

Monitoring of breeding bird abundance in the Brit Catchment – Year 2 results (2024)



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Summary

The English government uses populations of birds as a key indicator of the state of biodiversity and environmental health using data from the BTO/JNCC/RSPB Breeding Bird Survey surveillance scheme.

In 2023, the conservation charity West Dorset Wilding, set a baseline of the status of breeding bird populations in the Brit Catchment, sampling almost a fifth of the area at 1-km square resolution using BBS methods and data collected by a combination of contractors and local volunteers and from BBS data supplied by the BTO.

The results were mixed. Encouraging results included the return of Corn Bunting to the catchment and strong populations of Red-Listed Herring Gull and nationally scarce Raven. Many generalist birds which occur in urban areas urban such as Long-tailed Tit and Goldfinch were found in most squares, with these species known to be increasing nationally through widespread garden feeding of birds. However, the causes of concern outweighed the positives. Once common and familiar West Dorset birds such as Cuckoo, Nightingale, Grey Partridge, Lapwing, Snipe and Tree Sparrow were not recorded at all, with most of these species feared extinct within the catchment. Wetland birds were extremely thin on the ground, due to past land drainage works and many of the remaining populations of nationally rapidly declining species such as Yellowhammer, Marsh Tit, Reed Bunting and Spotted Flycatcher were small and fragmented; and thus vulnerable to local extinction.

The Brit Catchment surveillance scheme ran for the second year in 2024, with 12% coverage achieved by contractor (no change) and local volunteer efforts (two fewer squares in 2024). The full picture is not yet complete, as requested BBS data was not yet available by the BTO this time.

Four new species were recorded by the surveys in 2024, these were Little Egret, Lesser Black-backed Gull (which breeds in Bridport), Peregrine (which bred at West Bay in 2024) and Tree Pipit.

Data from the squares which were sampled in both 2023 and 2024 suggest a most but welcome upturn in bird fortunes in 2024. The average number of birds counted per repeat sampled square increased by 28% from 2023 levels whilst on average there were 10% more species in each square. Furthermore, the average number of birds seen per square across all squares (Including those not counted in both years) increased by 25% between 2023 and 2024.

A number of Red-Listed birds increased in abundance by more than 50% including Yellowhammer, Spotted Flycatcher, Corn Bunting, Marsh Tit and Linnet. In particular, it was a good year for Yellowhammer, which increased by 224% and Spotted Flycatcher, which was found in five more squares than the previous year). The rare Firecrest also showed a positive change in occupancy, being found at an additional three sites in 2024. Of the Amber-Listed species the Willow Warbler, which has declined rapidly in recent years in south west England showed a modest but welcome increase, whilst Dipper was found at two sites in 2024. Twice as many Bullfinch were counted in 2024 than in 2023.

The positive does seem a genuine increases and attributable to conservation interventions in some cases, though the magnitude of change at some squares may have been may have been influenced by recorder effects (i.e. changes to the recorder at some squares) a late start to the breeding season, with more flocks of birds seen than on the first visit in 2024 than in 2023.

A short lead in time for recruitment likely hampered volunteer involvement and it is recommended that the process of volunteer recruitment and training starts by February 2025.

1.0 Introduction

The English government uses a number of indicators to assess the state of biodiversity and overall health of the environment. The first of these to be developed in the UK was populations of wild birds. Birds are high in the food chain and therefore are considered good indicators for the overall state of biodiversity (Chambers 2008). The bird indicator is updated annually and chiefly uses Breeding Bird Survey (BBS) data, from a network of randomly selected 1-km squares, stratified by recorder density. The BTO/JNCC/RSPB BBS is a partnership jointly funded by the BTO, RSPB and JNCC, with fieldwork conducted by volunteers.

West Dorset Wilding (WDW) is a new Landowner-led charity focused on promoting and delivering nature recovery and sustainable land management in the Brit Catchment through species reintroductions, rewilding and regenerative farming.

The Brit Catchment extends over 113.5 square km and chiefly comprises mixed farmland, with smaller quantities of woodland, urban development and pockets of semi-natural grassland, Bracken and scrub. Wetlands are few and far between, though there are several small river systems, some of the less intensively managed field support areas of Rush Pasture and there are a number of small artificial ponds. The farmland is mostly intensive, with the main mix being silage fields, improved pastures grazed by cattle and sheep, and cereal crops, especially wheat and maize.

An objective of West Dorset Wilding, is to establish a baseline of the state of biodiversity in the Brit Catchment, from which to monitor future changes and the effectiveness of conservation interventions at a catchment scale.

In 2023 a project was undertaken to establish a baseline of breeding bird populations in the Brit Catchment, adopting the BBS sampling approach and survey method. The aim was to establish 10 1-km squares (~10% of the catchment area) to be monitored annually in the future.

A solid baseline was achieved, with coverage almost doubling our target. In total 19 squares were sampled/collated in 2023, comprising 10 randomly selected squares sampled by Tom Brereton, four free choice squares sampled by Bridport Bird Club volunteers and five BTO BBS squares (two of the five were just outside the catchment) sampled by BTO recorders.

The aim in 2024, was to build on this baseline, sampling as many of the core squares as possible with additional efforts from the BTO and local volunteers outside of their network.

2.0 Methods

2.1 Sampling framework

2.1.1. Stratified random squares

The 10 randomly selected 1-km squares were stratified by presence/absence of a substantial length of a named river water body. There are 109 1-km squares wholly or largely within the Brit catchment (criteria: 66-100% of the square is within the catchment boundary), whilst 63 of the 109 1-km squares (~60%) do not contain WFD river water bodies or only contain very small segments (<100 m). 46 of the 109 squares (~40%) contain WFD river water bodies (i.e. named stream/river sections >100m in length, with the majority of squares containing sections >300m in length)

Based on the ratio of river water body to non-river water body squares across the catchment, the allocation of random squares was as follows

Non river water bodies = 6 squares

River water bodies = 4 squares

2.1.2 Supplementary 'free choice squares'

Random square coverage at 10% is always going to look like uneven coverage, with some substantial gaps that may include important habitats and areas for birds.

A solution to getting more even geographical coverage was to offer a series of cherry-picked 'free choice' (non-random) squares to volunteers - 5 squares in the first instance. For example, SY4798 was one of the squares, as it was practically easy (mostly footpath which sample the land of interest well) and covers two land holding with positive land management underway. These squares were offered to volunteer surveyors from Bridport Bird Club.

This approach is loosely analogous to the UK Butterfly Monitoring Scheme where free choice butterfly transects are combined with randomly selected Wider Countryside Butterfly Squares to derive overall trends for species (Brereton et al. 2011).

2.2 Survey routes and access permission

Though a recce visit is advised, proposed survey routes were drawn up for each of the squares using satellite imagery, crop data and Ordnance survey maps showing public access points.

The ideal survey route comprises two parallel lines, each 1km in length, about 500m apart, and about 250m from the edge of the square. For practical reasons there is often substantial deviation from the ideal route. In particular, route through crops were avoided, whilst hedges often meant that transect lines (or access to them) were convoluted.

The two 1-km transects were divided into 200m sections, making a total of ten 200m sections per square.

Resource limitation precluded the collection of habitat data. In the BBS, habitat information is recorded using codes from an established hierarchical system common to a range of BTO schemes (Crick 1992). Observers record the two primary habitat types for each transect section, in up to four levels of detail.

2.3 Field method

The [BBS survey method](#) involved two early-morning spring visits to each 1-km square, to count all the birds seen or hear while walking two 1-km lines across the square and record any nest counts for colonial nesting birds in the square.

Two visits were made to each square - Visits were timed so that the first was in the early part of the breeding season (April to mid-May) and the second at least four weeks later (mid-May to the end of June).

Survey were made early morning, to coincide with maximum bird activity, but avoiding concentrated song activity at dawn. All bird seen or heard were recorded as surveyors walked at a slow, steady pace along each transect line.

Birds were noted in four distance categories, three measured at right angles to the transect line (within 25m, between 25-100m, or over 100m from the transect line), and those seen in flight only. Recording birds in distance bands gives the potential to measure bird detectability and allows relative population density to be estimated.

The recommended visit time to a square was 90 minutes. Observers record the start and end times for each of the two halves of the transect, and weather conditions, using a three-level weather code system to describe cloud cover, rain, wind and visibility. Observers were discouraged from conducting bird counts in heavy rain, poor visibility, or strong winds when bird activity is significantly dampened.

Standard BTO bird activity (Crick 1992) and species name codes were used.

Bird sightings were annotated onto standardised field sheets <https://www.bto.org/volunteer-surveys/bbs/taking-part/download-forms-instructions>

A photographic record was made of a number of the WDW randomly selected transect sections.

2.4 Data collation – established BBS squares

As in 2023, the [BTO were contacted to obtain data](#) from any BBS squares falling within or near to the catchment that could be combined with the WDW survey data. Unfortunately, this data is not available until February 2025 at the earliest, so is not included in the report

3.0 Results

The 10 random squares were surveyed by the Tom Brereton who also surveyed two free choice squares on a voluntary basis. Bridport Bird Club recorders were invited to take part, though in the event none took part.

Table 1: Description of sampled squares

Square type	1 -km square	Location	Type	Catchment
WDW random	ST4400	Brimley Farm, Stoke Abbot	Non-riverine	Within
WDW random	ST4700	Parnham House	Riverine	Within
WDW random	ST4902	White Sheet Hill, Beaminster	Non-riverine	Within
WDW random	SY4394	Symondsburry	Non-riverine	Within
WDW random	SY4498	South Bowood	Non-riverine	Within
WDW random	SY4894	Bradpole	Riverine	Within
WDW random	SY5096	West Milton	Riverine	Within
WDW random	SY5199	Coltleigh, Mapperton	Riverine	Within
WDW random	SY5298	North Poorton/Hooke	Non-riverine	Within
WDW random	SY5493	Haydon Down	Non-riverine	Within
Free choice	SY5194	Mappercombe	Non-riverine	Within
Free choice	SY4798	Slape & Melpash	Riverine	Within

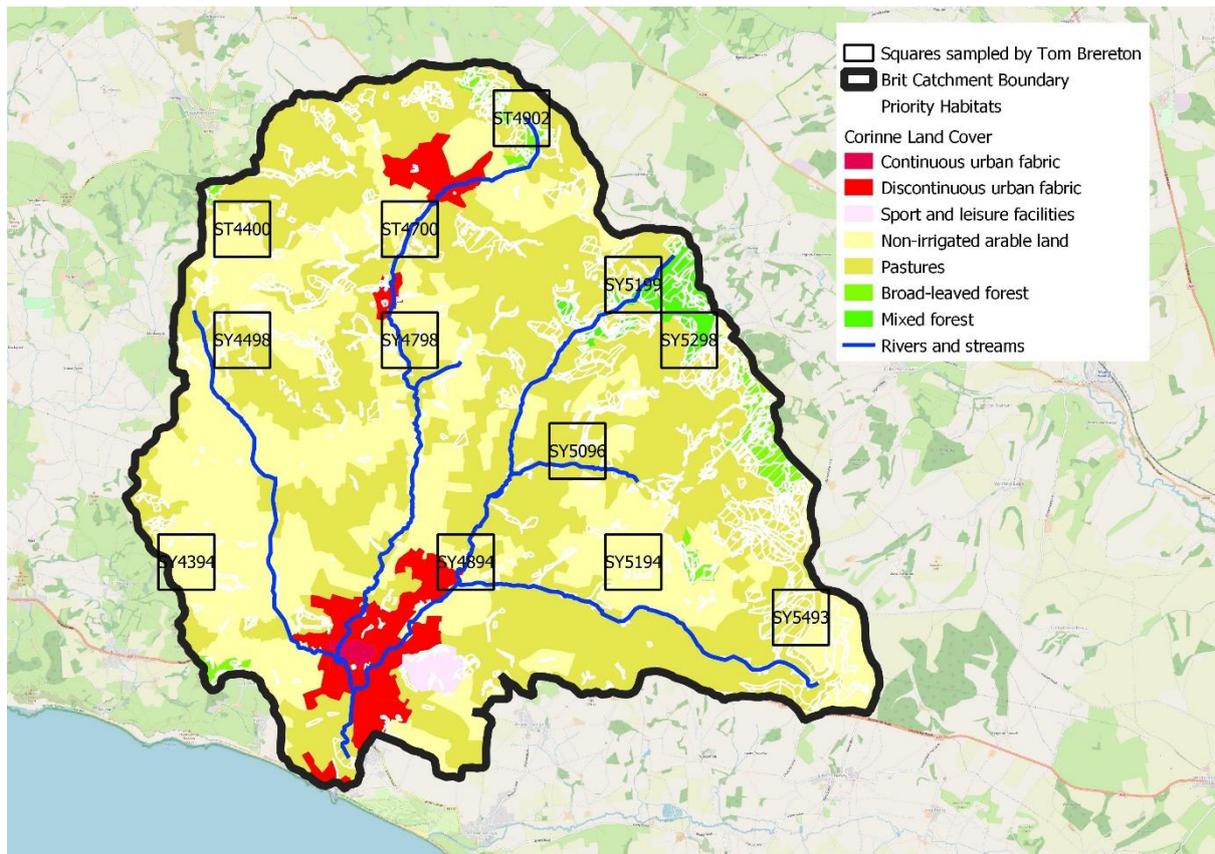


Figure 1: Location of surveyed squares by Tom Brereton in 2024 (data awaited BTO)

Species present and counts for each square are given in Table 2. There were 4845 birds counted across 26 visits to 12 squares, with 68 species recorded generating 3346 bird records. This compares with 3790 birds of 70 species from the same squares in 2023. Based on our extensive local knowledge of species distributions, all of the species recorded in 2024 are known or may possibly be breeding within the catchment.

Four new species were seen in 2024, these were Little Egret, Lesser Black-backed Gull (which breeds in Bridport), Peregrine (which bred at West Bay in 2024) and Tree Pipit.

Breeding species included 14 Red Listed (highest conservation concern¹) and 17 Amber List (medium priority¹) species, respectively representing 23% and 20% of the UK total for each list. Nationally scarce Firecrest was also detected. Important breeding species present in steep national/regional decline included: Corn Bunting and Yellowhammer (both farmland specialists), Marsh Tit, Spotted Flycatcher, Tree Pipit and Willow Warbler, (woodland/woodland edge). Dipper, which is at its eastern range margin in southern England, was another noteworthy find. Raven, which has less than 8000 pairs breeding in the UK, was found in over half of the squares, qualifying the area as a stronghold.

A total of 19 species were recorded in every square (Table 3) compared with three in 2024. The most abundant species were **generalists** including high densities of Wren (an Amber Listed), Robin, Chiffchaff and Blackbird; and **flocking species** such as Woodpigeon, Rook (an Amber Listed species),

¹ Red list: Have declined by more than 50% in the last 25 years, or longer. Are globally threatened or are not recovering from historical decline. Have had their breeding range in the UK reduced drastically by at least 50% in the last 25 years or longer. Species of birds on the amber list: Have moderately declined by 25 – 50% in the last 25 years or longer. Are recovering / recovered from historical decline. Are a rare breeder in the UK or of either European or International importance.

Jackdaw and Herring Gull (a widespread Red Listed foraging species on farmland, with nearly 300 pairs breeding in the Bridport area, [Brereton et al. 2021](#)) (Table 3).

Table 3: The most widely seen and abundant species. Red shading = Red Listed, Orange = Amber Listed.

Species	% squares recorded in	Species	Total no. counted
Blackbird	100	Wren	420
Blackcap	100	Woodpigeon	393
Blue Tit	100	Robin	322
Bullfinch	100	Rook	294
Buzzard	100	Chiffchaff	269
Carrion Crow	100	Jackdaw	256
Chaffinch	100	Blackbird	249
Chiffchaff	100	Carrion Crow	242
Coal Tit	100	Herring Gull	221
Dunnock	100	Blackcap	162
Goldfinch	100	Linnet	158
Great Tit	100	Blue Tit	139
Jackdaw	100	Chaffinch	139
Pheasant	100	Dunnock	121
Robin	100	Great Tit	108
Song Thrush	100	Pheasant	100
Stock Dove	100	Goldfinch	97
Woodpigeon	100	Song Thrush	97
Wren	100	Skylark	85
		Yellowhammer	81



Positive conservation interventions at Haydon Down, Mapperton, Melplash Court, Mappercombe, and South Bowood Yellowhammer are likely helping Yellowhammer recovery in the catchment *Tom Brereton*

Table 2: Species total for each square. Red shading = Red Listed, Orange = Amber Listed. Blue shaded = Passage/foraging visitor.

	ST4400	ST4700	ST4902	SY4394	SY4498	SY4798	SY4894	SY5096	SY5194	SY5199	SY5298	SY5493		
Species	Brimley Farm, Stoke Abbot	Parnham House	White Sheet Hill, Beaminster	Symondsburry	South Bowood	Slope & Melplash	Bradpole	West Milton	Mappercombe	Colleigh, Mapperton	North Poorton/Hooke	Haydon Down	% squares recorded in	Total no. counted
Blackbird	14	15	26	23	30	22	15	27	17	36	16	8	100	249
Blackcap	13	6	23	15	14	17	10	13	10	19	14	8	100	162
Blue Tit	14	8	11	11	16	13	12	17	7	16	11	3	100	139
Bullfinch	5	1	4	1	1	1	3	3	4	9	3	1	100	36
Buzzard	4	1	2	4	4	1	4	1	2	3	3	2	100	31
Carrion Crow	23	32	15	11	26	23	23	21	34	7	8	19	100	242
Chaffinch	8	9	5	15	11	8	11	26	10	8	12	16	100	139
Chiffchaff	18	10	26	28	27	18	15	33	25	29	33	7	100	269
Coal Tit	2	3	4	4	5	3	2	4	4	11	9	1	100	52
Collared Dove	1	2		3	7								33	13
Corn Bunting												19	8	19
Dipper		1					1						17	2
Duncock	4	6	11	13	10	13	9	12	16	8	9	10	100	121
Feral Pigeon				2									8	2
Firecrest				3				1	1	1			33	6
Goldcrest	1	2	5	4	5	9	2	7		6	7		83	48
Goldfinch	9	10	11	7	8	11	4	17	5	5	4	6	100	97
Great Spotted Woodpecker	4	1	4	3	4	7		7		5	5		75	40
Great Tit	7	5	11	6	13	13	8	14	5	6	16	4	100	108
Green Woodpecker				1		1	1	2			1	1	50	7
Greenfinch	2	4		1	3	2	1	5					58	18
Grey Heron									1		1		17	2
Grey Wagtail		3					1	1		2			33	7
Herring Gull	134		3	3	15	8	13	4	24		6	11	83	221
House Martin	21						8	9	13		1		42	52
House Sparrow	19	9	1	3	38	2	4	5					67	81
Jackdaw	35	40	39	1	31	30	8	36	16	8	4	8	100	256
Jay				1	1	2		1		2			42	7
Kestrel					1				1				17	2
Lesser Black-backed Gull	2												8	2
Lesser Whitethroat						1							8	1
Linnet	9		1	2	3	88	1	23	5	3	15	8	92	158
Little Egret							1						8	1
Long-tailed Tit	3	4	3	1		2	2	3	4	6	2	2	92	32
Magpie		1	2	2		1	12	1	5	1	3	6	83	34
Mallard		1					4		5				25	10
Marsh Tit	1		2		1	1		2		2	3		58	12
Meadow Pipit	1												8	1
Mistle Thrush	2			1	1	2	2	1		2	2		67	13
Moorhen	1					1			1	1			33	4
Nuthatch		3	3	3	3	1	1	3		7	5		75	29
Peregrine									1				8	1
Pheasant	10	8	6	17	16	13	3	12	3	5	4	3	100	100
Pied Wagtail		3	1		3	1	2	4				1	58	15
Raven				3	1	1	1	4	3			5	58	18
Red Kite	1										1		17	2
Red-legged Partridge						1			5		1	20	33	27
Robin	24	26	36	24	35	26	26	37	19	25	28	16	100	322
Rook	79	15	7		35	18	68	64	8				67	294
Siskin				5		2			1	3	13		42	24
Skylark	3		3	6	1	8	2		18	4	11	29	83	85
Song Thrush	11	10	11	5	12	10	3	8	5	9	10	3	100	97
Sparrowhawk									1				8	1
Spotted Flycatcher	1				2		1	2	1	1	1		58	9
Starling					1		10						17	11
Stock Dove	4	2	2	10	5	12	4	4	6	1	2	7	100	59
Stonechat	1					1	1			3	2	1	50	9
Swallow	6	6	2	5	6	1	12	14	5	1	1		92	59
Swift				1			1	1	1				33	4
Tawny Owl				1								2	17	3
Tree Pipit								1					8	1
Treecreeper	1	3	1		1	1		3		3			58	13
Tufted Duck									5				8	5
Whitethroat	1			7	2	4	4	3	13	4	11	2	83	51
Willow Warbler				1				2		2	11		33	16
Woodpigeon	23	56	25	17	60	44	36	35	20	24	19	34	100	393
Wren	40	29	41	28	31	40	45	42	25	45	39	15	100	420
Yellowhammer			1	22	1		3	10	8	5	8	23	75	81
No. species recorded	41	34	34	43	41	44	45	46	42	40	41	33		68
No. counted	562	335	348	324	490	484	400	545	363	338	355	301		4845

The most species-rich squares were at Bradpole and Slape Manor/Melplash, with both squares having good habitat diversity including riverine. Wetland birds were thin on the ground, though wetland habitat at West Bay was not sampled this year. The pond at Mappercombe held Mute Swan and Tufted Duck, whilst Mallard and Moorhen were seen at a scattering of ponds and rivers.

Year to year changes

The average number of birds counted per repeat sampled square increased by 28% from 2023 levels whilst on average there were 10% more species in each square. In total 11 of 12 squares showed an increase in total birds counted and 9 of 12 squares recorded more species. The largest increase was noted at Brimley Farm, Stoke Abbot where there were twice as many birds seen in 2024.

The average number of birds seen per square across all squares (including those not counted in both years) increased by 25% between 2023 and 2024.

Table 4: year to year changes for each sampled square. Green shading denotes an increase on the previous year, amber no change and red a decrease.

	2023	2024	2023	2024
Squares	No. species		No. counted	
Brimley Farm, Stoke Abbot	36	41	248	562
Parnham House	36	34	561	335
White Sheet Hill, Beaminster	33	34	299	348
Symonds bury	33	43	233	324
South Bowood	41	41	372	490
Slape & Melplash	44	44	356	484
Bradpole	34	45	241	400
West Milton	45	46	537	545
Mappercombe	37	42	206	363
Coltleigh, Mapperton	37	40	290	338
North Poorton/Hooke	36	41	263	355
Haydon Down	30	33	184	301

A number of Red-Listed birds showed substantial increases in abundance (by more than 50%, Table 5) including Yellowhammer, Spotted Flycatcher, Corn Bunting, Marsh Tit and Linnet. In particular, it was a good year for Yellowhammer, which increased by 224% and Spotted Flycatcher, which was found in five more squares than the previous year (Table 6). The rare Firecrest also showed a positive change in occupancy, being found at an additional three sites in 2024.

Of the Amber-Listed species the Willow Warbler, which has declined rapidly in recent years in south west England showed a modest but welcome increase, whilst Dipper was found at two sites in 2024. Twice as many Bullfinch were counted in 2024 than in 2023.

Table 5 Substantial increases in species abundance (>50%) from 2023 to 2024

	2023	2024	
Species	No counted		% change
Red-legged Partridge	2	27	1250
Grey Wagtail	1	7	600
Firecrest	1	6	500
Spotted Flycatcher	2	9	350
Yellowhammer	25	81	224
Tawny Owl	1	3	200
Starling	4	11	175
Stonechat	4	9	125
Corn Bunting	9	19	111
Bullfinch	18	36	100
Dipper	1	2	100
Grey Heron	1	2	100
Kestrel	1	2	100
Magpie	17	34	100
Mallard	5	10	100
Marsh Tit	7	12	71
Siskin	14	24	71
Carrion Crow	145	242	67
Tufted Duck	3	5	67
Linnet	95	158	66
Pheasant	61	100	64
Willow Warbler	10	16	60
Duncock	76	121	59
Pied Wagtail	10	15	50

Table 6 Substantial increases in and occupancy (>25%) from 2023 to 2024

	2023	2024	
Species	No sites		% change
Grey Wagtail	1	4	300
Firecrest	1	4	300
Spotted Flycatcher	2	7	250
Mallard	1	3	200
Tawny Owl	1	2	100
Dipper	1	2	100
Kestrel	1	2	100
Willow Warbler	2	4	100
Moorhen	2	4	100
Red-legged Partridge	2	4	100
Stonechat	3	6	100
Grey Heron	1	2	100
Bullfinch	8	12	50
Marsh Tit	5	7	40
Pied Wagtail	5	7	40
Long-tailed Tit	8	11	38
Buzzard	9	12	33
Yellowhammer	7	9	29
Skylark	8	10	25
Magpie	8	10	25
Siskin	4	5	25

4.0 Discussion

How good a year was 2024?

Data from the repeat monitored squares, suggest that bird abundance and diversity increased across the catchment from 2023 levels, with the majority of squares showing increases in bird abundance and species-richness. This does seem a genuine increase though the magnitude of change may have been may have been influenced by recorder effects (i.e. changes to the recorder at some squares).

Some of the change was likely attributable to a late start to the breeding season, with more flocks of birds seen than on the first visit in 2024 than in 2023. However, at some locations e.g.at Mapperton, Mappercombe and Symondsbury increases in Red Listed Species such as Yellowhammer and Linnet were likely caused by population growth and habitat improvements on farmland.

Birds in the Brit Catchment

A good variety of species were recorded in most squares (mean 40 species per square), reflecting the prevalence of mixed farming, copses, thick hedgerows and good quality town and village gardens.

Likely breeding species recorded in 2023 within the catchment, but not seen on survey squares included Barn Owl, Cetti's Warbler, Garden Warbler, Goshawk, Kingfisher, Little Grebe and Reed Bunting (West Bay), whilst a Nightingale was present at Mappercombe for over a week.

However, the complete absence of once common species from squares and the wider catchment such as Cuckoo, Lapwing, Grey Partridge, Lesser Spotted Woodpecker, Turtle Dove and Tree Sparrow highlights the scale of the challenge for nature recovery in the future.

Coverage

Coverage of free choice squares dropped by two squares and no additional volunteers took part in the survey. Though this was partly due to an unfortunate series of changes in personal circumstance, the delay in the start of the project was also a factor.

A short lead in time for recruitment likely hampered volunteer involvement for some established volunteers and affected recruitment of new volunteers. It is recommended that the process of volunteer recruitment and any training needed starts by February 2025.

Future analyses

Unlike for 2023 reporting, BTO data for 2024 were not available for inclusion in the report and are not available until at least April 2025. Discussion is needed on how and when it is best to include BTO data, for enhanced reporting in 2025.

5. References

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6.0 Acknowledgements

We would like to thank all the landowners who kindly allow access to walk transects on their land.



Peregrine Falcon *Tom Brereton*