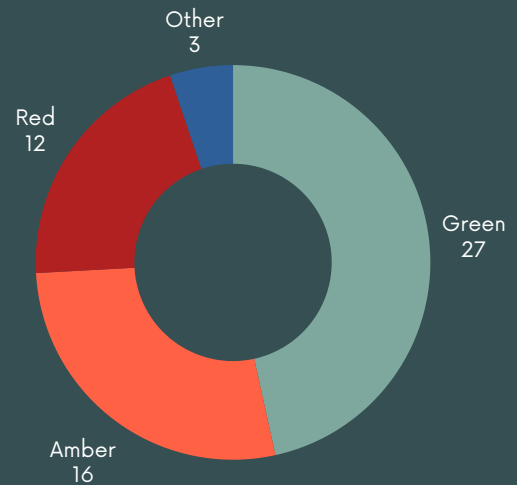
MOST FREQUENTLY IDENTIFIED BIRD SPECIES



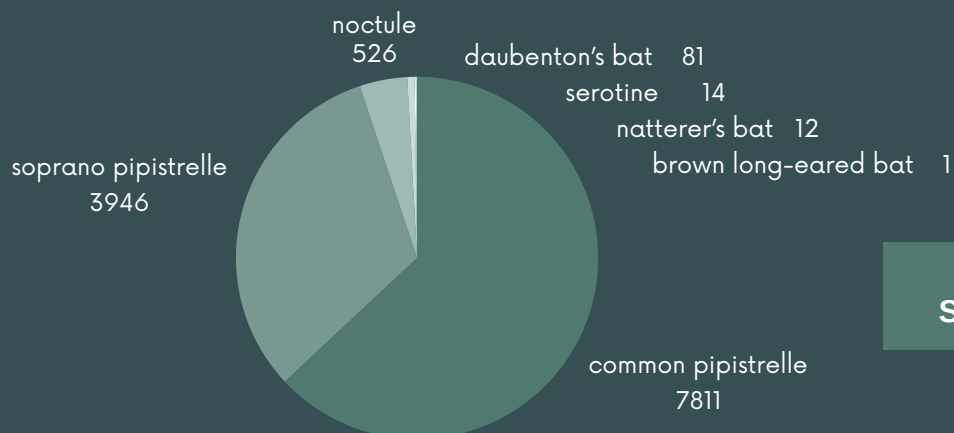
110914 CALLS FROM IDENTIFIED BIRD SPECIES

58 BIRD SPECIES

CONSERVATION STATUS OF BIRDS IDENTIFIED



BATS OVERVIEW



7 BAT SPECIES

MULLENS FARM

NUMBER OF SPECIES IDENTIFIED
PER RECORDING DEVICE

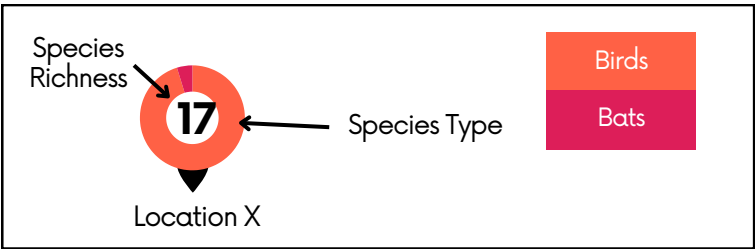
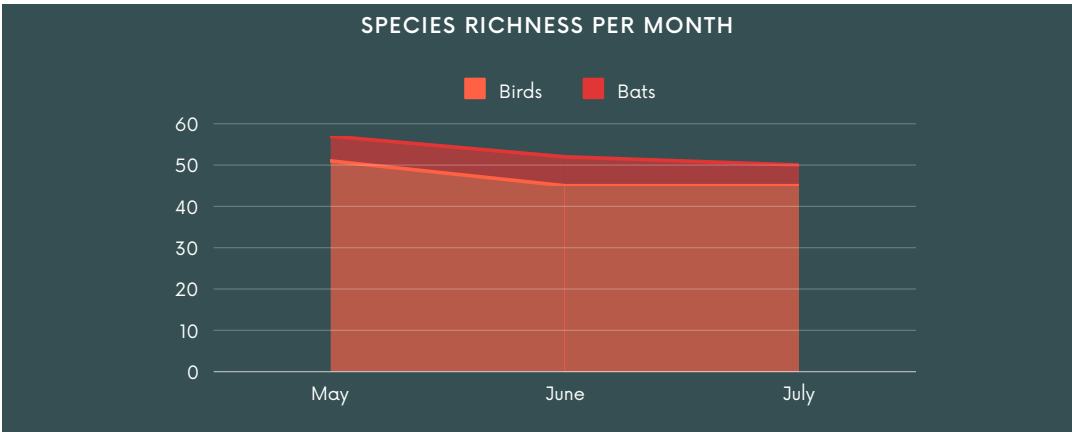


IMAGE © GOOGLE EARTH, © AIRBUS



BIRDS IDENTIFIED AT SITE

A full list of bird species identified at the site can be found below:

Species	Scientific Name	Month 1 Acoustic Identifications	Month 2 Acoustic Identifications	Month 3 Acoustic Identifications	Conservation Status (BoCC5)
Chiffchaff	<i>Phylloscopus collybita</i>	14297	8004	969	green
Barn Owl	<i>Tyto alba</i>	407	7733	9425	green
Blackbird	<i>Turdus merula</i>	7501	3377	559	green
Wren	<i>Troglodytes troglodytes</i>	4456	3824	2049	amber
Jackdaw	<i>Corvus monedula</i>	2154	2455	1428	green
Carrion Crow	<i>Corvus corone</i>	1629	2096	959	green
Skylark	<i>Alauda arvensis</i>	1727	1334	87	red
Rook	<i>Corvus frugilegus</i>	572	1916	424	amber
Robin	<i>Erithacus rubecula</i>	1130	636	767	green
Blackcap	<i>Sylvia atricapilla</i>	480	1802	219	green
Treecreeper	<i>Certhia familiaris</i>	490	629	1060	green
Long-tailed Tit	<i>Aegithalos caudatus</i>	1115	505	319	green
Dunnock	<i>Prunella modularis</i>	407	630	886	amber
Blue Tit	<i>Cyanistes caeruleus</i>	650	674	499	green
Magpie	<i>Pica pica</i>	284	1120	397	green
Song Thrush	<i>Turdus philomelos</i>	749	728	322	amber
Goldfinch	<i>Carduelis carduelis</i>	536	356	795	green
Chaffinch	<i>Fringilla coelebs</i>	1020	625	10	green
Spotted Flycatcher	<i>Muscicapa striata</i>	0	545	994	red
Woodpigeon	<i>Columba palumbus</i>	476	308	499	amber
Pied Wagtail	<i>Motacilla alba</i>	272	418	323	green
Great Tit	<i>Parus major</i>	410	220	307	green
Stock Dove	<i>Columba oenas</i>	177	160	344	amber
Great Spotted Woodpecker	<i>Dendrocopos major</i>	276	172	199	green
Goldcrest	<i>Regulus regulus</i>	244	273	119	green

BIRDS IDENTIFIED AT SITE

Species	Scientific Name	Month 1 Acoustic Identifications	Month 2 Acoustic Identifications	Month 3 Acoustic Identifications	Conservation Status (BoCC5)
Little Owl	<i>Athene noctua</i>	520	0	0	introduced
Green Woodpecker	<i>Picus viridis</i>	213	107	175	green
House Martin	<i>Delichon urbicum</i>	91	132	256	red
Pheasant	<i>Phasianus colchicus</i>	262	30	167	introduced
Whitethroat	<i>Curruca communis</i>	389	0	0	amber
Tawny Owl	<i>Strix aluco</i>	150	122	76	amber
Buzzard	<i>Buteo buteo</i>	136	83	99	green
Herring Gull	<i>Larus argentatus</i>	30	13	196	red
Nuthatch	<i>Sitta europaea</i>	65	63	108	green
Coal Tit	<i>Periparus ater</i>	40	33	118	green
House Sparrow	<i>Passer domesticus</i>	146	15	20	red
Swallow	<i>Hirundo rustica</i>	70	36	68	green
Linnet	<i>Linaria cannabina</i>	35	59	46	red
Mistle Thrush	<i>Turdus viscivorus</i>	126	0	0	red
Lesser Black-backed Gull	<i>Larus fuscus</i>	0	0	116	amber
Moorhen	<i>Gallinula chloropus</i>	53	29	0	amber
Grey Partridge	<i>Perdix perdix</i>	0	23	34	red
Jay	<i>Garrulus glandarius</i>	3	9	43	green
Greenfinch	<i>Chloris chloris</i>	25	23	3	red
Yellow Wagtail	<i>Motacilla flava</i>	15	27	6	red
Bullfinch	<i>Pyrrhula pyrrhula</i>	33	0	12	amber
Red Kite	<i>Milvus milvus</i>	28	11	0	green
Ringed Plover	<i>Charadrius hiaticula</i>	37	0	0	red
Black-headed Gull	<i>Chroicocephalus ridibundus</i>	0	0	23	amber
Raven	<i>Corvus corax</i>	23	0	0	green
Common Sandpiper	<i>Actitis hypoleucos</i>	19	0	0	amber

BIRDS IDENTIFIED AT SITE

Species	Scientific Name	Month 1 Acoustic Identifications	Month 2 Acoustic Identifications	Month 3 Acoustic Identifications	Conservation Status (BoCC5)
Canada Goose	<i>Branta canadensis</i>	19	0	0	introduced
Grey Heron	<i>Ardea cinerea</i>	16	0	0	green
Swift	<i>Apus apus</i>	4	1	1	red
Hobby	<i>Falco subbuteo</i>	0	0	0	green
Grey Wagtail	<i>Motacilla cinerea</i>	0	5	5	amber
Mallard	<i>Anas platyrhynchos</i>	4	0	0	amber
Kestrel	<i>Falco tinnunculus</i>	0	0	0	amber

BATS IDENTIFIED AT SITE

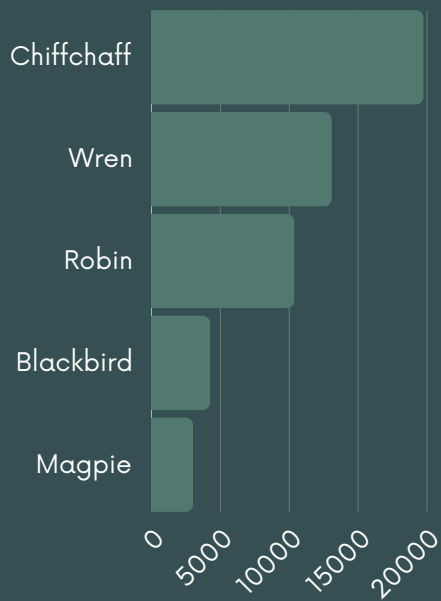
A full list of bat species identified at the site can be found below:

Species	Scientific Name	Month 1 Acoustic Identifications	Month 2 Acoustic Identifications	Month 3 Acoustic Identifications
common pipistrelle	<i>Pipistrellus pipistrellus</i>	2668	1999	3144
soprano pipistrelle	<i>Pipistrellus pygmaeus</i>	1683	857	1406
noctule	<i>Nyctalus noctula</i>	181	260	85
daubenton's bat	<i>Myotis daubentonii</i>	69	1	11
serotine	<i>Eptesicus serotinus</i>	8	2	4
natterer's bat	<i>Myotis nattereri</i>	10	2	0
brown long-eared bat	<i>Plecotus auritus</i>	0	1	0

SURVEY SITE: RUNCTON NURSERY

BIRDS OVERVIEW

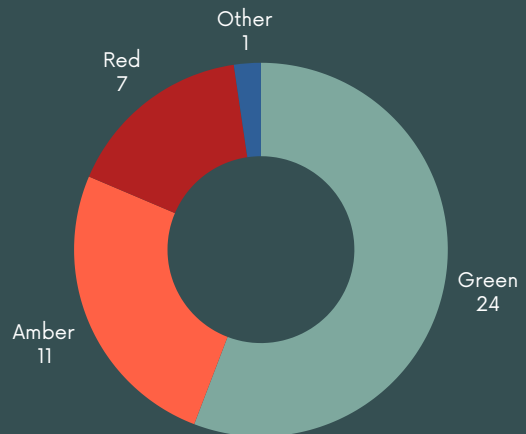
MOST FREQUENTLY IDENTIFIED BIRD SPECIES



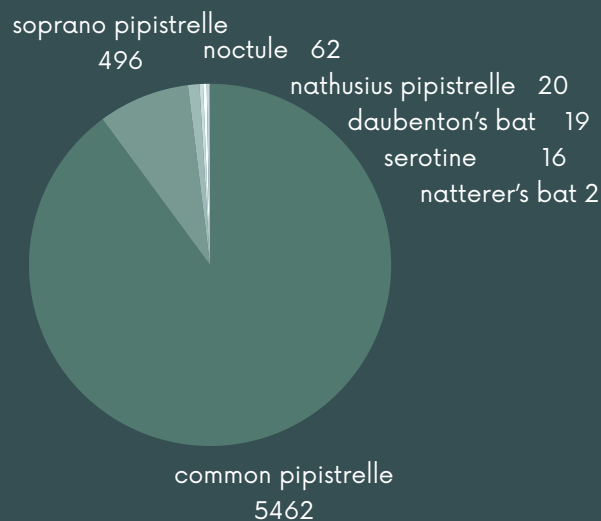
68899 CALLS FROM IDENTIFIED BIRD SPECIES

43 BIRD SPECIES

CONSERVATION STATUS OF BIRDS IDENTIFIED



BATS OVERVIEW



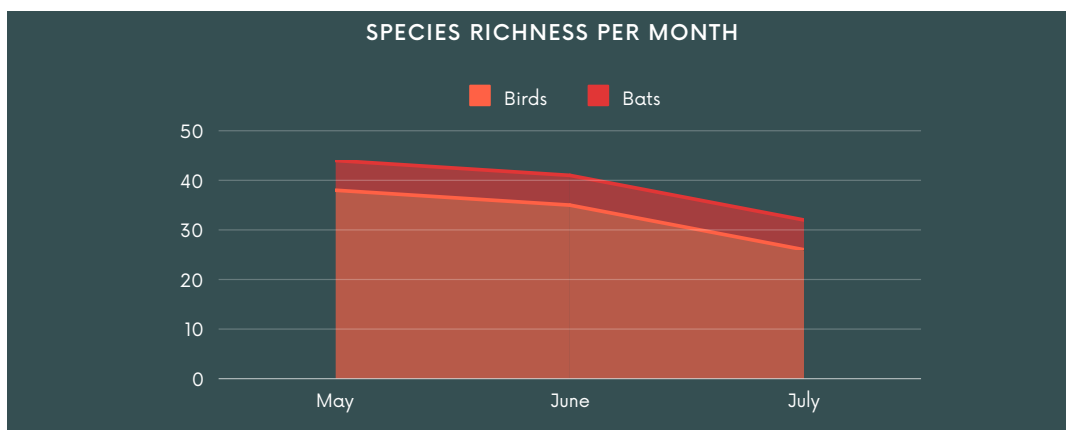
7 BAT SPECIES

RUNCTON NURSERY

NUMBER OF SPECIES IDENTIFIED PER RECORDING DEVICE



IMAGE © GOOGLE EARTH, © AIRBUS



BIRDS IDENTIFIED AT SITE

A full list of bird species identified at the site can be found below:

Species	Scientific Name	Month 1 Acoustic Identifications	Month 2 Acoustic Identifications	Month 3 Acoustic Identifications	Conservation Status (BoCC5)
Chiffchaff	<i>Phylloscopus collybita</i>	10592	5687	3465	green
Wren	<i>Troglodytes troglodytes</i>	8872	3880	335	amber
Robin	<i>Erithacus rubecula</i>	9510	442	412	green
Blackbird	<i>Turdus merula</i>	3389	858	9	green
Magpie	<i>Pica pica</i>	679	1975	360	green
Reed Warbler	<i>Acrocephalus scirpaceus</i>	206	1694	847	green
Greenfinch	<i>Chloris chloris</i>	1529	797	144	red
Black-headed Gull	<i>Chroicocephalus ridibundus</i>	608	1178	90	amber
Goldfinch	<i>Carduelis carduelis</i>	1162	506	42	green
Dunnock	<i>Prunella modularis</i>	726	662	79	amber
Long-tailed Tit	<i>Aegithalos caudatus</i>	729	205	262	green
Whitethroat	<i>Curruca communis</i>	498	498	56	amber
Blackcap	<i>Sylvia atricapilla</i>	145	657	180	green
Great Tit	<i>Parus major</i>	652	263	48	green
Cetti's Warbler	<i>Cettia cetti</i>	588	42	0	green
Blue Tit	<i>Cyanistes caeruleus</i>	377	203	43	green
Spotted Flycatcher	<i>Muscicapa striata</i>	464	13	0	red
Green Woodpecker	<i>Picus viridis</i>	283	144	38	green
Carrion Crow	<i>Corvus corone</i>	91	161	30	green
Herring Gull	<i>Larus argentatus</i>	132	116	20	red
Treecreeper	<i>Certhia familiaris</i>	244	0	0	green
Buzzard	<i>Buteo buteo</i>	68	71	14	green
Woodpigeon	<i>Columba palumbus</i>	81	32	10	amber
Song Thrush	<i>Turdus philomelos</i>	92	29	0	amber
Chaffinch	<i>Fringilla coelebs</i>	64	32	0	green

BIRDS IDENTIFIED AT SITE

Species	Scientific Name	Month 1 Acoustic Identifications	Month 2 Acoustic Identifications	Month 3 Acoustic Identifications	Conservation Status (BoCC5)
Linnet	<i>Linaria cannabina</i>	56	12	4	red
Grey Wagtail	<i>Motacilla cinerea</i>	47	20	0	amber
Pheasant	<i>Phasianus colchicus</i>	41	0	0	introduced
Skylark	<i>Alauda arvensis</i>	40	0	0	red
Grey Heron	<i>Ardea cinerea</i>	0	21	19	green
Tree Sparrow	<i>Passer montanus</i>	37	0	0	red
Goldcrest	<i>Regulus regulus</i>	34	0	0	green
Jackdaw	<i>Corvus monedula</i>	19	7	0	green
Coot	<i>Fulica atra</i>	24	0	0	green
Swallow	<i>Hirundo rustica</i>	3	9	9	green
Swift	<i>Apus apus</i>	9	8	1	red
Mallard	<i>Anas platyrhynchos</i>	9	7	0	amber
Kestrel	<i>Falco tinnunculus</i>	7	7	0	amber
Moorhen	<i>Gallinula chloropus</i>	0	13	0	amber
Jay	<i>Garrulus glandarius</i>	0	0	8	green
Pied Wagtail	<i>Motacilla alba</i>	0	0	6	green
Mediterranean Gull	<i>Ichthyaeetus melanocephalus</i>	3	3	0	amber
Nuthatch	<i>Sitta europaea</i>	0	6	0	green

BATS IDENTIFIED AT SITE

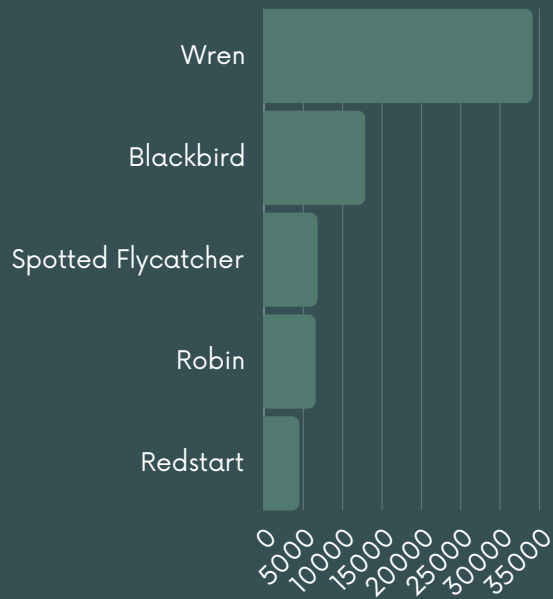
A full list of bat species identified at the site can be found below:

Species	Scientific Name	Month 1 Acoustic Identifications	Month 2 Acoustic Identifications	Month 3 Acoustic Identifications
common pipistrelle	<i>Pipistrellus pipistrellus</i>	1047	1613	2802
soprano pipistrelle	<i>Pipistrellus pygmaeus</i>	144	151	201
noctule	<i>Nyctalus noctula</i>	9	27	26
nathusius pipistrelle	<i>Pipistrellus nathusii</i>	6	13	1
daubenton's bat	<i>Myotis daubentonii</i>	0	0	19
serotine	<i>Eptesicus serotinus</i>	2	8	6
natterer's bat	<i>Myotis nattereri</i>	1	1	0

SURVEY SITE: ABBEY FARM

BIRDS OVERVIEW

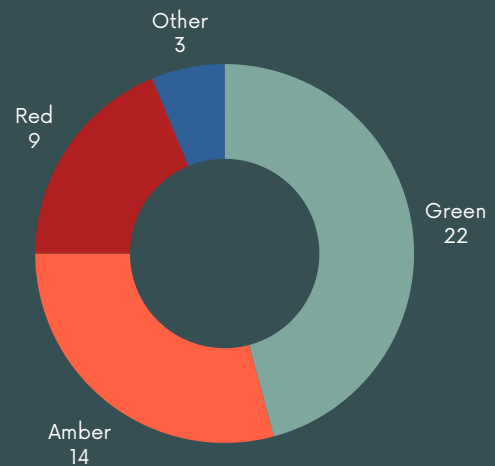
MOST FREQUENTLY IDENTIFIED BIRD SPECIES



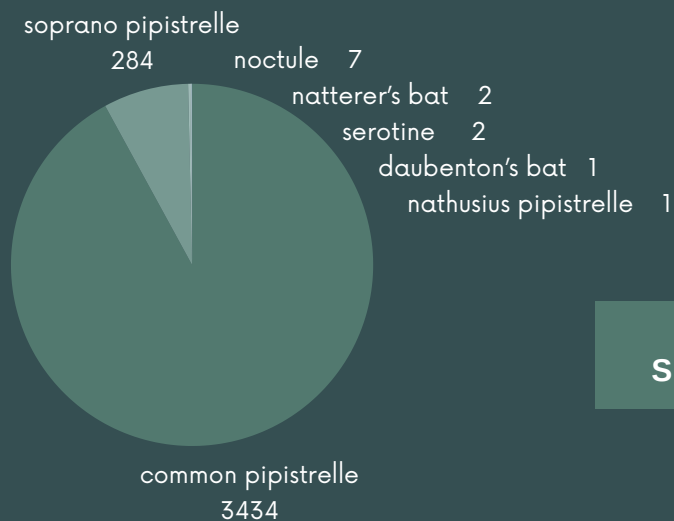
97299 CALLS FROM IDENTIFIED BIRD SPECIES

48 BIRD SPECIES

CONSERVATION STATUS OF BIRDS IDENTIFIED



BATS OVERVIEW



7 BAT SPECIES

ABBHEY FARM

NUMBER OF SPECIES IDENTIFIED PER RECORDING DEVICE

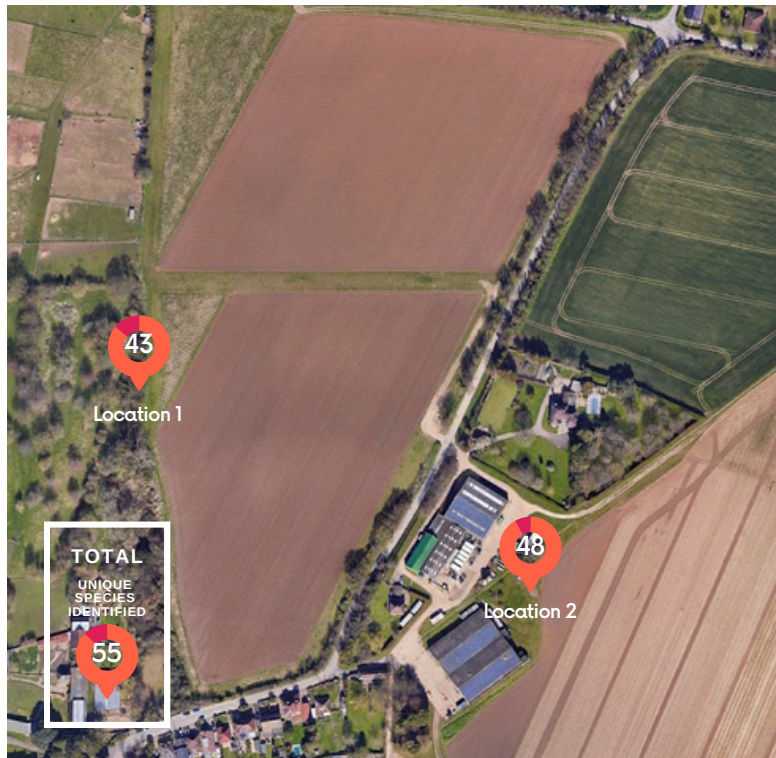
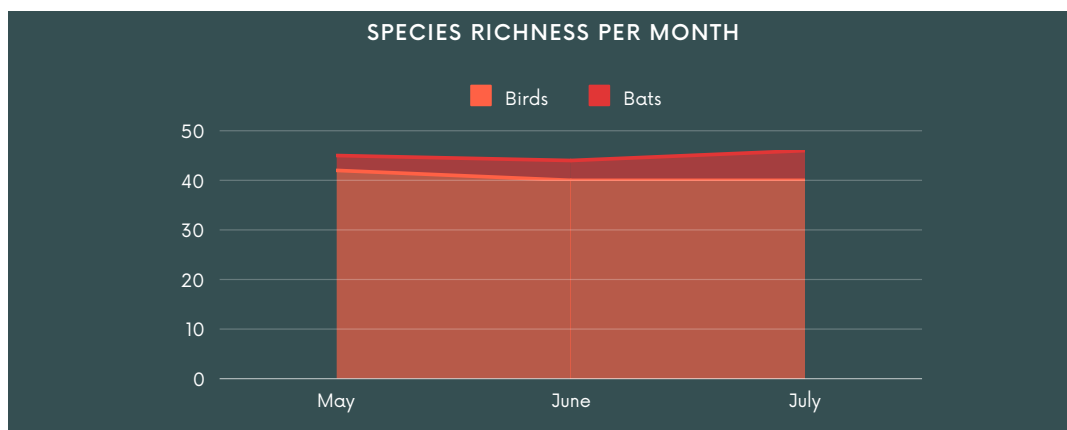


IMAGE © GOOGLE EARTH, © AIRBUS



BIRDS IDENTIFIED AT SITE

A full list of bird species identified at the site can be found below:

Species	Scientific Name	Month 1 Acoustic Identifications	Month 2 Acoustic Identifications	Month 3 Acoustic Identifications	Conservation Status (BoCC5)
Wren	<i>Troglodytes troglodytes</i>	13104	15840	5194	amber
Blackbird	<i>Turdus merula</i>	7129	3751	1986	green
Spotted Flycatcher	<i>Muscicapa striata</i>	3390	3026	391	red
Robin	<i>Erithacus rubecula</i>	3135	1635	1801	green
Redstart	<i>Phoenicurus phoenicurus</i>	2807	1535	150	amber
Blackcap	<i>Sylvia atricapilla</i>	2674	1203	39	green
Chaffinch	<i>Fringilla coelebs</i>	1866	1558	291	green
Treecreeper	<i>Certhia familiaris</i>	0	1613	523	green
Skylark	<i>Alauda arvensis</i>	327	724	838	red
Whitethroat	<i>Curruca communis</i>	241	1602	0	amber
Jackdaw	<i>Corvus monedula</i>	431	1389	22	green
Blue Tit	<i>Cyanistes caeruleus</i>	1284	228	165	green
Little Owl	<i>Athene noctua</i>	37	1377	230	introduced
Goldfinch	<i>Carduelis carduelis</i>	1301	72	38	green
Carrion Crow	<i>Corvus corone</i>	301	620	424	green
Ring-necked Parakeet	<i>Psittacula krameri</i>	446	403	339	introduced
Herring Gull	<i>Larus argentatus</i>	60	175	938	red
Dunnock	<i>Prunella modularis</i>	314	262	362	amber
Chiffchaff	<i>Phylloscopus collybita</i>	719	13	11	green
Great Tit	<i>Parus major</i>	486	118	114	green
Green Woodpecker	<i>Picus viridis</i>	161	164	287	green
Magpie	<i>Pica pica</i>	208	171	221	green
Barn Owl	<i>Tyto alba</i>	71	153	309	green
Great Spotted Woodpecker	<i>Dendrocopos major</i>	393	0	86	green
Jay	<i>Garrulus glandarius</i>	68	344	45	green

BIRDS IDENTIFIED AT SITE

Species	Scientific Name	Month 1 Acoustic Identifications	Month 2 Acoustic Identifications	Month 3 Acoustic Identifications	Conservation Status (BoCC5)
Long-tailed Tit	<i>Aegithalos caudatus</i>	243	190	14	green
Song Thrush	<i>Turdus philomelos</i>	97	288	14	amber
Pheasant	<i>Phasianus colchicus</i>	159	183	45	introduced
Stock Dove	<i>Columba oenas</i>	58	81	228	amber
Greenfinch	<i>Chloris chloris</i>	88	164	31	red
Corn Bunting	<i>Emberiza calandra</i>	28	65	176	red
House Sparrow	<i>Passer domesticus</i>	0	88	181	red
Woodpigeon	<i>Columba palumbus</i>	21	58	114	amber
Black Redstart	<i>Phoenicurus ochruros</i>	185	0	0	amber
Buzzard	<i>Buteo buteo</i>	72	49	38	green
Tawny Owl	<i>Strix aluco</i>	113	18	0	amber
Swallow	<i>Hirundo rustica</i>	36	26	61	green
Rook	<i>Corvus frugilegus</i>	78	17	0	amber
House Martin	<i>Delichon urbicum</i>	17	20	36	red
Pied Wagtail	<i>Motacilla alba</i>	15	10	34	green
Yellow Wagtail	<i>Motacilla flava</i>	0	30	22	red
Grey Heron	<i>Ardea cinerea</i>	0	0	18	green
Mallard	<i>Anas platyrhynchos</i>	0	0	14	amber
Goldcrest	<i>Regulus regulus</i>	0	0	13	green
Swift	<i>Apus apus</i>	1	11	0	red
Moorhen	<i>Gallinula chloropus</i>	9	0	0	amber
Black-headed Gull	<i>Chroicocephalus ridibundus</i>	5	0	0	amber
Kestrel	<i>Falco tinnunculus</i>	4	0	0	amber

BATS IDENTIFIED AT SITE

A full list of bat species identified at the site can be found below:

Species	Scientific Name	Month 1 Acoustic Identifications	Month 2 Acoustic Identifications	Month 3 Acoustic Identifications
common pipistrelle	<i>Pipistrellus pipistrellus</i>	810	991	1633
soprano pipistrelle	<i>Pipistrellus pygmaeus</i>	85	76	123
noctule	<i>Nyctalus noctula</i>	0	3	4
natterer's bat	<i>Myotis nattereri</i>	0	1	1
serotine	<i>Eptesicus serotinus</i>	0	0	2
daubenton's bat	<i>Myotis daubentonii</i>	0	0	1
nathusius pipistrelle	<i>Pipistrellus nathusii</i>	1	0	0



BIRDS OVERVIEW

BIRDS OVERVIEW

A full list of bird species identified across all sites can be found below:

Species	Scientific Name	Month 1 Acoustic Identifications	Month 2 Acoustic Identifications	Month 3 Acoustic Identifications	Conservation Status (BoCC5)
Wren	<i>Troglodytes troglodytes</i>	72767	80046	28519	amber
Chiffchaff	<i>Phylloscopus collybita</i>	28318	18169	7929	green
Blackbird	<i>Turdus merula</i>	28058	15720	4999	green
Robin	<i>Erithacus rubecula</i>	23744	7102	5727	green
Barn Owl	<i>Tyto alba</i>	526	8506	16367	green
Blackcap	<i>Sylvia atricapilla</i>	8874	8092	1358	green
Spotted Flycatcher	<i>Muscicapa striata</i>	4247	9465	3665	red
Long-tailed Tit	<i>Aegithalos caudatus</i>	5329	4870	5170	green
Treecreeper	<i>Certhia familiaris</i>	2320	5551	5752	green
Goldfinch	<i>Carduelis carduelis</i>	3734	4587	4827	green
Chaffinch	<i>Fringilla coelebs</i>	6412	5212	518	green
Blue Tit	<i>Cyanistes caeruleus</i>	4796	4238	2951	green
Dunnock	<i>Prunella modularis</i>	3844	4243	3308	amber
Jackdaw	<i>Corvus monedula</i>	3925	4904	1682	green
Tawny Owl	<i>Strix aluco</i>	985	2719	6024	amber
Magpie	<i>Pica pica</i>	1541	4837	3139	green
Carrion Crow	<i>Corvus corone</i>	2655	3449	1903	green
Song Thrush	<i>Turdus philomelos</i>	2772	2987	1125	amber
Great Tit	<i>Parus major</i>	3974	1285	1268	green
Skylark	<i>Alauda arvensis</i>	2206	2197	1247	red
Redstart	<i>Phoenicurus phoenicurus</i>	2807	1535	150	amber
Goldcrest	<i>Regulus regulus</i>	1705	1315	816	green
Whitethroat	<i>Curruca communis</i>	1190	2541	56	amber
Reed Warbler	<i>Acrocephalus scirpaceus</i>	372	1910	963	green

BIRDS OVERVIEW

Species	Scientific Name	Month 1 Acoustic Identifications	Month 2 Acoustic Identifications	Month 3 Acoustic Identifications	Conservation Status (BoCC5)
Greenfinch	<i>Chloris chloris</i>	1840	1055	236	red
Woodpigeon	<i>Columba palumbus</i>	817	788	1429	amber
Great Spotted Woodpecker	<i>Dendrocopos major</i>	1448	622	955	green
Rook	<i>Corvus frugilegus</i>	650	1936	438	amber
Sedge Warbler	<i>Acrocephalus schoenobaenus</i>	1543	812	521	amber
Green Woodpecker	<i>Picus viridis</i>	846	807	952	green
Cetti's Warbler	<i>Cettia cetti</i>	1788	412	4	green
Little Owl	<i>Athene noctua</i>	557	1377	230	introduced
Pheasant	<i>Phasianus colchicus</i>	959	546	544	introduced
Black-headed Gull	<i>Chroicocephalus ridibundus</i>	613	1178	113	amber
Buzzard	<i>Buteo buteo</i>	552	564	604	green
Herring Gull	<i>Larus argentatus</i>	230	313	1158	red
House Martin	<i>Delichon urbicum</i>	303	616	466	red
Pied Wagtail	<i>Motacilla alba</i>	357	531	437	green
Moorhen	<i>Gallinula chloropus</i>	616	370	305	amber
Stock Dove	<i>Columba oenas</i>	314	283	616	amber
Ring-necked Parakeet	<i>Psittacula krameri</i>	446	403	339	introduced
Grey Wagtail	<i>Motacilla cinerea</i>	201	188	445	amber
Grey Heron	<i>Ardea cinerea</i>	106	297	285	green
Bullfinch	<i>Pyrrhula pyrrhula</i>	256	230	172	amber
Sparrowhawk	<i>Accipiter nisus</i>	0	0	627	amber
Jay	<i>Garrulus glandarius</i>	78	383	139	green
Swallow	<i>Hirundo rustica</i>	143	125	242	green
Red Kite	<i>Milvus milvus</i>	213	157	112	green
House Sparrow	<i>Passer domesticus</i>	153	122	204	red
Kingfisher	<i>Alcedo atthis</i>	0	31	430	green

BIRDS OVERVIEW

Species	Scientific Name	Month 1 Acoustic Identifications	Month 2 Acoustic Identifications	Month 3 Acoustic Identifications	Conservation Status (BoCC5)
Firecrest	<i>Regulus ignicapilla</i>	329	0	0	green
Mallard	<i>Anas platyrhynchos</i>	122	104	97	amber
Coal Tit	<i>Periparus ater</i>	40	84	183	green
Tree Pipit	<i>Anthus trivialis</i>	96	206	0	red
Red-legged Partridge	<i>Alectoris rufa</i>	56	91	148	introduced
Mistle Thrush	<i>Turdus viscivorus</i>	246	0	31	red
Corn Bunting	<i>Emberiza calandra</i>	28	65	176	red
Nuthatch	<i>Sitta europaea</i>	65	75	108	green
Gadwall	<i>Mareca strepera</i>	237	0	0	amber
Linnet	<i>Linaria cannabina</i>	91	91	50	red
Black Redstart	<i>Phoenicurus ochruros</i>	185	0	0	amber
Coot	<i>Fulica atra</i>	106	27	19	green
Lesser Black-backed Gull	<i>Larus fuscus</i>	0	0	116	amber
Swift	<i>Apus apus</i>	21	48	42	red
Yellowhammer	<i>Emberiza citrinella</i>	0	90	15	red
Canada Goose	<i>Branta canadensis</i>	73	0	31	introduced
Yellow Wagtail	<i>Motacilla flava</i>	15	57	28	red
Reed Bunting	<i>Emberiza schoeniclus</i>	47	38	0	amber
Cuckoo	<i>Cuculus canorus</i>	33	47	0	red
Kestrel	<i>Falco tinnunculus</i>	17	12	32	amber
Grey Partridge	<i>Perdix perdix</i>	0	23	34	red
Grasshopper Warbler	<i>Locustella naevia</i>	0	0	44	red

BIRDS OVERVIEW

Species	Scientific Name	Month 1 Acoustic Identifications	Month 2 Acoustic Identifications	Month 3 Acoustic Identifications	Conservation Status (BoCC5)
Tree Sparrow	<i>Passer montanus</i>	37	0	0	red
Ringed Plover	<i>Charadrius hiaticula</i>	37	0	0	red
Raven	<i>Corvus corax</i>	23	0	0	green
Common Sandpiper	<i>Actitis hypoleucos</i>	19	0	0	amber
Teal	<i>Anas crecca</i>	0	16	0	amber
Hobby	<i>Falco subbuteo</i>	0	9	0	green
Mediterranean Gull	<i>Ichthyaetus melanocephalus</i>	3	3	0	amber
Starling	<i>Sturnus vulgaris</i>	2	0	0	red

BIRDS: SPECIES FOCUS

British bird populations have experienced severe decline in recent decades, with many species facing increasing risks such as habitat loss. The Red List, which includes our most endangered species, has grown to 70 species (nearly double the amount originally included on the list in 1996).

A total 80 bird species were identified during the survey period. Several of the identified species identified are of conservation importance and have experienced population loss in recent years, with 19 species (Skylark, Mistle Thrush, Greenfinch, Spotted Flycatcher, Starling, Linnet, House Sparrow, Yellowhammer, Swift, Grasshopper Warbler, Cuckoo, Herring Gull, House Martin, Corn Bunting, Yellow, Wagtail, Tree Sparrow, Tree Pipit, Ringed Plover, Grey Partridge) on the red list species of conservation concern (BoCC5).



The **skylark** is a small brown bird, and its song has been the subject of many great musical and literary works. A quintessential feature of our farmland and grasslands habitats, it can be most often heard in song-flight on sunny days. Skylark populations are declining in almost all countries of northern and western Europe, with its population declining over 75% in recent decades in the UK. The main cause of this decline is considered to be the widespread switch from spring to autumn-sown cereals, and agricultural intensification, which has resulted in a dramatic reduction in the number of chicks raised each year.

The **mistle thrush** is named after its favourite berry, the mistletoe berry, and mistle Thrushes can be found at berry bushes and trees, as pairs will defend their territories vigorously as their own personal larder.

They also feed on worms, insects and slugs, during breeding season and summer months. They will build nests in the fork of a tree or bush, made of grass, plant stems, roots and moss, and held together with mud (and sometimes artificial materials). Allowing areas of dense scrub to grow can benefit Mistle thrushes with foraging and nesting.

The **greenfinch** nests in small colonies, and uses moss, twigs, horsehair and lichen predominantly in their nests. They like to nest in hedges, bushes and trees, but prefer dense shrubbery and hedges the most. Population loss of the greenfinch has been strongly attributed to the disease Trichomonosis, which can be spread due to unclean bird feeders.

BIRDS: SPECIES FOCUS

The **Spotted flycatcher** is a migratory visitor to Britain, and can be found during warmer months in gardens, parks and open woodland. As their name suggests, they prey on insects, and will spot and hunt their prey from high vantage points, swooping down to catch insects mid-flight. They hunt flies, bumblebees, beetles and even butterflies. They prefer a habitat of tall trees or hedges, and can be found in built-up settlements, even nesting in buildings. They have experienced a severe decline in population in recent decades, which may be attributed to reduced available habitat, or an indication of declining insect populations.



The **Starling** has seen a population decline in recent decades, possibly due to widespread changes in land use, or reduced food supply. Starlings are heavily dependent on soil invertebrates like earthworms and leatherjackets. Starlings nest in holes and cavities, especially in trees, but can also use holes in buildings and houses. Nest boxes can be provided for starlings, which require a 45mm hole for access, and preferably set up in early spring.



Widely distributed across the UK, The **Linnet** is a common, small finch of heathland, scrub and farmland. The linnet feeds on seeds and is present in the UK all year-round. In winter, they may form large flocks with other seedeaters, roaming the countryside and feeding on stubbles, saltmarshes and wasteland. Linnet numbers have dropped substantially over the past few decades, with the UK population estimated to have declined by 57 per cent between 1970 and 2014.

The **house sparrow** can be found in urban and arable settings, as they can be found nesting in crevices of buildings, in bushes, or nest boxes. They can be commonly sighted, although their population has dropped dramatically in recent decades, with a staggering 71% loss recorded between 1971 - 2008.

The **yellowhammer** is a small, bright yellow bird, generally found at woodland edges, hedgerows, heath and farmland. Its food source includes seeds and invertebrates. Like many of our farmland birds, the yellowhammer has declined in number in recent years. The UK yellowhammer population has declined by 61% since 1967. The main factor is low overwinter survival, probably because fewer seed food sources are available to them on farmland.

BIRDS: SPECIES FOCUS

Swifts are brief visitors to the UK during summer months, they are one of the last summer migrants to arrive and one of the earliest to leave. Swifts spend their life almost entirely on the wing, and can travel hundreds of kilometres per day. They even feed, sleep and mate in flight. They feed exclusively on insects and only come to land when nesting.

They hunt for insects over a range of habitats from meadows, open water and over woods, to the skies above towns and cities. An abundant supply of insects is critical for their survival, and reduced insect populations may be causing their population decline, along with loss of nesting sites.

The **Grasshopper warbler** nests in scrub and reedbed and feeds on insects. It is normally situated close to the ground and hidden in vegetation, primarily identified by its long grasshopper-like call. It has seen significant decline in recent years due to loss of habitat in both its summer and winter ranges.



The Cuckoo is one of the UK's best known summer visitor. Spending the winter months in Africa, Cuckoos arrive back in the UK during late April and early May, timing this arrival to match the breeding season of its host species here. Since the early 1980s, Cuckoo populations have declined by almost two-thirds, which may be due to climate induced shifts of hosts reducing the number of .nests available, and challenges in their migration routes

The **Herring gull** is a common sight of our seaside towns, particularly during the breeding season. In winter it can be found on farmland, wetland and coastal habitats, as well as urban settings throughout the UK. Despite their prevalence in urban areas and adaptability to different environments, their population has seen significant decline of 60% since 1986, placing them on the red list of conservation concern (BoCC5). The primary drivers of population decline are thought to be changes in fishing practices reducing food availability, disturbances at breeding sites, and targeted control measures in urban areas.

BIRDS: SPECIES FOCUS



The **House Martin** spends much of its time on the wing collecting insect prey. Its nests are primarily made of mud, and are usually sited below the eaves of buildings. They are summer migrants and spend their winters in Africa. You can attract more house martins by installing nest boxes (nest cups), which they can use for the summer period. Although still numerous and widespread, recent moderate declines earn them a place on the Red List.

The **corn bunting** is often seen perched on a hedge, post or wire, singing its jangling song. In the summer corn buntings prefer open farmland and in winter they may be found in stubbles, root crops, fields and cattle yards. Changes in farmland practices are thought to be responsible for Corn Bunting declines, due to reductions in the seeds and invertebrates upon which this species feeds. Its dramatic population decline and extinction across parts of its former range in the UK makes it a Red List species.



The **Yellow Wagtail** is a summer visitor, breeding primarily in southern and eastern Britain. It breeds in a variety of habitats in the UK, including arable farmland, wet pastures and upland hay meadows. It spends much time walking or running on the ground, and nest on the ground, usually in large fields, well away from tall boundaries. They also nest in wet grassland and hay meadows. There has been a major decline in numbers since the 1970s, although populations have seen greater stability over the last decade.

The **Tree Sparrow** is a small, sociable bird species found throughout the UK. Recognisable by its chestnut crown and black cheek spots, the Tree Sparrow has suffered a significant decline in numbers over the last few decades, primarily due to changes in agricultural practices which have led to habitat loss and food shortages. Current UK conservation needs focus on the protection and restoration of suitable habitats, which include farmlands, woodland edges, and hedgerows. Efforts are also underway to encourage the installation of nest boxes, as Tree Sparrows are cavity-nesting birds and the loss of such sites has contributed to their decline.

BIRDS: SPECIES FOCUS

Tree pipits are summer visitors to the UK, spending the winter in sub-Saharan Africa. They return to the UK in Spring, and are usually found in glades of open woodlands, clearings in conifer plantations, and on heathlands with scattered trees. Their populations have decreased in recent years, leading to their place on the BoCC5 Red List. However, whilst the populations in England (particularly the lowlands) and Wales have seen big declines, the numbers in Scotland have increased - perhaps due to an improved structure and composition of Scottish woodland.



The **Ringed Plover** is a short-legged wading bird. It is brownish grey above and whitish below. It has an orange bill, tipped with black, orange legs and a black-and-white pattern on its head and breast. In flight, it shows a broad, white wing-stripe. They primarily breed on beaches around the coast, with a larger wintering population, and many also passing through on migration.

The **Grey partridge** is a medium-sized bird with a distinctive orange face. It is a native gamebird, and has declined enormously despite years of research and the application of a government biodiversity action plan. Grey partridges are traditionally found in lowland arable areas of Great Britain, from the South up to parts of Northern Scotland.



BATS OVERVIEW

BATS OVERVIEW

Bats make an important contribution to the UK's biodiversity as they account for more than a quarter of our native mammal species. Many bat species can be considered indicator species; they can tell us a lot about the state of their local environment, as they are top predators of common nocturnal insects and are sensitive to changes in land use practices. 11 bat species were detected during the monitoring period, with the following species identified:



COMMON
PIPISTRELLE
SOPRANO
PIPISTRELLE
NATHUSIUS
PIPISTRELLE

Pipistrelles are the commonest and most widespread of all British bat species. There are two very similar species, common pipistrelle and soprano pipistrelle, which are only differentiated by the frequency of their call. A single pipistrelle can consume up to 3,000 insects in one night. The Nathusius pipistrelle is a larger and much rarer species, and often migrate across Europe.

Primary Diet: Range of small insects, such as flies, midges

Roosts: Primarily buildings



NOCTULE
BAT

The **noctule bat** is one of the largest British species and is usually the first bat to appear in the evening, sometimes even before sunset. Their favoured feeding sites are parkland, pasture, water and deciduous woodland. Most prey is caught on the wing, but occasionally noctules take insects from the ground.

Primary Diet: Spring: small insects (e.g. midges), summer: also moths and beetles

Roosts: Trees, but may also use buildings and bat boxes



DAUBENTON'S
BAT

Daubenton's bat, or the 'water bat' as it is sometimes known, specialises in hunting over water bodies, picking out insects off the water or in the air. Given their preference to feeding near water, they generally also roost close to rivers or ponds, in trees, under bridges, and in tunnels. Daubenton's bats emerge later in the evening than other species, and may also forage in trees, especially if the habitat is close to water.

Primary Diet: insects, aquatic larvae, small moths

Roosts: holes in waterside trees, bridges, tunnels

BATS OVERVIEW



SEROTINE

The serotine is one of the UK's largest and most distinctive species; it has a dark brown and black face, with pale fur on the underside. They generally forage over pasture, parkland and along woodland edges, and they will travel up to six kilometres to feed.

Primary Diet: Spring: flies and moths, summer: cockchafers and dung beetles.

Roosts: Primarily buildings



NATTERER'S BAT

Natterer's bats often emerge later in the evening once it is fully dark. They have broad wings, making them highly manoeuvrable, helping them hunt in woodland or close to foliage. They often have quieter echolocation calls, making them more difficult to detect than other species.

Primary Diet: Small insects, beetles, moths

Roosts: Trees, buildings and caves



WHISKERED BAT

The Whiskered bat is one of three *Myotis* species (Whiskered bat, Brandt's bat, Alcaethoe bat) that can often be difficult to distinguish. Whiskered bats forage close to vegetation in a wide range of habitats, including parkland, woodland and over flowing water.

Primary Diet: Primarily moths and small insects

Roosts: Buildings, trees and bat boxes.



BARBASTELLE

The Barbastelle is one of the rarest British bats, and will roost in trees during warm summer months (often in cracks in trunks or damaged trees). They can forage up to 18km from their roost, often commuting along hedgerows or streams. A large proportion of their diet is moths, but also feed on flies.

Primary Diet: Primarily moths, but also flies.

Roosts: Mature trees, occasionally buildings and bat boxes

BATS OVERVIEW



LEISLER'S BAT

Leisler's bat is a close relative of the and shares many of its characteristics. Within Europe, it is regarded as a forest species, roosting in old woodpecker holes or other tree cavities. It forages mostly in open areas, feeding on flying insects such as midges and crane flies.

Primary Diet: Small insects (e.g. midges)

Roosts: Trees, bat boxes



BROWN
LONG-EARED
BAT

As well as catching insects in free flight, **brown long-eared bats** are gleaners, and often fly slowly amongst foliage, picking insects off leaves and bark. Their echolocation calls are very quiet, making them hard to detect. Their calls can also be very similar to the grey long-eared bat, although these are much rarer in the UK, especially in East England.

Primary Diet: Moths, beetles, flies, earwigs, spiders and other insects

Roosts: Trees, buildings

BATS OVERVIEW

Species	Scientific Name	Month 1 Acoustic Identifications	Month 2 Acoustic Identifications	Month 3 Acoustic Identifications
common pipistrelle	<i>Pipistrellus pipistrellus</i>	9270	4976	7780
soprano pipistrelle	<i>Pipistrellus pygmaeus</i>	3884	1387	1818
noctule	<i>Nyctalus noctula</i>	307	302	131
daubenton's bat	<i>Myotis daubentonii</i>	113	8	35
serotine	<i>Eptesicus serotinus</i>	16	10	13
nathusius pipistrelle	<i>Pipistrellus nathusii</i>	7	14	1
natterer's bat	<i>Myotis nattereri</i>	11	4	1
whiskered bat	<i>Myotis mystacinus</i>	10	0	0
barbastelle	<i>Barbastella barbastellus</i>	3	1	0
leisler's bat	<i>Nyctalus leisleri</i>	0	0	2
brown long-eared bat	<i>Plecotus auritus</i>	0	1	0

Some bat species families (e.g. *Myotis* family) are difficult to differentiate using only bioacoustic detection methods. Therefore, we would recommend further visual verification for the Daubenton bat, Natterer's Bat and Whiskered bat.

APPENDIX A: SPECIES REQUIRING FURTHER VERIFICATION

The following species were identified through the bioacoustic survey, although due to insufficient evidence we would recommend further surveys to verify their presence. Some of the species listed below may have been identified at other locations across the site.

Site Name	Location	Species Name	Scientific Name
1	Hawfinch	Coccothraustes coccothraustes	abbey farm
1	Yellowhammer	Emberiza citrinella	abbey farm
1	Rook	Corvus frugilegus	abbey farm
2	Redstart	Phoenicurus phoenicurus	abbey farm
2	daubenton's bat	Myotis daubentonii	abbey farm
2	Goldcrest	Regulus regulus	abbey farm
1	Mistle Thrush	Turdus viscivorus	abbots ann farm
1	Grey Wagtail	Motacilla cinerea	abbots ann farm
1	Redstart	Phoenicurus phoenicurus	abbots ann farm
1	Kestrel	Falco tinnunculus	abbots ann farm
1	Kingfisher	Alcedo atthis	abbots ann farm
1	Goshawk	Accipiter gentilis	abbots ann farm
1	Water Rail	Rallus aquaticus	abbots ann farm
1	Hawfinch	Coccothraustes coccothraustes	abbots ann farm
1	Little Grebe	Tachybaptus ruficollis	abbots ann farm
1	Cuckoo	Cuculus canorus	abbots ann farm
3	Redstart	Phoenicurus phoenicurus	abbots ann farm
3	Rook	Corvus frugilegus	abbots ann farm
3	Teal	Anas crecca	abbots ann farm
3	Ringed Plover	Charadrius hiaticula	abbots ann farm
3	Quail	Coturnix coturnix	abbots ann farm
3	Barn Owl	Tyto alba	abbots ann farm
3	Great Spotted Woodpecker	Dendrocopos major	abbots ann farm
3	Treecreeper	Certhia familiaris	abbots ann farm
3	Kingfisher	Alcedo atthis	abbots ann farm
3	Moorhen	Gallinula chloropus	abbots ann farm
1	Jackdaw	Corvus monedula	lower link farm
1	Marsh Tit	Poecile palustris	lower link farm
2	Mistle Thrush	Turdus viscivorus	lower link farm
2	Green Woodpecker	Picus viridis	lower link farm
2	Little Grebe	Tachybaptus ruficollis	lower link farm

APPENDIX A: SPECIES REQUIRING FURTHER VERIFICATION

Site Name	Location	Species Name	Scientific Name
2	Whitethroat	Curruca communis	lower link farm
2	Kingfisher	Alcedo atthis	lower link farm
2	Little Owl	Athene noctua	lower link farm
3	Gadwall	Mareca strepera	lower link farm
3	Firecrest	Regulus ignicapilla	lower link farm
3	Nuthatch	Sitta europaea	lower link farm
3	Green Sandpiper	Tringa ochropus	lower link farm
1	nathusius pipistrelle	Pipistrellus nathusii	mullens farm
1	Buzzard	Buteo buteo	mullens farm
2	Swift	Apus apus	mullens farm
2	Coot	Fulica atra	mullens farm
2	Rook	Corvus frugilegus	mullens farm
2	Hawfinch	Coccothraustes coccothraustes	mullens farm
2	Mistle Thrush	Turdus viscivorus	mullens farm
2	House Martin	Delichon urbicum	mullens farm
2	Redstart	Phoenicurus phoenicurus	mullens farm
2	Swallow	Hirundo rustica	mullens farm
2	Chaffinch	Fringilla coelebs	mullens farm
3	Spotted Flycatcher	Muscicapa striata	mullens farm
3	Redstart	Phoenicurus phoenicurus	mullens farm
3	Little Owl	Athene noctua	mullens farm
3	Rook	Corvus frugilegus	mullens farm
5	Mistle Thrush	Turdus viscivorus	mullens farm
5	Whitethroat	Curruca communis	mullens farm
5	Yellow Wagtail	Motacilla flava	mullens farm
5	Dunnock	Prunella modularis	mullens farm
5	Great Spotted Woodpecker	Dendrocopos major	mullens farm
1	Moorhen	Gallinula chloropus	runcton nursery
1	Kingfisher	Alcedo atthis	runcton nursery
1	Pied Wagtail	Motacilla alba	runcton nursery
1	Egyptian Goose	Alopochen aegyptiaca	runcton nursery

APPENDIX A: SPECIES REQUIRING FURTHER VERIFICATION

Site Name	Location	Species Name	Scientific Name
1	Blackbird	Turdus merula	runcton nursery
1	Quail	Coturnix coturnix	runcton nursery
2	Skylark	Alauda arvensis	runcton nursery
2	Reed Bunting	Emberiza schoeniclus	runcton nursery
2	Kingfisher	Alcedo atthis	runcton nursery

APPENDIX B: SURVEY METHODOLOGY

Bioacoustic Monitoring Methodology - Bird Monitoring

A standardised survey methodology is employed for bioacoustic monitoring to collect and analyse wildlife sound data. Our easy-to-use recording technology can be scaled for all sizes of land and is configured for consistent, repeatable measurements.



1. Deployment and Data Collection

Recording units are pre-programmed to operate at fixed intervals throughout the day, recording sound at 48KHz. The recording units operate 24 hours per day, allowing for comprehensive data collection. They are weather-resistant, designed to function in various environmental conditions, and capable of extended deployment.

The recording locations are documented using GPS coordinates or alternative geolocation measures during deployment. Sound data is collected over a pre-defined survey period, after which the units are retrieved for analysis.

2. Data Processing and Species Identification

The recordings are processed using automated species identification algorithms. These models, trained on extensive datasets, are designed to detect and classify species based on their vocalisations and other sounds. The automated process enables efficient handling of large datasets and serves as the initial stage of species identification.

3. Analysis and Verification

The results from the species classification undergo statistical modelling and filtering to improve accuracy. Following this, human verification is performed, where audio samples are reviewed to confirm the presence of the identified species, ensuring a higher level of accuracy in the final dataset.

APPENDIX B: SURVEY METHODOLOGY

Ultrasonic Monitoring Methodology - Bat Monitoring

A standardised survey methodology is employed for bioacoustic monitoring to collect and analyse wildlife sound data. Our easy-to-use recording technology can be scaled for all sizes of land and is configured for consistent, repeatable measurements.



1. Deployment and Data Collection

Recording units are pre-programmed to operate at fixed intervals throughout the day, recording sound at 256KHz. The recording units operate 8 hours per night, allowing for comprehensive data collection. They are weather-resistant, designed to function in various environmental conditions, and capable of extended deployment.

The recording locations are documented using GPS coordinates or alternative geolocation measures during deployment. Sound data is collected over a pre-defined survey period, after which the units are retrieved for analysis.

2. Data Processing and Species Identification

The recordings are processed using automated species identification algorithms. These models, trained on extensive datasets, are designed to detect and classify species based on their vocalisations and other sounds. The automated process enables efficient handling of large datasets and serves as the initial stage of species identification.

3. Analysis and Verification

The results from the species classification undergo statistical modelling and filtering to improve accuracy. Following this, human verification is performed, where audio samples are reviewed to confirm the presence of the identified species, ensuring a higher level of accuracy in the final dataset.