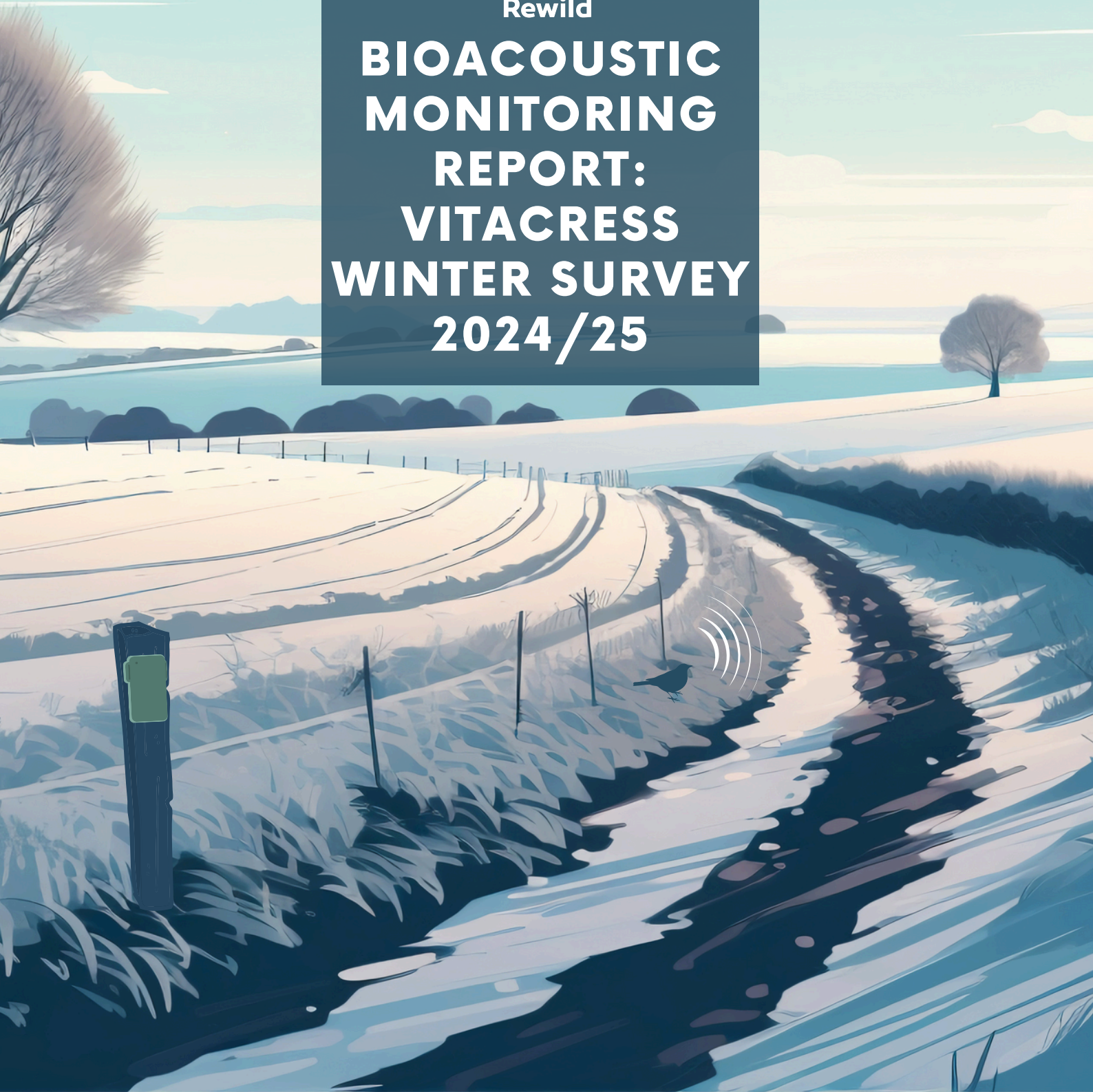




**BIOACOUSTIC
MONITORING
REPORT:
VITACRESS
WINTER SURVEY
2024/25**



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 highlight those of conservation importance. The survey took place between 1st November 2024 - 19th February 2025, recording at the same time intervals every day during the survey period. Recording devices were deployed across 5 survey sites.

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
- 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:

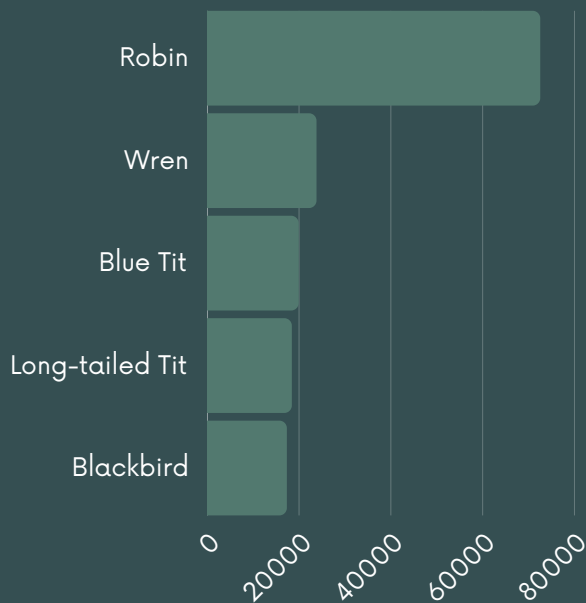
- Temporal Species Trends (daily/hourly identifications data)
- Site Biodiversity timelines and multi-survey trends.
- Species list filtering:
 - Filter Bird Species by primary habitat
 - Filter Bird species by Conservation Status (BoCC5) and Indicator Group (JNCC Species indicator groups)

During the survey we identified 79 species, 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: Fieldfare, Waxwing, Corn Bunting. A further 5 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 A.

SURVEY DASHBOARD

BIRDS SPECIES OVERVIEW

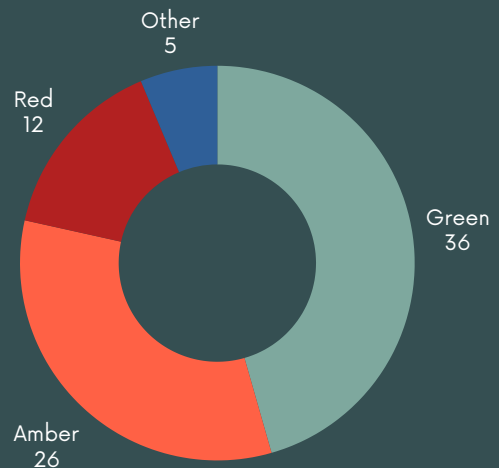
MOST FREQUENTLY IDENTIFIED BIRD SPECIES



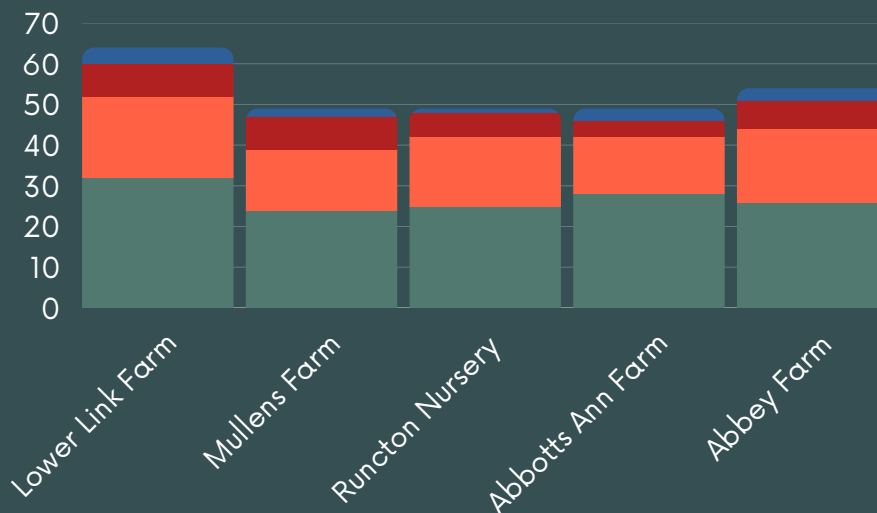
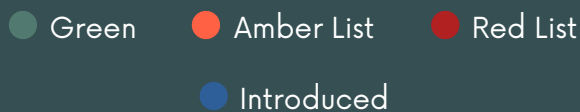
290073 CALLS FROM IDENTIFIED BIRD SPECIES

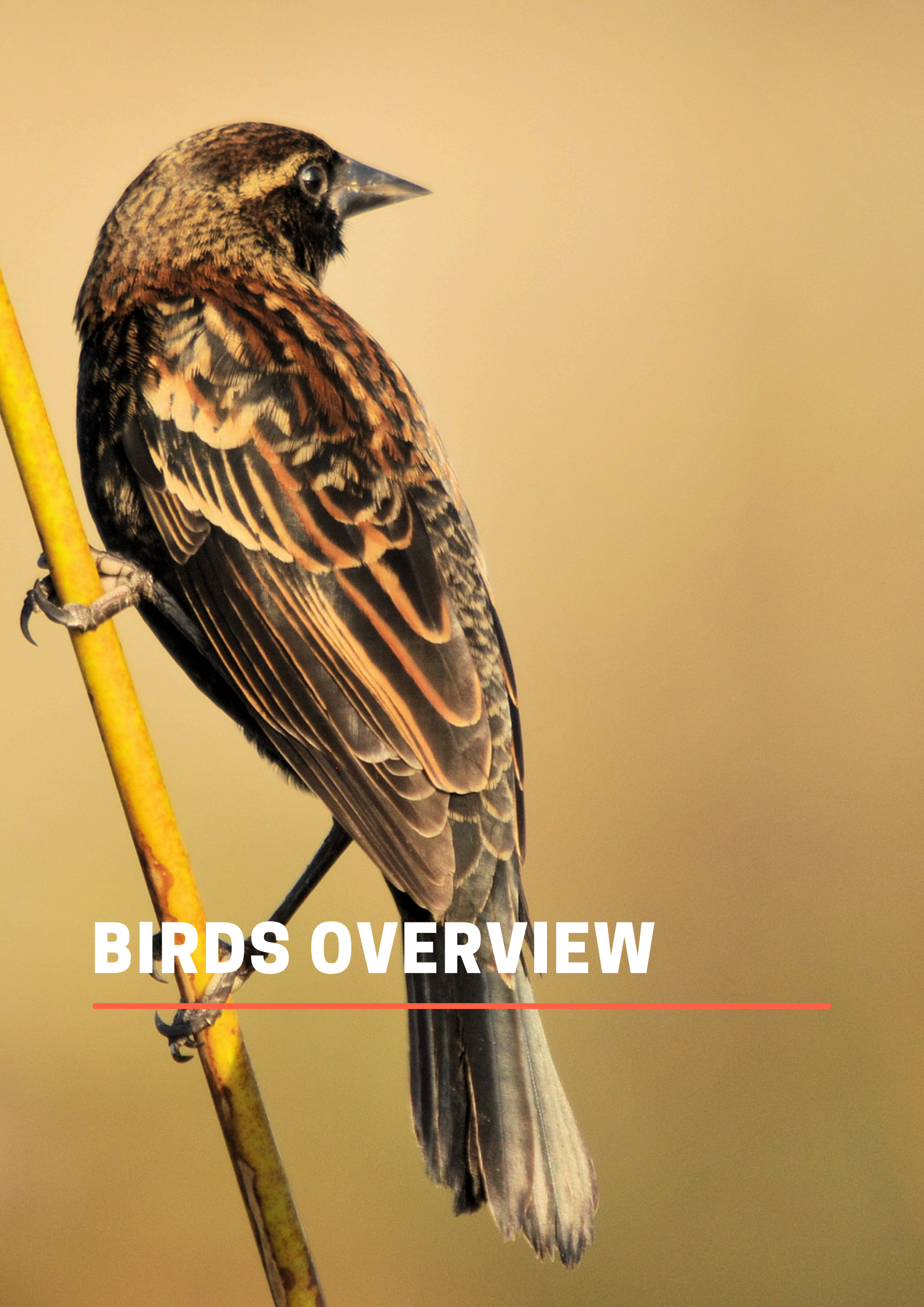
79 BIRD SPECIES

CONSERVATION STATUS OF BIRDS IDENTIFIED



BIRD SPECIES RICHNESS AND CONSERVATION STATUS PER SURVEY SITE





BIRDS OVERVIEW

BIRDS OVERVIEW

A full list of species identified across all survey locations can be found below:

Species	Scientific Name	Month 1 Acoustic Identifications	Month 2 Acoustic Identifications	Month 3 Acoustic Identifications	Conservation Status (BoCC5)
Robin	<i>Erithacus rubecula</i>	27443	21148	23954	green
Wren	<i>Troglodytes troglodytes</i>	10861	7397	5548	amber
Blue Tit	<i>Cyanistes caeruleus</i>	2261	5343	12316	green
Long-tailed Tit	<i>Aegithalos caudatus</i>	8858	6227	3345	green
Blackbird	<i>Turdus merula</i>	5362	6058	5928	green
Dunnock	<i>Prunella modularis</i>	5329	3658	3192	amber
Jackdaw	<i>Corvus monedula</i>	3524	4210	3767	green
Carrion Crow	<i>Corvus corone</i>	3658	3930	3501	green
Great Tit	<i>Parus major</i>	1350	3253	5821	green
Ring-necked Parakeet	<i>Psittacula krameri</i>	2890	2573	3790	introduced
Chaffinch	<i>Fringilla coelebs</i>	3664	2793	2399	green
Rook	<i>Corvus frugilegus</i>	1459	2840	3294	amber
Song Thrush	<i>Turdus philomelos</i>	1583	1284	3301	amber
Magpie	<i>Pica pica</i>	1826	1675	2313	green
Pheasant	<i>Phasianus colchicus</i>	2061	1594	1228	introduced
Goldcrest	<i>Regulus regulus</i>	2191	1710	764	green
Chiffchaff	<i>Phylloscopus collybita</i>	2940	1100	254	green
Great Spotted Woodpecker	<i>Dendrocopos major</i>	1252	1186	1810	green
Tawny Owl	<i>Strix aluco</i>	1660	1065	1413	amber
Redwing	<i>Turdus iliacus</i>	2358	773	493	amber
Pied Wagtail	<i>Motacilla alba</i>	1764	1071	649	green
Herring Gull	<i>Larus argentatus</i>	796	1011	1093	red
Grey Wagtail	<i>Motacilla cinerea</i>	1224	699	695	amber
Kingfisher	<i>Alcedo atthis</i>	1349	612	389	green

BIRDS OVERVIEW

Species	Scientific Name	Month 1 Acoustic Identifications	Month 2 Acoustic Identifications	Month 3 Acoustic Identifications	Conservation Status (BoCC5)
Meadow Pipit	<i>Anthus pratensis</i>	1050	799	289	amber
Green Woodpecker	<i>Picus viridis</i>	410	466	602	green
Buzzard	<i>Buteo buteo</i>	572	481	409	green
Moorhen	<i>Gallinula chloropus</i>	503	420	385	amber
Goldfinch	<i>Carduelis carduelis</i>	677	212	383	green
Jay	<i>Garrulus glandarius</i>	501	282	236	green
Treecreeper	<i>Certhia familiaris</i>	171	304	309	green
Grey Heron	<i>Ardea cinerea</i>	323	248	202	green
Mallard	<i>Anas platyrhynchos</i>	278	205	248	amber
Mistle Thrush	<i>Turdus viscivorus</i>	54	55	620	red
Coal Tit	<i>Periparus ater</i>	81	314	255	green
Nuthatch	<i>Sitta europaea</i>	48	266	317	green
Green Sandpiper	<i>Tringa ochropus</i>	205	209	161	amber
Marsh Tit	<i>Poecile palustris</i>	225	140	92	red
Coot	<i>Fulica atra</i>	233	27	95	green
Barn Owl	<i>Tyto alba</i>	172	62	77	green
Black-headed Gull	<i>Chroicocephalus ridibundus</i>	238	41	0	amber
Red Kite	<i>Milvus milvus</i>	68	97	79	green
Hawfinch	<i>Coccothraustes coccothraustes</i>	196	29	0	red
Canada Goose	<i>Branta canadensis</i>	151	24	22	introduced
Raven	<i>Corvus corax</i>	44	100	51	green
Greenfinch	<i>Chloris chloris</i>	32	48	109	red
Water Rail	<i>Rallus aquaticus</i>	83	65	29	green
Fieldfare	<i>Turdus pilaris</i>	99	31	26	red
Bullfinch	<i>Pyrrhula pyrrhula</i>	35	58	44	amber
Greylag Goose	<i>Anser anser</i>	74	35	21	amber
Cetti's Warbler	<i>Cettia cetti</i>	103	15	11	green

BIRDS OVERVIEW

Species	Scientific Name	Month 1 Acoustic Identifications	Month 2 Acoustic Identifications	Month 3 Acoustic Identifications	Conservation Status (BoCC5)
Peregrine	<i>Falco peregrinus</i>	19	3	106	green
Lapwing	<i>Vanellus vanellus</i>	25	29	58	red
Starling	<i>Sturnus vulgaris</i>	25	44	16	red
Reed Bunting	<i>Emberiza schoeniclus</i>	30	41	11	amber
Yellowhammer	<i>Emberiza citrinella</i>	45	31	0	red
Kestrel	<i>Falco tinnunculus</i>	43	20	13	amber
Yellow-legged Gull	<i>Larus michahellis</i>	0	44	31	amber
Skylark	<i>Alauda arvensis</i>	38	0	33	red
Wigeon	<i>Mareca penelope</i>	24	25	0	amber
Gadwall	<i>Mareca strepera</i>	25	22	0	amber
Common Sandpiper	<i>Actitis hypoleucos</i>	0	0	47	amber
Corn Bunting	<i>Emberiza calandra</i>	0	45	0	red
Little Grebe	<i>Tachybaptus ruficollis</i>	15	8	19	green
Red-legged Partridge	<i>Alectoris rufa</i>	0	0	35	introduced
Little Owl	<i>Athene noctua</i>	0	0	35	introduced
Teal	<i>Anas crecca</i>	0	2	32	amber
House Sparrow	<i>Passer domesticus</i>	6	8	13	red
Stonechat	<i>Saxicola rubicola</i>	13	13	0	green
Waxwing	<i>Bombycilla garrulus</i>	25	0	0	green
Whooper Swan	<i>Cygnus cygnus</i>	22	0	0	amber
Snipe	<i>Gallinago gallinago</i>	19	2	0	amber
Brambling	<i>Fringilla montifringilla</i>	16	0	0	green
Oystercatcher	<i>Haematopus ostralegus</i>	0	0	12	amber
Stock Dove	<i>Columba oenas</i>	0	2	6	amber

BIRDS OVERVIEW

Species	Scientific Name	Month 1 Acoustic Identifications	Month 2 Acoustic Identifications	Month 3 Acoustic Identifications	Conservation Status (BoCC5)
Siskin	<i>Spinus spinus</i>	0	6	0	green
Golden Plover	<i>Pluvialis apricaria</i>	0	4	0	green
Great Black-backed Gull	<i>Larus marinus</i>	3	0	0	amber
Mute Swan	<i>Cygnus olor</i>	1	2	0	green

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 79 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 12 species (Yellowhammer, Greenfinch, Marsh Tit, Mistle Thrush, Herring Gull, Lapwing, Skylark, Corn Bunting, Fieldfare, House Sparrow, Hawfinch, Starling) on the red list species of conservation concern (BoCC5).



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. You can support house sparrows through a number of simple practices:

- Let thick vegetation species such as ivy and hawthorn grow, where they can nest and hide in.
- Nest boxes (with 32mm hole) can provide a home
- Let grasslands grow wild to encourage greater insect populations

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.

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

Marsh tits are most often found in broadleaf woodland, parks and gardens. They feed mostly on insects, seeds and berries, and often cache food over winter if they find a good supply. They will often come visiting if you offer a food supply of seeds and nuts. Marsh tits nest in existing tree holes, rather than excavating their own, and may also use nest boxes if needed. They will often nest low to the ground, or even at or below ground level.



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 **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 **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 **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.



Lapwings are found on arable land throughout the UK particularly in lowland areas of northern England, the Borders and eastern Scotland. In the breeding season prefer spring sown cereals, root crops, permanent unimproved pasture, meadows and fallow fields. They can also be found on wetlands with short vegetation. In winter they flock on pasture and ploughed fields. Lapwing populations have declined significantly in recent decades. This decline has been largely caused by the loss of mixed farming and spring cropping, and the intensification of grassland management. Declines in the west of the UK are leading to local extinctions. To reverse the decline of lapwing populations, there are several recommendations to reduce intensive land management, including creation of a mosaic of spring sown crops and grassland, managing grazing pressure and maintaining damp areas on unimproved grassland.



Fieldfares can be found across the UK during winter. The birds primarily stay to rural areas, but will come into towns and gardens to search for food when necessary. They will feast on the seasonal berries in hedgerows and woodland, and will often nest in large colonies.

Hawfinches are the largest finch in the UK, with its notable and powerful bill. Although it is a large bird, it is also highly elusive. Hawfinches are now mostly restricted to England in the UK and have declined in many areas. Hawfinches may perch high in trees, but also feed on the ground and much more inconspicuously among the foliage. Hawfinches are primarily seed eaters during the winter months, specialising in large seeds that other birds might struggle with.

BIRDS: SPECIES FOCUS

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.



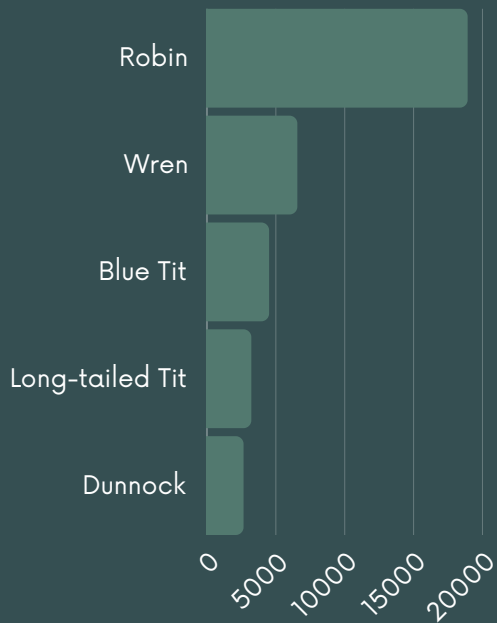
SURVEY SITE FINDINGS



SURVEY SITE: ABBOTTS ANN FARM

BIRDS OVERVIEW

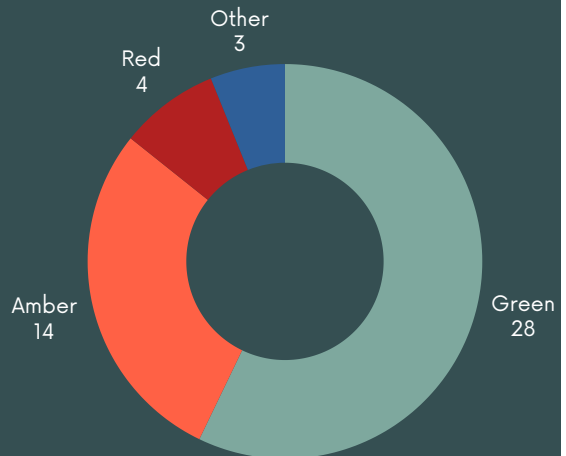
MOST FREQUENTLY IDENTIFIED BIRD SPECIES



56494 CALLS FROM IDENTIFIED BIRD SPECIES

49 BIRD SPECIES

CONSERVATION STATUS OF BIRDS IDENTIFIED



SURVEY SITE: ABBOTTS ANN FARM

NUMBER OF SPECIES IDENTIFIED PER RECORDING LOCATION

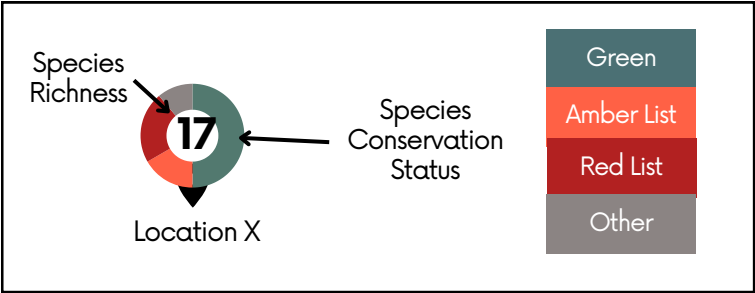


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BIRDS IDENTIFIED AT SITE

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

Species	Scientific Name	Month 1 Acoustic Identification s	Month 2 Acoustic Identifications	Month 3 Acoustic Identifications	Conservation Status (BoCC5)
Robin	<i>Erithacus rubecula</i>	3795	6621	8508	green
Wren	<i>Troglodytes troglodytes</i>	2994	2105	1462	amber
Blue Tit	<i>Cyanistes caeruleus</i>	404	2039	2068	green
Long-tailed Tit	<i>Aegithalos caudatus</i>	1407	1189	624	green
Dunnock	<i>Prunella modularis</i>	920	880	856	amber
Great Tit	<i>Parus major</i>	292	1084	910	green
Jackdaw	<i>Corvus monedula</i>	577	826	657	green
Blackbird	<i>Turdus merula</i>	570	800	620	green
Pied Wagtail	<i>Motacilla alba</i>	726	773	319	green
Chaffinch	<i>Fringilla coelebs</i>	341	583	771	green
Grey Wagtail	<i>Motacilla cinerea</i>	468	448	494	amber
Meadow Pipit	<i>Anthus pratensis</i>	463	436	47	amber
Magpie	<i>Pica pica</i>	224	250	218	green
Redwing	<i>Turdus iliacus</i>	249	282	158	amber
Song Thrush	<i>Turdus philomelos</i>	111	265	284	amber
Moorhen	<i>Gallinula chloropus</i>	155	255	246	amber
Kingfisher	<i>Alcedo atthis</i>	284	235	59	green
Carrion Crow	<i>Corvus corone</i>	178	173	171	green
Green Woodpecker	<i>Picus viridis</i>	74	182	263	green
Goldcrest	<i>Regulus regulus</i>	163	215	105	green
Chiffchaff	<i>Phylloscopus collybita</i>	123	218	61	green
Pheasant	<i>Phasianus colchicus</i>	40	89	192	introduced
Mistle Thrush	<i>Turdus viscivorus</i>	27	0	268	red
Goldfinch	<i>Carduelis carduelis</i>	45	93	132	green
Tawny Owl	<i>Strix aluco</i>	38	86	133	amber
Treecreeper	<i>Certhia familiaris</i>	47	75	134	green
Mallard	<i>Anas platyrhynchos</i>	84	57	91	amber
Marsh Tit	<i>Poecile palustris</i>	95	46	81	red
Red Kite	<i>Milvus milvus</i>	27	77	67	green
Grey Heron	<i>Ardea cinerea</i>	64	60	36	green
Great Spotted Woodpecker	<i>Dendrocopos major</i>	52	55	34	green
Greenfinch	<i>Chloris chloris</i>	12	41	55	red
Green Sandpiper	<i>Tringa ochropus</i>	26	23	42	amber
Water Rail	<i>Rallus aquaticus</i>	24	33	29	green
Coal Tit	<i>Periparus ater</i>	15	28	37	green

BIRDS IDENTIFIED AT SITE

Species	Scientific Name	Month 1 Acoustic Identifications	Month 2 Acoustic Identifications	Month 3 Acoustic Identifications	Conservation Status (BoCC5)
Coot	<i>Fulica atra</i>	33	22	23	green
Barn Owl	<i>Tyto alba</i>	32	37	0	green
Jay	<i>Garrulus glandarius</i>	33	14	17	green
Buzzard	<i>Buteo buteo</i>	14	21	26	green
Nuthatch	<i>Sitta europaea</i>	0	52	5	green
Little Grebe	<i>Tachybaptus ruficollis</i>	15	8	19	green
Rook	<i>Corvus frugilegus</i>	9	9	17	amber
Yellowhammer	<i>Emberiza citrinella</i>	17	15	0	red
Bullfinch	<i>Pyrrhula pyrrhula</i>	14	17	0	amber
Cetti's Warbler	<i>Cettia cetti</i>	16	0	11	green
Red-legged Partridge	<i>Alectoris rufa</i>	0	0	13	introduced
Gadwall	<i>Mareca strepera</i>	10	0	0	amber
Teal	<i>Anas crecca</i>	0	0	5	amber
Canada Goose	<i>Branta canadensis</i>	0	0	2	introduced

SURVEY SITE: LOWER LINK FARM

BIRDS OVERVIEW

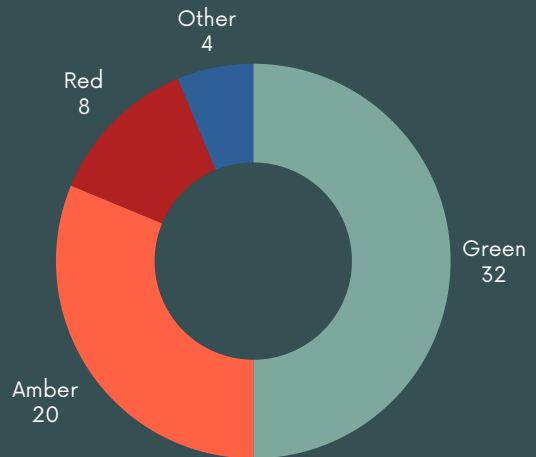
MOST FREQUENTLY IDENTIFIED BIRD SPECIES



53571 CALLS FROM IDENTIFIED BIRD SPECIES

64 BIRD SPECIES

CONSERVATION STATUS OF BIRDS IDENTIFIED



SURVEY SITE: LOWER LINK FARM

NUMBER OF SPECIES IDENTIFIED PER RECORDING LOCATION

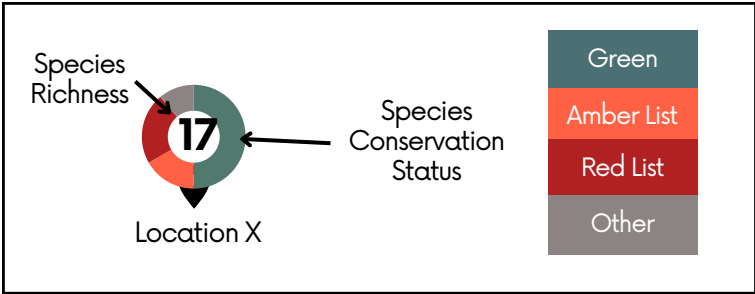


IMAGE © GOOGLE EARTH, © AIRBUS

BIRDS IDENTIFIED AT SITE

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

Species	Scientific Name	Month 1 Acoustic Identification s	Month 2 Acoustic Identifications	Month 3 Acoustic Identifications	Conservation Status (BoCC5)
Robin	<i>Erithacus rubecula</i>	5215	2367	1678	green
Wren	<i>Troglodytes troglodytes</i>	2673	1960	1205	amber
Long-tailed Tit	<i>Aegithalos caudatus</i>	2961	2231	587	green
Blue Tit	<i>Cyanistes caeruleus</i>	1155	1013	3552	green
Dunnock	<i>Prunella modularis</i>	1919	1020	319	amber
Blackbird	<i>Turdus merula</i>	1293	784	835	green
Pheasant	<i>Phasianus colchicus</i>	1168	868	631	introduced
Tawny Owl	<i>Strix aluco</i>	1177	537	680	amber
Jackdaw	<i>Corvus monedula</i>	703	841	335	green
Kingfisher	<i>Alcedo atthis</i>	938	337	330	green
Great Tit	<i>Parus major</i>	443	305	729	green
Goldcrest	<i>Regulus regulus</i>	762	531	106	green
Chaffinch	<i>Fringilla coelebs</i>	471	375	196	green
Carrion Crow	<i>Corvus corone</i>	358	358	216	green
Buzzard	<i>Buteo buteo</i>	314	285	133	green
Magpie	<i>Pica pica</i>	233	272	92	green
Song Thrush	<i>Turdus philomelos</i>	248	153	184	amber
Moorhen	<i>Gallinula chloropus</i>	331	131	78	amber
Great Spotted Woodpecker	<i>Dendrocopos major</i>	256	150	105	green
Redwing	<i>Turdus iliacus</i>	316	47	80	amber
Chiffchaff	<i>Phylloscopus collybita</i>	179	141	49	green
Mallard	<i>Anas platyrhynchos</i>	136	108	106	amber
Grey Wagtail	<i>Motacilla cinerea</i>	151	55	92	amber
Green Sandpiper	<i>Tringa ochropus</i>	120	80	94	amber
Grey Heron	<i>Ardea cinerea</i>	138	96	56	green
Pied Wagtail	<i>Motacilla alba</i>	133	68	43	green
Treecreeper	<i>Certhia familiaris</i>	74	119	46	green
Marsh Tit	<i>Poecile palustris</i>	130	94	11	red
Meadow Pipit	<i>Anthus pratensis</i>	121	67	39	amber
Hawfinch	<i>Coccothraustes coccothraustes</i>	196	29	0	red
Canada Goose	<i>Branta canadensis</i>	151	24	8	introduced
Coot	<i>Fulica atra</i>	132	5	35	green
Jay	<i>Garrulus glandarius</i>	69	35	27	green

BIRDS IDENTIFIED AT SITE

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

Species	Scientific Name	Month 1 Acoustic Identification s	Month 2 Acoustic Identifications	Month 3 Acoustic Identifications	Conservation Status (BoCC5)
Coal Tit	<i>Periparus ater</i>	66	44	10	green
Red Kite	<i>Milvus milvus</i>	41	20	12	green
Cetti's Warbler	<i>Cettia cetti</i>	60	6	0	green
Goldfinch	<i>Carduelis carduelis</i>	15	11	19	green
Gadwall	<i>Mareca strepera</i>	15	22	0	amber
Rook	<i>Corvus frugilegus</i>	33	0	0	amber
Mistle Thrush	<i>Turdus viscivorus</i>	0	31	0	red
Fieldfare	<i>Turdus pilaris</i>	17	10	0	red
Teal	<i>Anas crecca</i>	0	0	27	amber
Stonechat	<i>Saxicola rubicola</i>	13	13	0	green
Kestrel	<i>Falco tinnunculus</i>	17	0	7	amber
Raven	<i>Corvus corax</i>	16	0	8	green
Nuthatch	<i>Sitta europaea</i>	0	11	13	green
Herring Gull	<i>Larus argentatus</i>	12	0	11	red
Whooper Swan	<i>Cygnus cygnus</i>	22	0	0	amber
Red-legged Partridge	<i>Alectoris rufa</i>	0	0	22	introduced
Bullfinch	<i>Pyrrhula pyrrhula</i>	12	0	7	amber
Barn Owl	<i>Tyto alba</i>	10	9	0	green
Green Woodpecker	<i>Picus viridis</i>	7	0	9	green
Water Rail	<i>Rallus aquaticus</i>	16	0	0	green
Lapwing	<i>Vanellus vanellus</i>	8	0	0	red
Greenfinch	<i>Chloris chloris</i>	7	0	0	red
Siskin	<i>Spinus spinus</i>	0	6	0	green
Little Owl	<i>Athene noctua</i>	0	0	5	introduced
Reed Bunting	<i>Emberiza schoeniclus</i>	5	0	0	amber
Oystercatcher	<i>Haematopus ostralegus</i>	0	0	5	amber
Yellowhammer	<i>Emberiza citrinella</i>	0	4	0	red
Greylag Goose	<i>Anser anser</i>	4	0	0	amber
Mute Swan	<i>Cygnus olor</i>	1	2	0	green
Peregrine	<i>Falco peregrinus</i>	2	0	0	green
Snipe	<i>Gallinago gallinago</i>	1	0	0	amber

SURVEY SITE: MULLENS FARM

BIRDS OVERVIEW

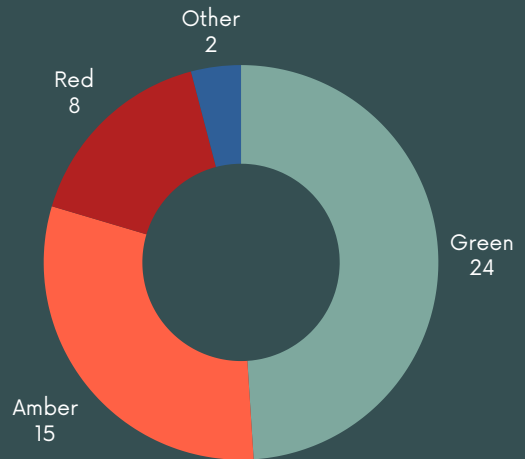
MOST FREQUENTLY IDENTIFIED BIRD SPECIES



43798 CALLS FROM IDENTIFIED BIRD SPECIES

58 BIRD SPECIES

CONSERVATION STATUS OF BIRDS IDENTIFIED



SURVEY SITE: MULLENS FARM

NUMBER OF SPECIES IDENTIFIED
PER RECORDING DEVICE

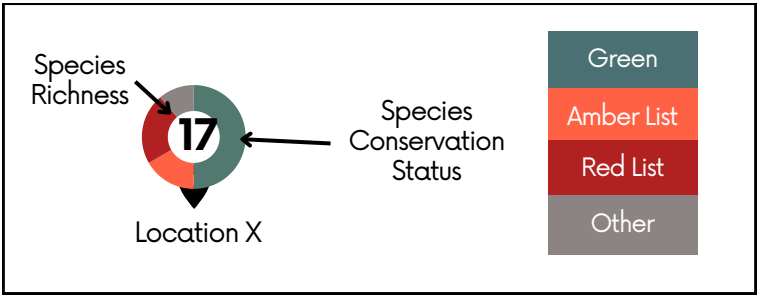


IMAGE © GOOGLE EARTH, © AIRBUS

BIRDS IDENTIFIED AT SITE

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

Species	Scientific Name	Month 1 Acoustic Identification s	Month 2 Acoustic Identifications	Month 3 Acoustic Identifications	Conservation Status (BoCC5)
Rook	<i>Corvus frugilegus</i>	935	2293	2829	amber
Carrion Crow	<i>Corvus corone</i>	978	1999	1509	green
Wren	<i>Troglodytes troglodytes</i>	1776	851	879	amber
Blue Tit	<i>Cyanistes caeruleus</i>	100	1319	2003	green
Jackdaw	<i>Corvus monedula</i>	589	1028	1541	green
Great Tit	<i>Parus major</i>	132	1015	1664	green
Robin	<i>Erithacus rubecula</i>	453	639	1699	green
Blackbird	<i>Turdus merula</i>	317	1150	714	green
Long-tailed Tit	<i>Aegithalos caudatus</i>	684	883	355	green
Great Spotted Woodpecker	<i>Dendrocopos major</i>	142	432	1115	green
Song Thrush	<i>Turdus philomelos</i>	43	100	1361	amber
Pheasant	<i>Phasianus colchicus</i>	612	438	242	introduced
Duncock	<i>Prunella modularis</i>	434	296	410	amber
Tawny Owl	<i>Strix aluco</i>	276	328	341	amber
Pied Wagtail	<i>Motacilla alba</i>	401	92	258	green
Goldcrest	<i>Regulus regulus</i>	205	323	194	green
Meadow Pipit	<i>Anthus pratensis</i>	218	164	164	amber
Nuthatch	<i>Sitta europaea</i>	48	203	229	green
Chaffinch	<i>Fringilla coelebs</i>	148	144	168	green
Coal Tit	<i>Parus ater</i>	0	242	208	green
Magpie	<i>Pica pica</i>	83	96	218	green
Redwing	<i>Turdus iliacus</i>	151	152	87	amber
Mistle Thrush	<i>Turdus viscivorus</i>	27	0	352	red
Goldfinch	<i>Carduelis carduelis</i>	173	62	133	green
Chiffchaff	<i>Phylloscopus collybita</i>	310	20	37	green
Treecreeper	<i>Certhia familiaris</i>	50	110	129	green
Buzzard	<i>Buteo buteo</i>	45	87	110	green
Jay	<i>Garrulus glandarius</i>	54	94	32	green
Raven	<i>Corvus corax</i>	17	100	32	green
Starling	<i>Sturnus vulgaris</i>	25	44	16	red
Moorhen	<i>Gallinula chloropus</i>	0	34	49	amber
Coot	<i>Fulica atra</i>	49	0	33	green
Green Woodpecker	<i>Picus viridis</i>	27	27	6	green
Peregrine	<i>Falco peregrinus</i>	17	3	39	green

BIRDS IDENTIFIED AT SITE

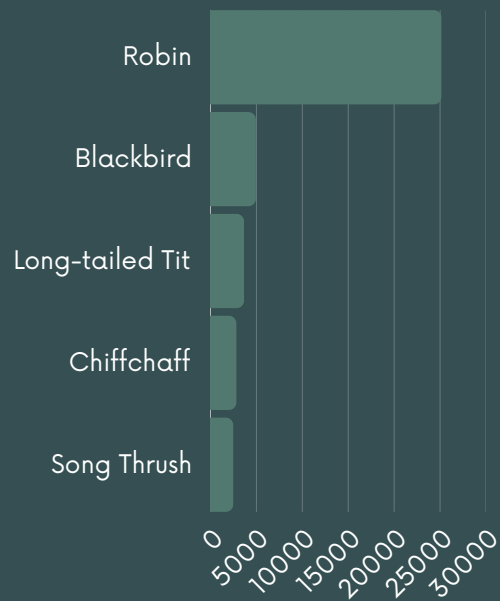
A full list of bird species identified at the site can be found below:

Species	Scientific Name	Month 1 Acoustic Identification s	Month 2 Acoustic Identifications	Month 3 Acoustic Identifications	Conservation Status (BoCC5)
Wigeon	<i>Mareca penelope</i>	24	25	0	amber
Common Sandpiper	<i>Actitis hypoleucos</i>	0	0	47	amber
Barn Owl	<i>Tyto alba</i>	21	6	17	green
Lapwing	<i>Vanellus vanellus</i>	2	17	16	red
Greenfinch	<i>Chloris chloris</i>	0	7	27	red
Skylark	<i>Alauda arvensis</i>	0	0	27	red
House Sparrow	<i>Passer domesticus</i>	6	8	11	red
Black-headed Gull	<i>Chroicocephalus ridibundus</i>	25	0	0	amber
Grey Wagtail	<i>Motacilla cinerea</i>	20	0	0	amber
Mallard	<i>Anas platyrhynchos</i>	0	14	0	amber
Canada Goose	<i>Branta canadensis</i>	0	0	12	introduced
Fieldfare	<i>Turdus pilaris</i>	7	1	0	red
Kestrel	<i>Falco tinnunculus</i>	0	6	1	amber
Stock Dove	<i>Columba oenas</i>	0	0	4	amber
Yellowhammer	<i>Emberiza citrinella</i>	4	0	0	red

SURVEY SITE: RUNCTON NURSERY

BIRDS OVERVIEW

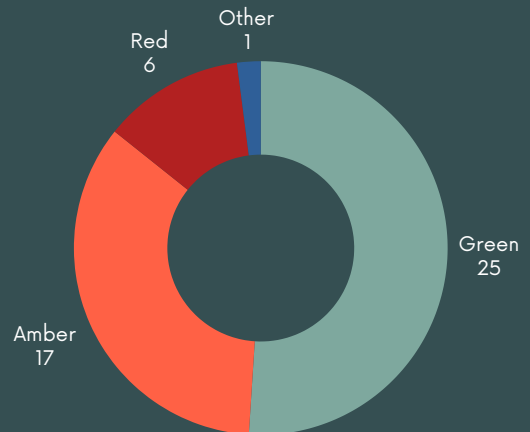
MOST FREQUENTLY IDENTIFIED BIRD SPECIES



57236 CALLS FROM IDENTIFIED BIRD SPECIES

49 BIRD SPECIES

CONSERVATION STATUS OF BIRDS IDENTIFIED



SURVEY SITE: RUNCTON NURSERY

NUMBER OF SPECIES IDENTIFIED PER RECORDING DEVICE

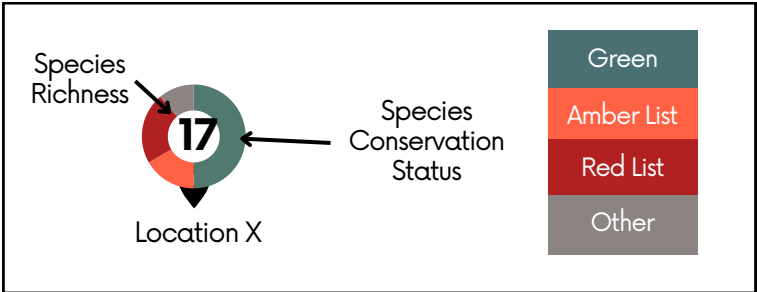
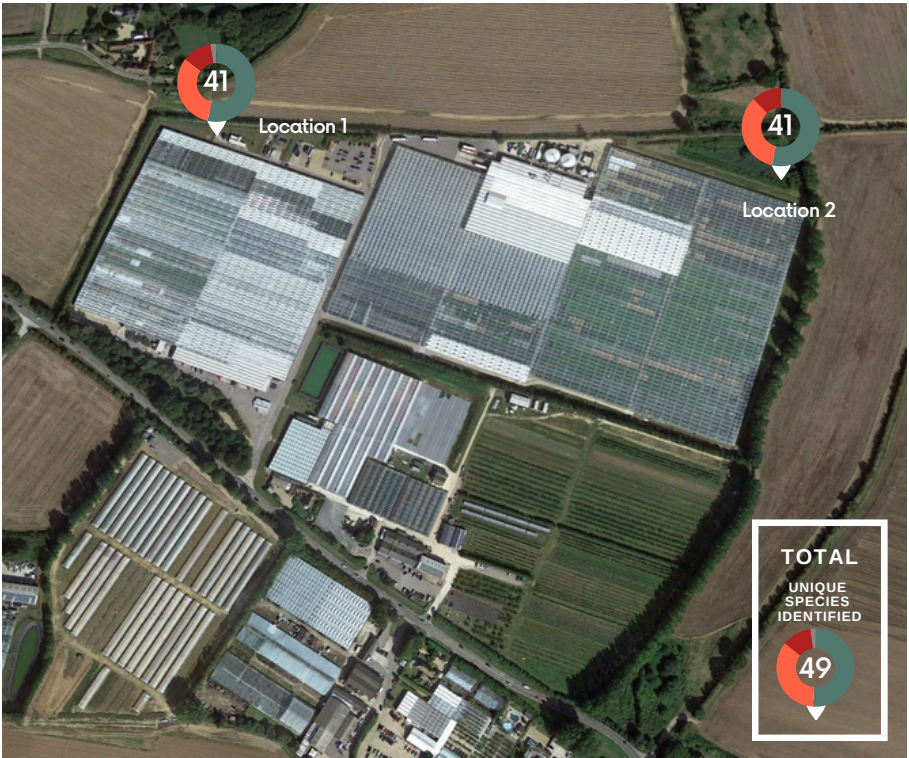


IMAGE © GOOGLE EARTH, © AIRBUS

BIRDS IDENTIFIED AT SITE

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

Species	Scientific Name	Month 1 Acoustic Identification s	Month 2 Acoustic Identifications	Month 3 Acoustic Identifications	Conservation Status (BoCC5)
Robin	<i>Erithacus rubecula</i>	9352	8456	7338	green
Blackbird	<i>Turdus merula</i>	1662	1695	1584	green
Long-tailed Tit	<i>Aegithalos caudatus</i>	2297	585	774	green
Chiffchaff	<i>Phylloscopus collybita</i>	2182	615	20	green
Song Thrush	<i>Turdus philomelos</i>	926	476	1078	amber
Great Tit	<i>Parus major</i>	290	498	1527	green
Wren	<i>Troglodytes troglodytes</i>	1012	729	555	amber
Blue Tit	<i>Cyanistes caeruleus</i>	305	450	1376	green
Dunnock	<i>Prunella modularis</i>	405	504	564	amber
Magpie	<i>Pica pica</i>	375	449	621	green
Carrion Crow	<i>Corvus corone</i>	462	285	627	green
Redwing	<i>Turdus iliacus</i>	1008	99	38	amber
Grey Wagtail	<i>Motacilla cinerea</i>	570	187	92	amber
Herring Gull	<i>Larus argentatus</i>	182	186	286	red
Goldfinch	<i>Carduelis carduelis</i>	362	30	99	green
Great Spotted Woodpecker	<i>Dendrocopos major</i>	209	127	145	green
Goldcrest	<i>Regulus regulus</i>	315	85	41	green
Green Woodpecker	<i>Picus viridis</i>	137	104	161	green
Pied Wagtail	<i>Motacilla alba</i>	310	49	14	green
Chaffinch	<i>Fringilla coelebs</i>	106	84	83	green
Grey Heron	<i>Ardea cinerea</i>	105	56	81	green
Green Sandpiper	<i>Tringa ochropus</i>	59	106	25	amber
Black-headed Gull	<i>Chroicocephalus ridibundus</i>	176	13	0	amber
Tawny Owl	<i>Strix aluco</i>	55	46	78	amber
Jay	<i>Garrulus glandarius</i>	47	24	56	green
Mallard	<i>Anas platyrhynchos</i>	43	26	40	amber
Kingfisher	<i>Alcedo atthis</i>	55	40	0	green
Buzzard	<i>Buteo buteo</i>	44	12	24	green
Fieldfare	<i>Turdus pilaris</i>	58	20	0	red
Reed Bunting	<i>Emberiza schoeniclus</i>	25	41	11	amber
Nuthatch	<i>Sitta europaea</i>	0	0	70	green
Meadow Pipit	<i>Anthus pratensis</i>	60	5	3	amber

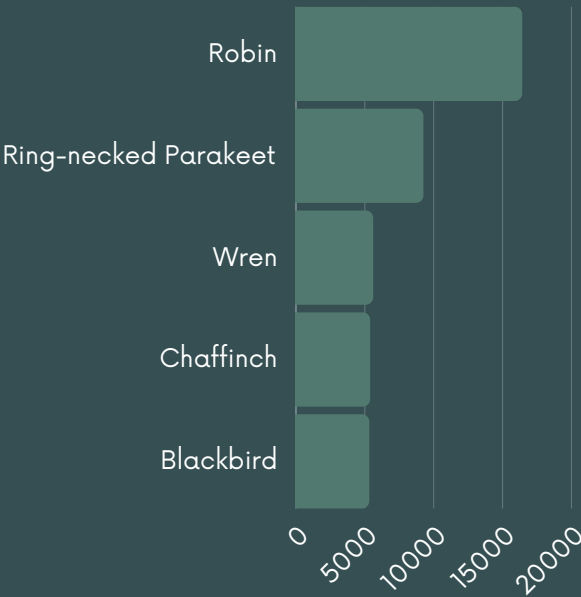
BIRDS IDENTIFIED AT SITE

Species	Scientific Name	Month 1 Acoustic Identification s	Month 2 Acoustic Identifications	Month 3 Acoustic Identifications	Conservation Status (BoCC5)
Water Rail	<i>Rallus aquaticus</i>	43	24	0	green
Jackdaw	<i>Corvus monedula</i>	41	4	15	green
Yellow-legged Gull	<i>Larus michahellis</i>	0	22	31	amber
Greylag Goose	<i>Anser anser</i>	17	26	0	amber
Greenfinch	<i>Chloris chloris</i>	13	0	27	red
Bullfinch	<i>Pyrrhula pyrrhula</i>	0	0	37	amber
Cetti's Warbler	<i>Cettia cetti</i>	27	9	0	green
Yellowhammer	<i>Emberiza citrinella</i>	24	12	0	red
Skylark	<i>Alauda arvensis</i>	29	0	0	red
Moorhen	<i>Gallinula chloropus</i>	17	0	12	amber
Rook	<i>Corvus frugilegus</i>	18	0	10	amber
Waxwing	<i>Bombycilla garrulus</i>	25	0	0	green
Lapwing	<i>Vanellus vanellus</i>	6	12	3	red
Coot	<i>Fulica atra</i>	13	0	4	green
Pheasant	<i>Phasianus colchicus</i>	8	0	7	introduced
Raven	<i>Corvus corax</i>	0	0	11	green
Teal	<i>Anas crecca</i>	0	2	0	amber

SURVEY SITE: ABBEY FARM

BIRDS OVERVIEW

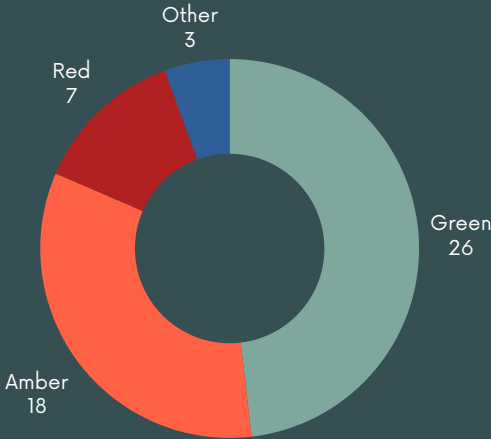
MOST FREQUENTLY IDENTIFIED BIRD SPECIES



78974 CALLS FROM IDENTIFIED BIRD SPECIES

54 BIRD SPECIES

CONSERVATION STATUS OF BIRDS IDENTIFIED



SURVEY SITE: ABBEY FARM

NUMBER OF SPECIES IDENTIFIED
PER RECORDING DEVICE

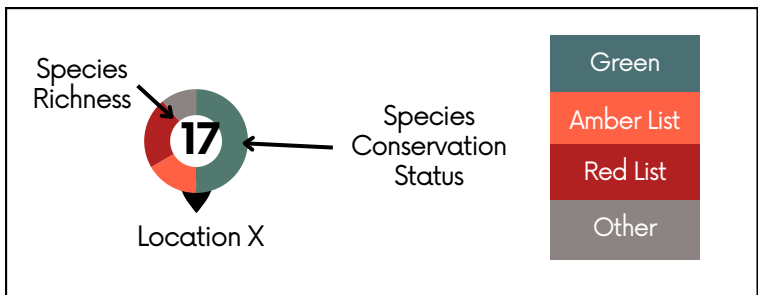


IMAGE © GOOGLE EARTH, © AIRBUS

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)
Robin	<i>Erithacus rubecula</i>	8628	3065	4731	green
Ring-necked Parakeet	<i>Psittacula krameri</i>	2890	2573	3790	introduced
Wren	<i>Troglodytes troglodytes</i>	2406	1752	1447	amber
Chaffinch	<i>Fringilla coelebs</i>	2598	1607	1181	green
Blackbird	<i>Turdus merula</i>	1520	1629	2175	green
Jackdaw	<i>Corvus monedula</i>	1614	1511	1219	green
Blue Tit	<i>Cyanistes caeruleus</i>	297	522	3317	green
Long-tailed Tit	<i>Aegithalos caudatus</i>	1509	1339	1005	green
Carrion Crow	<i>Corvus corone</i>	1682	1115	978	green
Dunnock	<i>Prunella modularis</i>	1651	958	1043	amber
Magpie	<i>Pica pica</i>	911	608	1164	green
Herring Gull	<i>Larus argentatus</i>	602	825	796	red
Goldcrest	<i>Regulus regulus</i>	746	556	318	green
Great Tit	<i>Parus major</i>	193	351	991	green
Rook	<i>Corvus frugilegus</i>	464	538	438	amber
Great Spotted Woodpecker	<i>Dendrocopos major</i>	593	422	411	green
Redwing	<i>Turdus iliacus</i>	634	193	130	amber
Song Thrush	<i>Turdus philomelos</i>	255	290	394	amber
Pheasant	<i>Phasianus colchicus</i>	233	199	156	introduced
Jay	<i>Garrulus glandarius</i>	298	115	104	green
Green Woodpecker	<i>Picus viridis</i>	165	153	163	green
Tawny Owl	<i>Strix aluco</i>	114	68	181	amber
Meadow Pipit	<i>Anthus pratensis</i>	188	127	36	amber
Buzzard	<i>Buteo buteo</i>	155	76	116	green
Chiffchaff	<i>Phylloscopus collybita</i>	146	106	87	green
Pied Wagtail	<i>Motacilla alba</i>	194	89	15	green
Barn Owl	<i>Tyto alba</i>	109	10	60	green
Goldfinch	<i>Carduelis carduelis</i>	82	16	0	green
Greylag Goose	<i>Anser anser</i>	53	9	21	amber
Grey Heron	<i>Ardea cinerea</i>	16	36	29	green

BIRDS IDENTIFIED AT SITE

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

Species	Scientific Name	Month 1 Acoustic Identification s	Month 2 Acoustic Identifications	Month 3 Acoustic Identifications	Conservation Status (BoCC5)
Lapwing	<i>Vanellus vanellus</i>	9	0	39	red
Kestrel	<i>Falco tinnunculus</i>	26	14	5	amber
Corn Bunting	<i>Emberiza calandra</i>	0	45	0	red
Fieldfare	<i>Turdus pilaris</i>	17	0	26	red
Grey Wagtail	<i>Motacilla cinerea</i>	15	9	17	amber
Little Owl	<i>Athene noctua</i>	0	0	30	introduced
Mallard	<i>Anas platyrhynchos</i>	15	0	11	amber
Mistle Thrush	<i>Turdus viscivorus</i>	0	24	0	red
Yellow-legged Gull	<i>Larus michahellis</i>	0	22	0	amber
Snipe	<i>Gallinago gallinago</i>	18	2	0	amber
Brambling	<i>Fringilla montifringilla</i>	16	0	0	green
Skylark	<i>Alauda arvensis</i>	9	0	6	red
Raven	<i>Corvus corax</i>	11	0	0	green
Water Rail	<i>Rallus aquaticus</i>	0	8	0	green
Oystercatcher	<i>Haematopus ostralegus</i>	0	0	7	amber
Coot	<i>Fulica atra</i>	6	0	0	green
Stock Dove	<i>Columba oenas</i>	0	2	2	amber
Golden Plover	<i>Pluvialis apricaria</i>	0	4	0	green
Great Black-backed Gull	<i>Larus marinus</i>	3	0	0	amber
House Sparrow	<i>Passer domesticus</i>	0	0	2	red

APPENDIX A: SPECIES REQUIRING FURTHER VERIFICATION

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

Site	Location ID	Species Name	Scientific Name
abbey farm	1	Firecrest	Regulus ignicapilla
abbey farm	2	Little Owl	Athene noctua
abbey farm	2	Black Redstart	Phoenicurus ochruros
abbey farm	2	Sparrowhawk	Accipiter nisus
abbey farm	4	Grey Plover	Pluvialis squatarola
abbey farm	4	Water Rail	Rallus aquaticus
abbotts ann farm	1	Fieldfare	Turdus pilaris
abbotts ann farm	1	Gadwall	Mareca strepera
abbotts ann farm	3	Hawfinch	Coccothraustes coccothraustes
lower link farm	1	Hawfinch	Coccothraustes coccothraustes
lower link farm	1	Peregrine	Falco peregrinus
lower link farm	1	Fieldfare	Turdus pilaris
mullens farm	2	Linnet	Linaria cannabina
mullens farm	5	Gadwall	Mareca strepera
runcton nursery	1	Golden Plover	Pluvialis apricaria
runcton nursery	1	Lapwing	Vanellus vanellus
runcton nursery	2	Siskin	Spinus spinus
runcton nursery	2	Firecrest	Regulus ignicapilla

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.