TVERC

Biodiversity Annual Monitoring Report 2022

Vale of White Horse Council

Highlights

- There are 78 Local Wildlife Sites in Vale of White Horse totalling 1790.18 hectares. The area of these LWS has increased by 72.08ha since 2021. The area of Local Geological Sites has increased by 0.03ha.
- There are 2964.10ha of NERC S41 habitats in Vale of White Horse. This has increased by 29.16ha since 2021.
- There were 68 surveys for water voles in 2021, with 28 positive sightings. This is a success rate of 41% .
- There have been records of 154 priority species in Vale of White Horse within the last 10 years. We have not received from four priority species in the last 10 years.
- The farmland bird index for Vale of White Horse is 0.97 which shows the index fell by 0.17 from 2020.

Introduction

This document provides biodiversity information to be used by Vale of White Horse Council in the production of its Annual Monitoring Report. The biodiversity information in this report is based on figures from the 2021-2022 business year unless otherwise indicated. The approach of this report is to set Vale of White Horse data in a unitary context, with further national or regional perspectives where appropriate. The biodiversity information associated with each indicator is accompanied by a brief commentary, containing guidance on the interpretation of the information, issues of data quality and the sources of the data.

Whilst a large proportion of the information contained within the report is derived from TVERC sources, the report acknowledges the assistance provided by various individuals and recording groups in the updating and interpretation of the biodiversity information.

The information provided in this report is as follows:

- Changes in the area of biodiversity importance (LWS/LGS)
- Changes in the area of UK S41 priority habitats
- Changes in the number of water voles
- Changes in the number of UK S41 priority species
- Distribution and status of farmland birds

ABOUT THIS INDICATOR

This indicator analyses the changes in the areas of sites which are recognised for their intrinsic environmental value, specifically those sites designated for their local significance.

The calculation of the percentage of designated sites within Vale of White Horse are based on GIS determination of the area that the Local Authority cover. For Vale of White Horse this is 57857.64.

INFORMATION SOURCES

Local Wildlife Sites

TVERC maintains the Local Wildlife Site boundaries on GIS. Alterations are made to these boundaries as decisions are made by the site selection panel during the course of the year, or boundary errors are corrected. Figures for changes in area are derived from an analysis of digitised site boundary files following the site selection panel meeting of the year of analysis. Some sites are made up of multiple polygons which have previously been counted as separate sites. Counts in this report are based on the number of sites, rather than polygons, thus counts may differ from previous reports aside from any changes arising from panel decisions. Multiple polygons still contribute to the total area calculations.

Local Geological Sites

Formerly known as Regionally Important Geological and Geomorphological Sites. Site information was digitised in GIS using site documentation provided by Berkshire Geoconservation and the Oxford Geology Trust.

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Changes in areas of biodiversity importance

AREAS OF BIODIVERSITY IMPORTANCE

There are 78 Local Wildlife Sites in Vale of White Horse.

The area of Local Wildlife Sites has changed by 72.08 hectares since last year.

The area of Local Geological sites has increased by 0.03ha.

Table 1. Areas of Sites Designated for Intrinsic Environmental Value

Designation	2021	2022
Local Geological Site	69.22	69.25
Local Wildlife Site	1718.10	1790.18

ABOUT THIS INDICATOR

This indicator identifies the UK NERC Act section 41 habitats of principal importance (priority habitats) within Vale of White Horse, as maintained on the TVERC digital mapping system.

Table 2 provides details of the UK priority habitats which have been identified within Vale of White Horse. The changes in the UK priority habitats are mostly attributable to new information such as confirmation of boundaries of habitat types.

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Changes in area of UK priority habitat

UK PRIORITY HABITAT

The changes largely represent an improved understanding of the habitat resource in Vale of White Horse, rather than the creation or loss of habitat.

Table 2. UK Priority Habitat Resource

S41 HABITAT	2021 (area in ha)	2022 (area in ha)
Arable Field Margins	0.04	0.04
Coastal And Floodplain Grazing Marsh	700.44	713.22
Eutrophic Standing Waters	242.67	240.77
Lowland Beech And Yew Woodland	5.23	2.95
Lowland Calcareous Grassland	208.16	209.30
Lowland Dry Acid Grassland	22.19	22.19
Lowland Fens	38.20	37.43
Lowland Meadows	96.45	105.51
Lowland Mixed Deciduous Woodland	985.26	998.83
Lowland Wood Pasture And Parkland	348.71	348.71
Open Mosaic Habitats On Previously Developed Land	112.94	112.94
Possible Priority Grassland Habitat	12.67	12.67
Reedbeds	9.22	9.21
Rivers	4.73	4.73
Traditional Orchards	98.79	98.79
Wet Woodland	49.23	46.80
Total	**2934.94**	**2964.10**

ABOUT THIS INDICATOR

Information for this indicator is entirely from survey work carried out by trained volunteer surveyors and co ordinated by the Berkshire, Buckinghamshire and Oxfordshire Wildlife Trust (BBOWT) as part of a wider water vole project. The survey method records presence or absence of water voles within 500m stretch of water course, not population size.

FUTURE DATA NEEDS

The BBOWT water vole project remains dependent on funds being available for long term monitoring of sites and more resource investment is needed to increase survey effort to improve accuracy of this indicator

Distribution and status of water voles

The number of sites surveyed and the number of positive signs are given in table 3.

Abingdon Local Key Area is the second largest Local Key Area in Berkshire, Buckinghamshire and Oxfordshire. There were 28 positive surveys, with an apparent increase in activity on sections of Frogmore Brook, and Letcombe Brook. Although there were no signs of water voles along Ginge Brook, sightings have been reported in Steventon indicating water voles may be present at low levels.

Year	No of surveys	Positive Surveys	% positive
2013	51	19	37
2014	209	140	67
2015	52	13	25
2016	77	37	48
2017	77	35	45
2018	48	6	13
2019	77	50	65
2020	59	40	68
2021	68	28	41

Table 3. Number of positive sightings of water voles

ABOUT THIS INDICATOR

This indicator uses records of UK NERC Act Section 41 species of principle importance (priority species) which have been reported in Vale of White Horse Council during the period year to year.

QUALITY OF INFORMATION

The list of priority species is a reflection of recording effort and the speed at which records are added to the TVERC database. A priority species may have been seen a number of years ago, but these records might only have been shared with TVERC and added to the database since the production of the last report.

The absence of a species from the list does not necessarily indicate that it is definitely not present, rather that it may not yet have been found. Equally, the absence of a species since last year might not point to a genuine extinction, rather no recorders are surveying for these species.

INFORMATION SOURCES

The sources of information used for this indicator are: National list of UK priority species, maintained by the JNCC and Species database of verified and validated records held by TVERC.

Changes in number of UK priority species

NUMBER OF UK PRIORITY SPECIES

The number of priority species in Vale of White Horse Council is 160. Three species have been removed from the list, as no new records have been made within the last ten years. A list of these species can be found in Appendix 1. Table 4 shows the change in the number of UK priority species recorded since last year. A list of priority species recording in Vale of White Horse can be found in Appendix 2.

Table 4. UK Priority species recorded in Vale of White Horse Council

Data	2011-2021	2012-2022
Number of UK Priority species	156	154

Distribution and status of farmland birds

Farmland bird density and the index are given in Table 5. There was a change in the index compared with 2020. Survey effort was changed compared to last year. Total numbers of farmland birds are reported in **Appendix 3.**

The data provided this year includes new data for previous years, based on new survey information. Therefore, the index values reported this year are slightly different to those reported last year.

Table 5. Farmland bird index

COMMON NAME	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Corn Bunting	0.72	1.12	1.00	1.73	1.67	2.00	4.47	3.53	6.00	2.75	3.83
Goldfinch	7.39	10.12	5.00	8.53	9.27	11.28	8.42	9.58	14.22	6.69	8.83
Greenfinch	6.22	5.41	5.11	3.87	3.87	3.22	1.26	1.68	1.78	0.75	1.00
Grey Partridge	0.56	0.71	0.56	0.80	0.93	0.56	0.47	0.74	0.22	0.25	1.00
Jackdaw	31.39	32.59	33.39	22.07	34.20	23.00	23.37	20.63	26.56	22.69	35.00
Kestrel	0.67	0.59	0.33	0.73	0.93	0.78	0.79	0.68	0.50	0.50	0.33
Lapwing	7.78	1.18	2.44	1.73	1.60	0.78	2.74	0.42	1.11	0.12	1.56
Linnet	7.33	3.53	1.89	4.47	13.80	9.33	6.95	10.63	5.56	3.06	4.06
Reed Bunting	0.67	0.59	0.78	0.80	0.67	1.33	0.95	0.74	0.78	0.50	0.78
Rook	61.78	62.47	65.39	89.07	81.53	48.28	45.53	62.68	63.56	54.38	57.28
Skylark	10.72	10.94	7.78	11.60	10.07	9.72	10.26	11.42	14.33	11.75	13.61
Starling	15.44	14.12	23.56	6.93	5.33	8.61	5.68	5.47	19.00	4.00	12.94
Stock Dove	2.44	1.29	1.44	2.27	2.80	2.44	2.53	3.16	3.83	6.62	3.33
Tree Sparrow	2.00	0.82	0.67	0.27	0.27	0.00	0.00	0.00	0.00	0.00	0.00
Turtle Dove	0.00	0.00	0.00	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Whitethroat	7.44	4.24	5.94	7.87	4.13	5.06	4.68	5.37	7.39	6.12	6.67
Woodpigeon	75.28	76.18	78.89	58.47	56.93	65.89	68.63	76.47	73.83	48.75	77.44
Yellow Wagtail	0.22	0.00	0.11	0.40	0.00	0.33	0.11	0.26	0.22	0.00	0.22
Yellowhammer	7.11	5.71	6.00	6.07	4.00	3.83	6.63	5.74	5.50	2.75	9.11
Index	1.00	0.95	0.98	0.93	0.95	0.80	0.79	0.89	1.00	0.70	0.97
Total	246.16	232.56	241.26	228.74	232.95	197.24	194.26	220.09	245.39	172.38	237.96

ABOUT THIS INDICATOR

This indicator uses an established list of 19 species, identifiable as farmland birds, compiled by the RSPB. The Tree Sparrow has been excluded from this in Berkshire and Oxfordshire due to a lack of data.

Survey data were obtained from the British Trust for Ornithology (BTO)/ JNCC/RSPB Breeding Bird Survey, Data from specific 1km by 1km squares were used to determine a farmland bird index. The index was calculated using a method established by RSPB Central England Office staff, and is used in the national State of Nature Report.

To establish a timeframe from which any kind of meaningful trend can be identified, a shifting baseline has been used. Changes in bird population in subsequent years (over a 10 year period) are the stated relative to that baseline. The latest assessment of the farmland bird index uses a baseline of 2011.

QUALITY OF DATA

The reliability of the species records is dependent on the number of 1km squares surveyed each year. This varies from year to year. As such, the reliability of bird density data is open to debate, but the approach has been used in the national State of Nature report and therefore is considered robust.

Appendix 1

Priority species removed from the list—no new records since 2011. This does not mean that they are not present, only that no records have been added to the TVERC database since 2011.

Common Name	Taxon Name	Max Year
Crescent	*Helotropha leucostigma*	2011
Depressed River Mussel	*Pseudanodonta complanata*	2011
White-clawed Crayfish	*Austropotamobius pallipes*	2011

Appendix 2

List of priority species recorded in Vale of White Horse Council since 2012.

Common Name	Taxon Name	MYearax
A Beetle	*Ophonus puncticollis*	2014
A Lichen	*Lecanora sublivescens*	2013
Armed Nomad Bee	*Nomada armata*	2018
Ashen Coral	*Tremellodendropsis tuberosa*	2012
August Thorn	*Ennomos quercinaria*	2019
Autumnal Rustic	*Eugnorisma glareosa*	2014
Basil Thyme	*Clinopodium acinos*	2021
Beaded Chestnut	*Agrochola lychnidis*	2019
Bittern	*Botaurus stellaris*	2019
Black-headed Mason Wasp	*Odynerus melanocephalus*	2018
Black-tailed Godwit	*Limosa limosa*	2019
Black Oil-beetle	*Meloe proscarabaeus*	2021
Blood-vein	*Timandra comae*	2019
Brent Goose	*Branta bernicla*	2013
Brindled Beauty	*Lycia hirtaria*	2019

Appendix 2(continued)

Common Name	Taxon Name	Max Year
Brown-Banded Carder Bee	*Bombus humilis*	2018
Brown-spot Pinion	*Anchoscelis litura*	2019
Brown Hairstreak	*Thecla betulae*	2020
Brown Hare	*Lepus europaeus*	2021
Brown Long-eared Bat	*Plecotus auritus*	2021
Brown Trout	*Salmo trutta subsp. fario*	2015
Buff Ermine	*Spilosoma lutea*	2020
Bullfinch	*Pyrrhula pyrrhula*	2020
Centre-barred Sallow	*Atethmia centrago*	2019
Chalk Carpet	*Scotopteryx bipunctaria*	2019
Chamomile	*Chamaemelum nobile*	2012
Cinnabar	*Tyria jacobaeae*	2021
Common Lizard	*Zootoca vivipara*	2021
Common Scoter	*Melanitta nigra*	2020
Common Toad	*Bufo bufo*	2021
Corn Bunting	*Emberiza calandra*	2020
Cornflower	*Centaurea cyanus*	2020
Cuckoo	*Cuculus canorus*	2020
Curlew	*Numenius arquata*	2020
Dark Crimson Un-	*Catocala sponsa*	2019
Dark Spinach	*Pelurga comitata*	2015
Deep-brown Dart	*Aporophyla lutu-*	2019
Dingy Skipper	*Erynnis tages tages*	2020
Dot Moth	*Melanchra persi-*	2018
Double Dart	*Graphiphora augur*	2017
Duke of Burgundy	*Hamearis lucina*	2020
Dunnock	*Prunella modularis*	2022
Dusky-lemon Sal-	*Cirrhia gilvago*	2018
Dusky Brocade	*Apamea remissa*	2018
Dusky Thorn	*Ennomos fuscantaria*	2020

Common Name	Taxon Name	Max Year
Ear Moth	*Amphipoea oculea*	2015
Eurasian Otter	*Lutra lutra*	2021
European Eel	*Anguilla anguilla*	2015
European Water Vole	*Arvicola amphibius*	2022
Feathered Gothic	*Tholera decimalis*	2019
Fen Violet	*Viola persicifolia*	2015
Figure of Eight	*Diloba caeruleocephala*	2016
Fine-lined Pea	*Odhneripisidium*	2017
Five-banded	*Cerceris quinque-*	2020
Flat-sedge	*Blysmus compressus*	2021
Garden Dart	*Euxoa nigricans*	2018
Garden Tiger	*Arctia caja*	2020
Ghost Moth	*Hepialus humuli*	2019
Grape-hyacinth	*Muscari neglectum*	2014
Grass Rivulet	*Perizoma albulata albulata*	2014
Grass Snake	*Natrix helvetica*	2021
Grasshopper Warbler	*Locustella naevia*	2020
Great Crested Newt	*Triturus cristatus*	2022
Greater Waterparsnip	*Sium latifolium*	2020
Green-brindled Crescent	*Allophyes oxyacanthae*	2019
Grey Dagger	*Acronicta psi*	2018
Grey Partridge	*Perdix perdix*	2019
Grizzled Skipper	*Pyrgus malvae*	2020
Harvest Mouse	*Micromys minutus*	2019
Hawfinch	*Coccothraustes*	2018
Hen Harrier	*Circus cyaneus*	2017
Herring Gull	*Larus argentatus*	2020
Hornet Robberfly	*Asilus crabroniformis*	2020
House Sparrow	*Passer domesticus*	2022
Juniper	*Juniperus communis*	2012
Knot Grass	*Acronicta rumicis*	2020

Appendix 2(continued)

Common Name	Taxon Name	Max Year
Lackey	*Malacosoma neustria*	2018
Lapwing	*Vanellus vanellus*	2020
Large Garden Bumblebee	*Bombus ruderatus*	2018
Large Nutmeg	*Apamea anceps*	2020
Large Wainscot	*Rhizedra lutosa*	2019
Latticed Heath	*Chiasmia clathrata*	2019
Lesser Butterfly-orchid	*Platanthera bifolia*	2014
Lesser Horseshoe Bat	*Rhinolophus hipposideros*	2021
Lesser Redpoll	*Acanthis cabaret*	2020
Lesser Spotted	*Dryobates minor*	2015
Linnet	*Linaria cannabina*	2020
Liquorice Piercer	*Grapholita pallifrontana*	2019
Marsh Fritillary	*Euphydryas aurinia*	2020
Marsh Tit	*Poecile palustris*	2020
Minor Shoulder-knot	*Brachylomia viminalis*	2016
Mottled Rustic	*Caradrina morpheus*	2019
Mouse Moth	*Amphipyra*	2020
Mullein Wave	*Scopula marginepunctata*	2016
Natterjack Toad	*Epidalea calamita*	2021
Noctule Bat	*Nyctalus noctula*	2021
Oak Hook-tip	*Watsonalla binaria*	2019
Oak Lutestring	*Cymatophorina*	2019
Pale Eggar	*Trichiura crataegi*	2019
Picture-winged Fly	*Dorycera grami-*	2017
Polecat	*Mustela putorius*	2020
Pondweed Leaf-	*Erotettix cyane*	2014
Powdered Quaker	*Orthosia gracilis*	2019
Pretty Chalk Carpet	*Melanthia procel-*	2015
Red-shanked Carder Bee	*Bombus ruderarius*	2018
Red Hemp-nettle	*Galeopsis angustifolia*	2015
Reed Bunting	*Emberiza schoeniclus*	2020
Ring Ouzel	*Turdus torquatus*	2017
Rosy Minor	*Litoligia literosa*	2017
Rosy Rustic	*Hydraecia micacea*	2020
Rugged Oil-beetle	*Meloe rugosus*	2013
Rustic	*Hoplodrina blanda*	2020
Sallow	*Cirrhia icteritia*	2019
Scaup	*Aythya marila*	2019
Sedge Jumper	*Attulus caricis*	2016
September Thorn	*Ennomos erosaria*	2019
Shaded Broad-bar	*Scotopteryx chenopodiata*	2019
Shepherd's-needle	*Scandix pecten-veneris*	2014
Shoulder-striped Wainscot	*Leucania comma*	2020
Skylark	*Alauda arvensis*	2021
Slow-worm	*Anguis fragilis*	2021
Small Blue	*Cupido minimus*	2021
Small Emerald	*Hemistola chrysoprasaria*	2019
Small Heath	*Coenonympha*	2019
Small Heath	*Coenonympha pamphilus pamphilus*	2021
Small Phoenix	*Ecliptopera silaceata*	2019
Small Square-spot	*Diarsia rubi*	2019
Song Thrush	*Turdus philomelos*	2022
Soprano Pipistrelle	*Pipistrellus pygmaeus*	2021
Southern Damselfly	*Coenagrion mercuriale*	2021
Spinach	*Eulithis mellinata*	2014
Spotted Flycatcher	*Muscicapa striata*	2017
Sprawler	*Asteroscopus sphinx*	2016
Stag Beetle	*Lucanus cervus*	2020
Starling	*Sturnus vulgaris*	2020
Stone-curlew	*Burhinus oedicnemus*	2020
Tree Pipit	*Anthus trivialis*	2018
Tree Sparrow	*Passer montanus*	2014
True Fox-sedge	*Carex vulpina*	2018
Tubular Water-dropwort	*Oenanthe fistulosa*	2021

Appendix 2

Common Name	Taxon Name	MYearax
Turtle Dove	*Streptopelia turtur*	2017
West European Hedgehog	*Erinaceus europaeus*	2021
Western Barbastelle	*Barbastella barbastellus*	2021
White-letter Hairstreak	*Satyrium w-album*	2020
White Admiral	*Limenitis camilla*	2020
White Ermine	*Spilosoma lubricipeda*	2019
White Helleborine	*Cephalanthera damasonium*	2022
Willow Tit	*Poecile montanus*	2013
Wood Warbler	*Phylloscopus sibilatrix*	2013
Woodlark	*Lullula arborea*	2014
Yellow Bird's-nest	*Hypopitys monotropa*	2012
Yellow Wagtail	*Motacilla flava*	2020
Yellow Wagtail	*Motacilla flava flavissima*	2020
Yellowhammer	*Emberiza citrinella*	2020

Appendix 3

Breeding bird survey results from BTO (2011 to 2021). Total number of farmland birds recorded in Vale of White Horse from 2011 to 2021.

COMMON NAME	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Corn Bunting	13	19	18	26	25	36	85	67	108	44	69
Goldfinch	133	172	90	128	139	203	160	182	256	107	159
Greenfinch	112	92	92	58	58	58	24	32	32	12	18
Grey Partridge	10	12	10	12	14	10	9	14	4	4	18
Jackdaw	565	554	601	331	513	414	444	392	478	363	630
Kestrel	12	10	6	11	14	14	15	13	9	8	6
Lapwing	140	20	44	26	24	14	52	8	20	2	28
Linnet	132	60	34	67	207	168	132	202	100	49	73
Reed Bunting	12	10	14	12	10	24	18	14	14	8	14
Rook	1112	1062	1177	1336	1223	869	865	1191	1144	870	1031
Skylark	193	186	140	174	151	175	195	217	258	188	245
Starling	278	240	424	104	80	155	108	104	342	64	233
Stock Dove	44	22	26	34	42	44	48	60	69	106	60
Tree Sparrow	36	14	12	4	4	0	0	0	0	0	0
Turtle Dove	0	0	0	2	0	0	0	0	0	0	0
Whitethroat	134	72	107	118	62	91	89	102	133	98	120
Woodpigeon	1355	1295	1420	877	854	1186	1304	1453	1329	780	1394
Yellow Wagtail	4	0	2	6	0	6	2	5	4	0	4
Yellowhammer	128	97	108	91	60	69	126	109	99	44	164

Data provided by the BTO/JNCC/RSPB Breeding Bird Survey. The BTO/JNCC/RSPB Breeding Bird Survey is a partnership jointly funded by the British Trust for Ornithology (BTO), Royal Society for the Protection of Birds (RSPB) and the Joint Nature Conservation Committee (JNCC), with fieldwork conducted by volunteers.

About TVERC

Enabling data-driven decisions to better enhance and protect our natural environment.

Thames Valley Environmental Records Centre (TVERC) is a 'not for profit' organisation covering Berkshire and Oxfordshire. We are run by a partnership and are one of a national network of local records centres. We are a member of the Association of Local Records Centres (ALERC) and the National Biodiversity Network (NBN).
Our funding partners include all the local authorities in Oxfordshire & Berkshire plus the Environment Agency.
We also work closely with the Berkshire, Buckinghamshire and Oxfordshire Wildlife Trust.

WHAT WE DO

We provide our funding partners with annually updated species and sites information as GIS tables, and undertake surveys of local wildlife sites. We also carry out data analysis for the monitoring of local authority Local Plans. We provide information to parish councils, local people, conservation bodies, land-owners, students and commercial organisations such as ecological consultants and utilities companies via data searches, data licensing and data exchanges. We provide other services such as ecological surveys, data analysis & presentation and training.

Get involved!

Please continue (or begin) to submit your records to TVERC. The more data we have, the better we are able to help protect our local wildlife. Thank you!

https://www.tverc.org/cms/content/share-your-records

Our Records

We hold over 4.2 million records of flora and fauna in Berkshire and Oxfordshire plus information about Local Wildlife Sites and Geological Sites, NERC Act S41 Habitats of Principal Importance and Ecological Networks. We collect this data from the general public, skilled volunteer/amateur recorders, professionals working for wildlife charities and for government agencies and ecological consultants.

WHAT THE INFORMATION IS USED FOR

- By planning authorities and developers to make informed decision on the design and location of sustainable development
- To help farmers, land-owners and conservation organisations manage land in the best way to enhance biodiversity
- By nature partnerships to direct wildlife conservation work
- By teachers, students and scientists for education and scientific research.

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