

Big Washlands Watch



Transforming the Trent Valley's Big Washlands
Watch data analytics, 2019-2023

Keeley Beeston

Our Partner Organisations

Staffordshire
Ecological
Record



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INDUSTRIES



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Staffordshire
Borough Council



RSPB



trent
rivers
trust



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Community and Social Enterprise (VCSE) sector

Preface

The intention of this report is to outline the impact of Transforming the Trent Valley's Big Washlands Watch in the Trent Valley area. Statistical analysis was mostly undertaken on Microsoft Excel, with ecological data provided by iRecord and Staffordshire Ecological Records. BirdTrack and other similar recording apps were removed, in order to avoid duplicate submissions and qualitative data.

For all statistical analysis, the time periods were defined as:
01/04/2015 - 31/03/2019 - before Big Washlands Watch Project
01/04/2019-09/01/2023 - during Big Washlands Watch Project

Special thanks to Jane Arnold, Claire Cooper, Pam Beale and David Coles for contributing fantastic photos to this report.

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Introduction

Big Washlands Watch Project Aims

The Big Washlands Watch Project is a citizen science programme which encourages families, schools and local communities to engage with Trent Valley's biodiversity. Volunteers are introduced to the iRecord app and field guides are provided by Transforming the Trent Valley, created by the Field Studies Council Publications.

From 2019-2023, Transforming the Trent Valley volunteers and staff have collected over 5000 records of wildlife.



Fig 1. Painted Lady at Teasel Wolseley ©David Coles (2021)



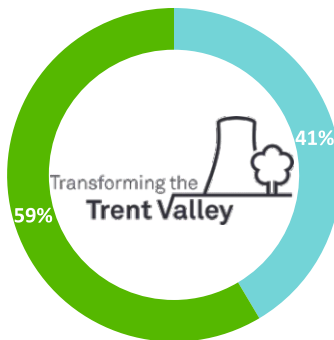
SCAN ME



How does Wildlife Recording work?

Citizen Science programmes rely on the public to collect records. In terms of the Big Washlands Project, participants can download the iRecord App on their phone, or access the browser version. To record a species, the participant needs to note who they are, what they saw, as well as where and when they saw it.

Percentage of ecological records collected by volunteers and non-volunteers, 2019-2023



■ Transforming the Trent Valley volunteers ■ Non-volunteers

Fig 2. Comparison of contributing recorders' affiliations on iRecord, 2019-2023



iRecord
Desktop
Version

Scheme Area

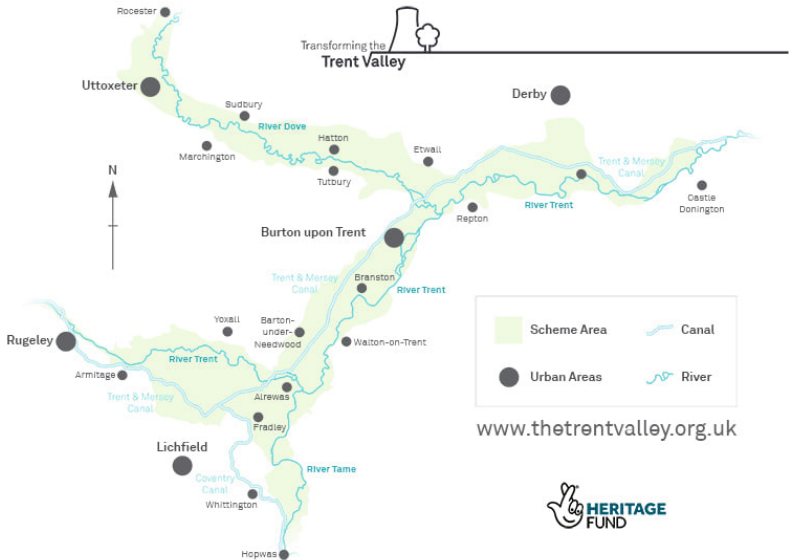


Fig 3. Scheme area map. Contains OS data © Crown Copyright 2020

Local Sites

- Branston Leas Nature Reserve
- Brook Hollows
- Croxall Lakes Nature Reserve
- Hilton Gravel Pits
- National Memorial Arboretum
- Newbold Quarry
- Princes Wood
- Scapcliffe Woods
- Sinfin Moor Park
- The Washlands
- The Wolseley Centre
- Tucklesholme Nature Reserve
- Willington Wetlands
- Woodhouse Farm and Garden



Fig 4. Cinnamon bug at The Wolseley Centre ©David Coles (2023)

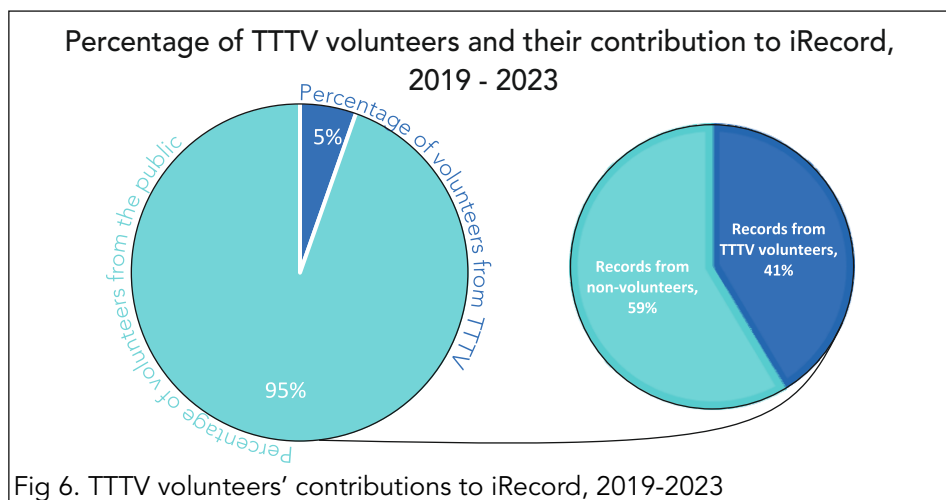


Fig 5. Swans at Croxall Lakes Nature Reserve ©Jane Arnold (2023)

Comparison of trends collated from iRecord, 2015 - 2019 and 2019 - 2023

Overview

Despite only representing around 5% of the surveyors contributing to Transforming the Trent Valley (TTTV) scheme area, TTTV volunteers provided 41% of iRecord's data in this area from 2019 to 2023 (fig 6). The change in Kingdoms, Groups and Species detailed on TTTV's identification guide from 2015 to 2023 is set out in this section of the guide.



Statistical Analysis

From 2015 to 2019, 2,604 records were uploaded to iRecord in the TTTV scheme area, whereas from 2019 to 2023, 12,305 records were uploaded.

This is an increase of more than 372%. This shows iRecord's increasing popularity. When looking at the size of Kingdoms, measured by the amount of individuals surveyed in each one (fig 7. for 2015-2019 and 2019-2023), it is obvious that Animalia has had the largest increase (295.8%).

Generally, every Kingdom has seen an increase in records.

NUMBER OF INDIVIDUALS SURVEYED IN EACH KINGDOM ON IRECORD

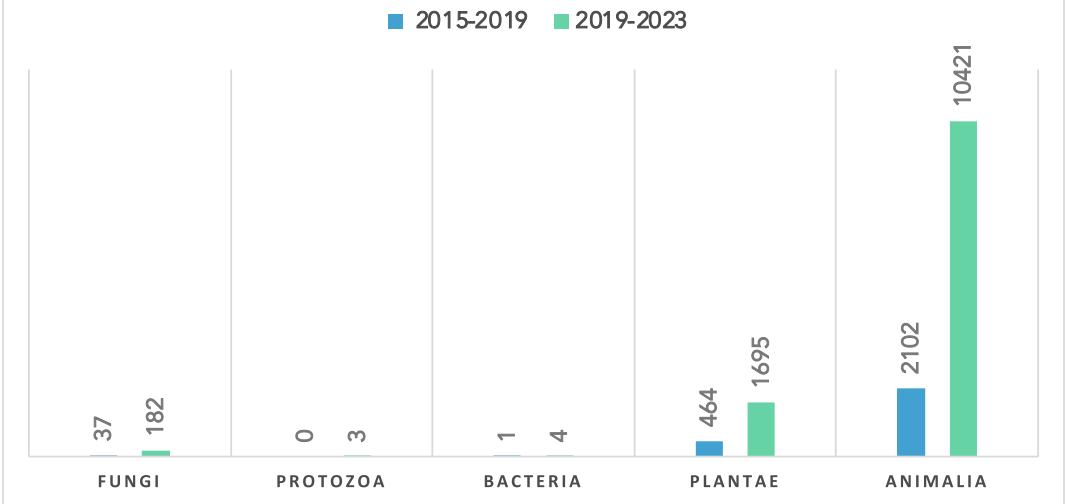


Fig 7. A graph depicting the breakdown of individuals recorded per Kingdom on iRecord, in the TTTV Scheme Area, 2015-2019 and 2019-2023.

Taxonomical Ranks

Organisms can be grouped and categorised by their features, genetics and compatibility. The taxonomical ranks are as follows:

Domain - 3, known as Bacteria, Archaea & Eukaryota

Kingdom - 5, Animalia, Plantae, Bacteria, Protozoa & Fungi

Phylum - around 54 phylum

Class - various

Order - various

Family - various

Genus - various

Species - various

In relation to The Big Washlands Watch, only two domains were sampled.

These were the Eukaryota and Bacteria domains. However, all five Kingdoms were sampled (fig 7.), as well as a large variety of groups and species.

Comparison of trends collated from iRecord, 2015 - 2019 and 2019 - 2023

The Overall Picture

The size of each group surveyed in the TTTV Scheme Area, 2015-2019

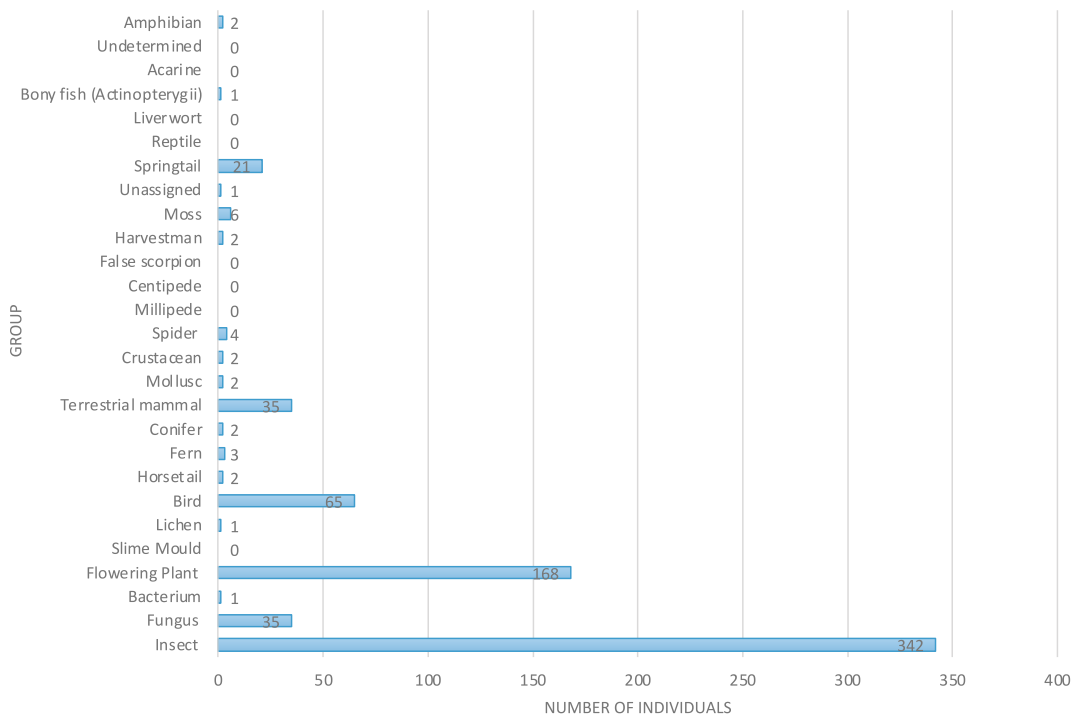


Fig 9. A graph which shows the individual size of all the groups described in iRecord in the TTTV scheme area, 2015-2019.

Statistical Analysis

Two graphs depicting the number of individuals in all groups are displayed here, to provide an overall picture of the change in groups between iRecord 2015-2019 and iRecord 2019-2023 in the TTTV scheme area (Fig 9., Fig 10). The Insect, Flowering Plant and Terrestrial Mammal groups can be seen to generally dominate the records in both time periods, despite the increase in the number of individuals in these groups from 2019 to 2023. 2019-2023 also shows some emerging groups, such as Centipedes, Millipedes, Amphibians and more, suggesting that records are becoming more prolific due to the encouragement of Citizen Science initiatives.

The size of each group surveyed in the TTTV Scheme Area, 2019-2023

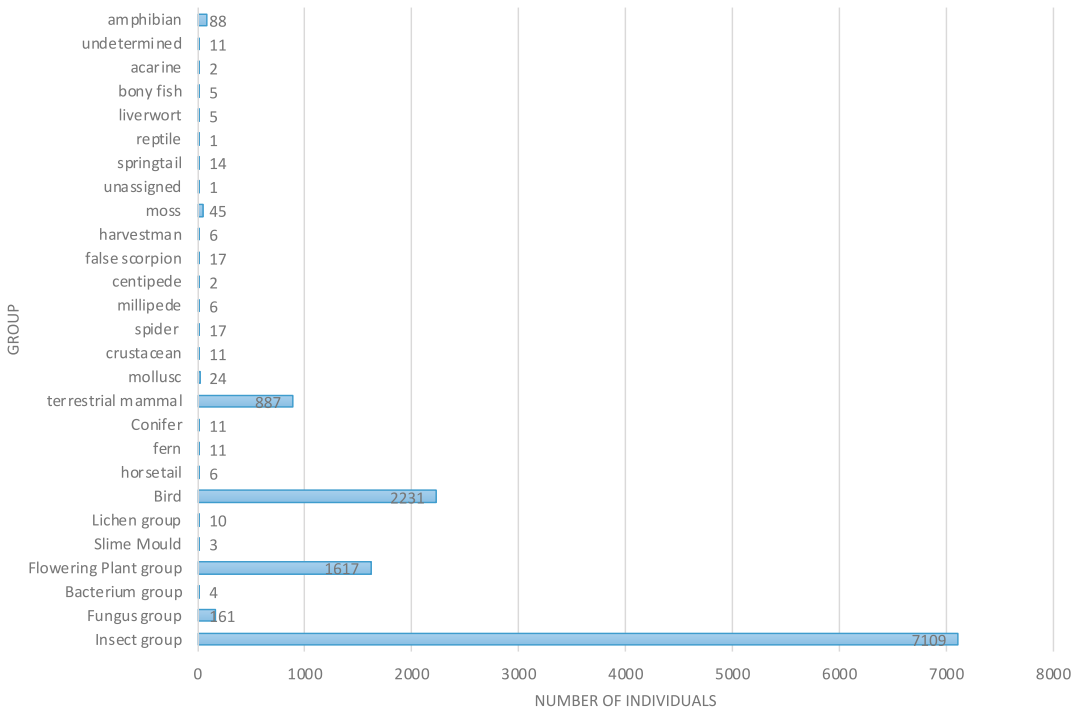


Fig 10. A graph which shows the individual size of all the groups described in iRecord in the TTTV scheme area, 2019-2023.



Fig 11. Croxall Lakes Nature Reserve ©Pam Beale (2023)

Comparison of trends collated from iRecord, 2015 - 2019 and 2019 - 2023

Insect Groups

Fig 13. and Fig 14. portray the percentage of records of insect groups recorded on iRecord during 2015-2019 and 2019-2023. Although the overall size of the insect group has increased from 342 to 7109 (1978% increase) in the scheme area, the graphs demonstrate the relative change in individual insect group sizes. For example, in 2015-2019 there was a greater proportion of dragonfly records in relation to other insect groups compares to records from 2019-2023, despite an overall increase in dragonfly records. Furthermore, butterflies were consistently the most recorded group. This could reflect the increased use of different recording methods, such as Transforming the Trent Valley's Butterfly Transects.



Fig 12. Banded Demoiselle at Tucklesholme ©Jane Arnold (2023)

Graph showing the relative percentage of insect groups surveyed on iRecord, 2015-2019

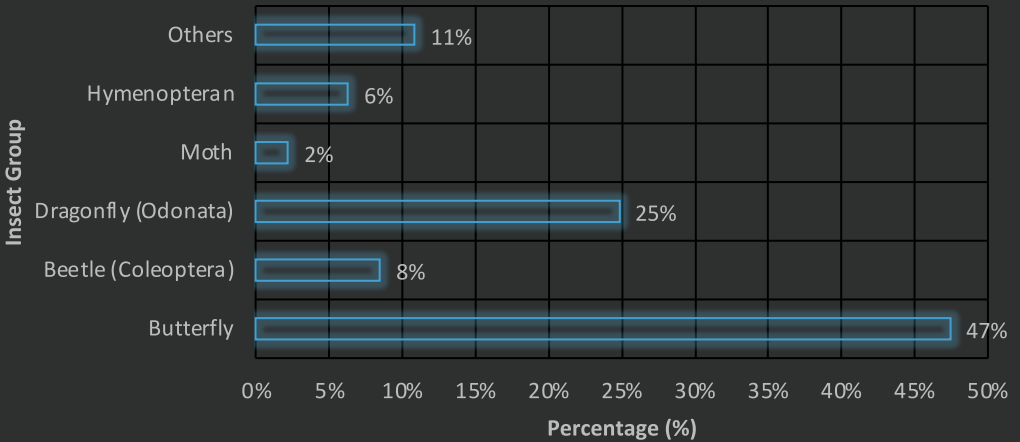


Fig 13. The percentage of insects surveyed out of 1,782 sightings, 2015-2019, collated by iRecord. 'Others' category includes True fly (Diptera), Orthopteran, Cockroach (Dictyoptera), Caddis Fly (Trichoptera), Mayfly (Ephemeroptera), True Bug (Hemiptera), Snakefly (Rahidioptera), Alderfly (Megaloptera), Scorpion Fly (Mecoptera) and Earwig (Dermaptera).

Graph showing the relative percentage of insect groups surveyed on iRecord, 2019-2023

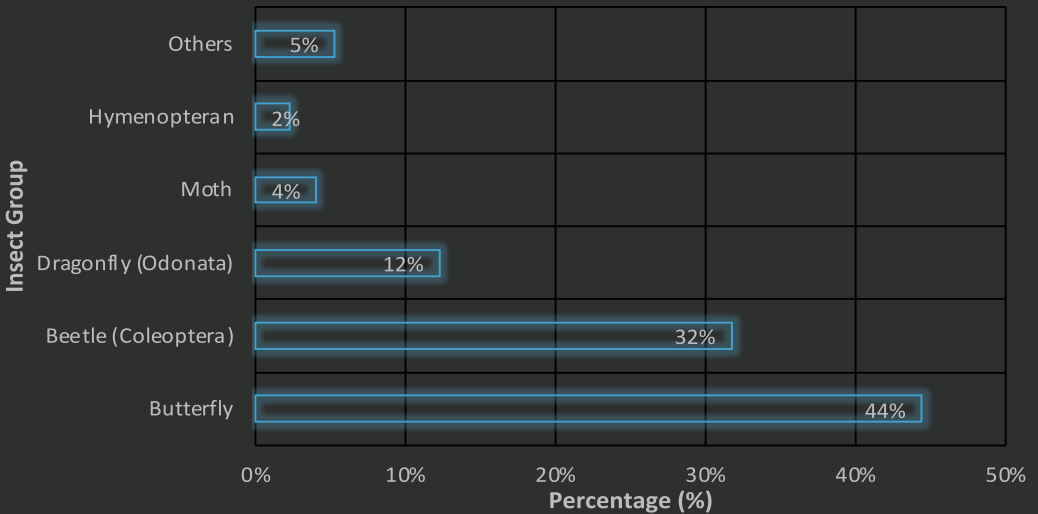


Fig 14. The percentage of insects surveyed out of 7,109 sightings, 2019-2023, collated by iRecord. 'Others' category is listed in Fig.13.

Comparison TTTV's Species Guide from iRecord, 2015 - 2019 and 2019 - 2023

Change in number of species' records for species in the TTTV Identification Guide

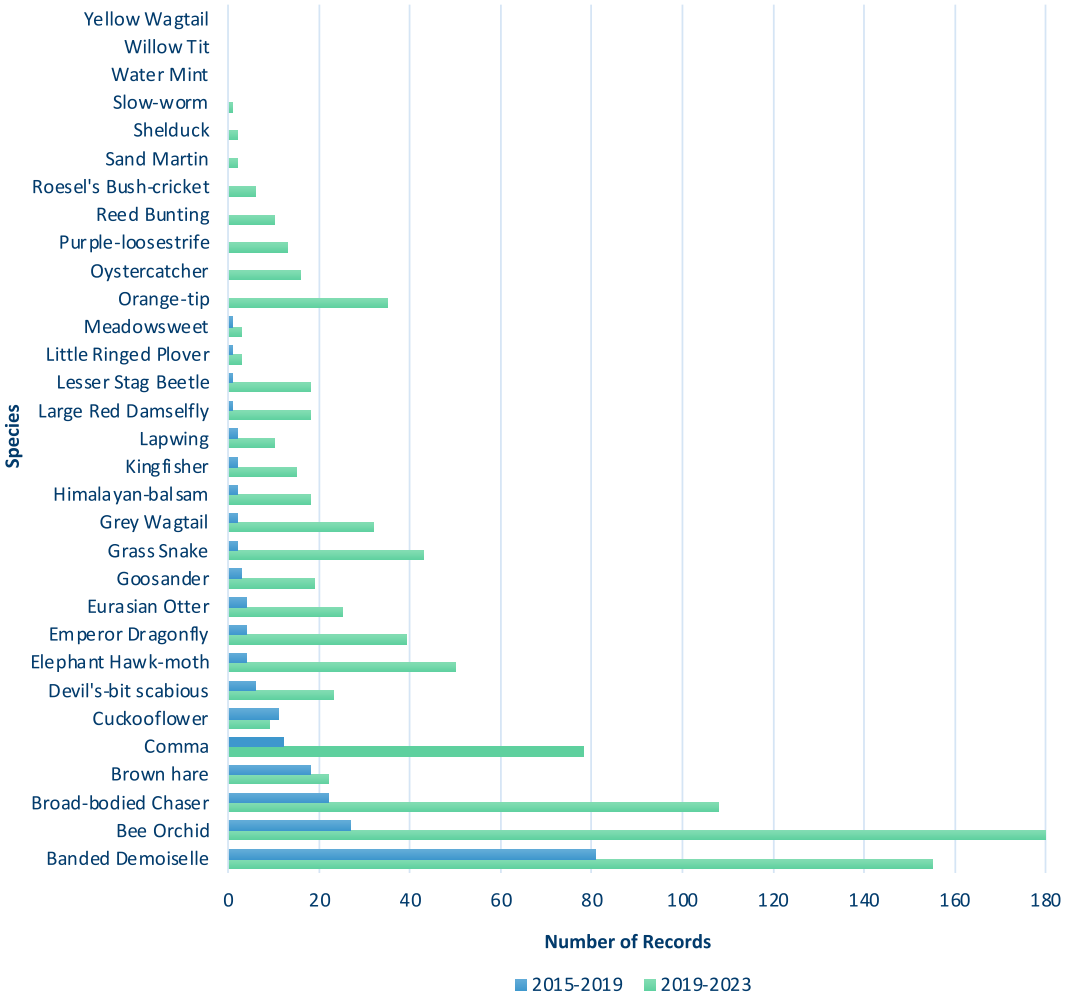


Fig 15. A graph showing the change in number of species' records from species featured on Transforming the Trent Valley's ID Guide.

Transforming the Trent Valley's Species Identification Guide

The TTTV Wildlife Guide was created to introduce the public to different species they could spot in the Trent Valley. TTTV was interested in finding out whether these species were rare in the landscape, or whether they were simply under-recorded. Fig 15 shows the change in sightings of individual species before and after the Wildlife Guides were created and distributed.



Fig 16. Survey Booklet ©Transforming the Trent Valley



Fig 17. WEBS at Croxall Lakes in December ©Jane Arnold (2023)

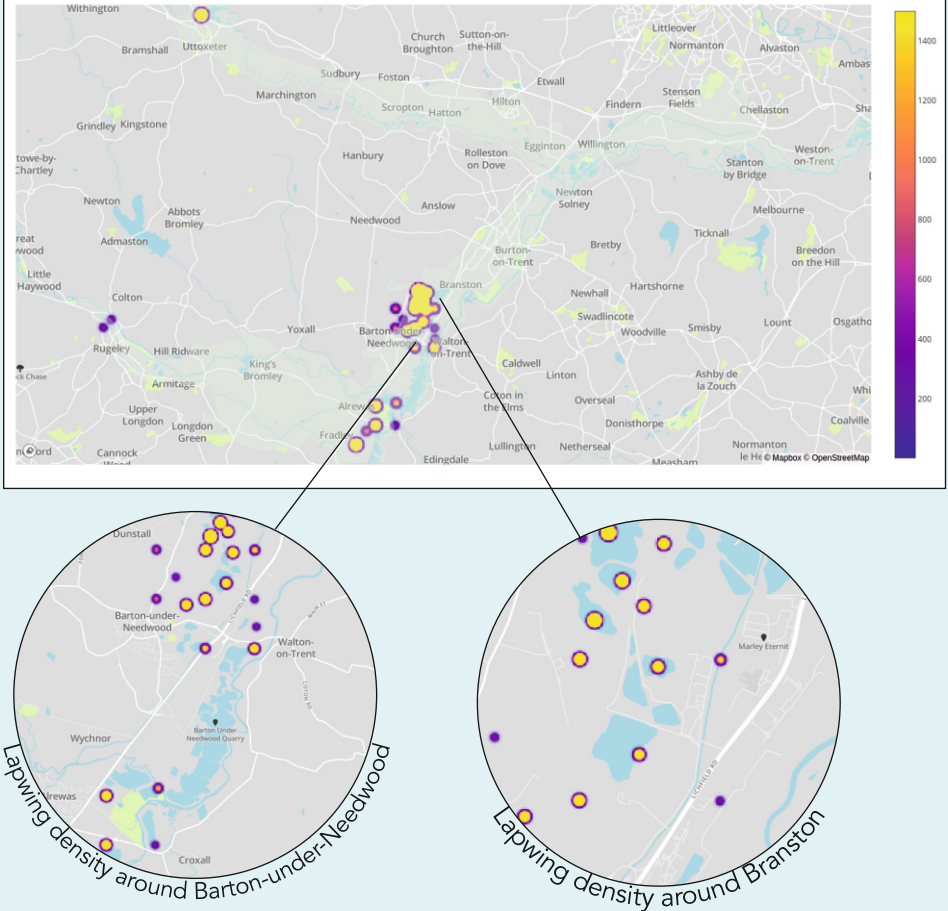
TTTV's Lapwing Prevalence Map, 2015-2019 and 2019-2023

Lapwing Prevalence in the Transforming the Trent Valley scheme area, 2015-2019



Data provided by Staffordshire Ecological Records (SER) was used to plot these density graphs, due to the fact that SER's records contain a larger variety of sources, in comparison to iRecord.

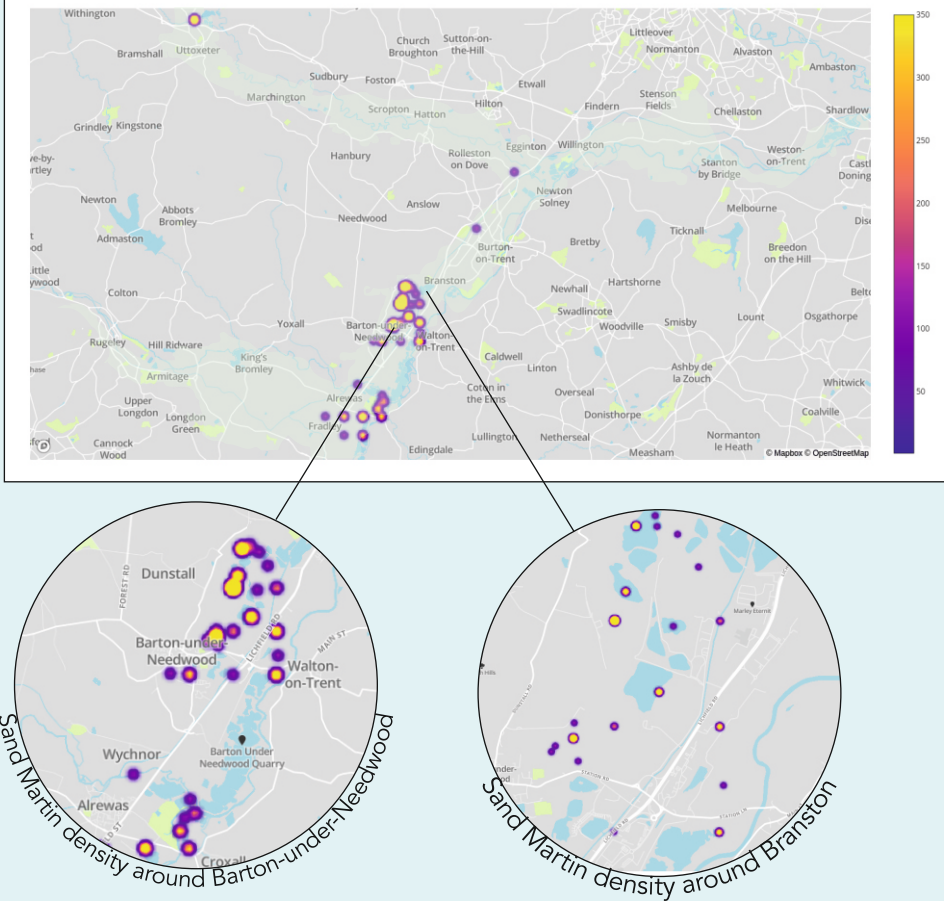
Lapwing Prevalence in the Transforming the Trent Valley scheme area, 2019-2023



Although iRecord analysis shows an increase in Lapwing records (Fig.15), SER's dataset suggests that the overall records for Lapwings have decreased. This could reflect a change in population or the amount of people recording Lapwings. It also highlights the importance of sharing data across different recording platforms to get a full picture of species records.

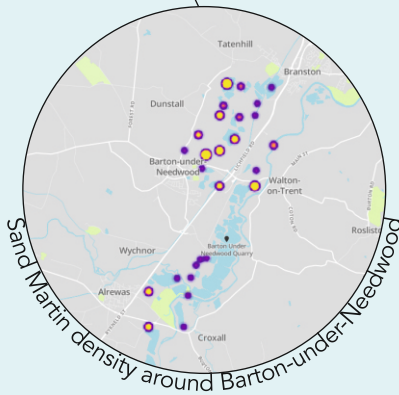
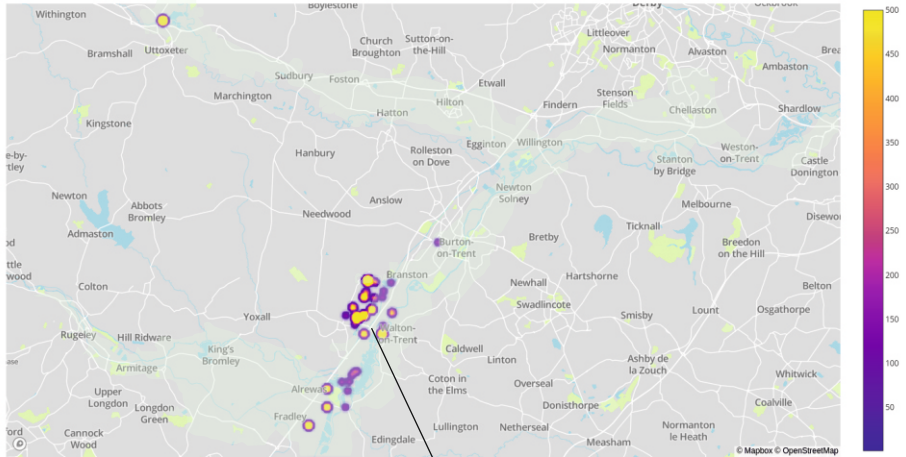
TTTV's Sand Martin Prevalence Map, 2015-2019 and 2019-2023

Sand Martin Prevalence in the Transforming the Trent Valley scheme area, 2015-2019



Data provided by Staffordshire Ecological Records (SER) was used to plot these density graphs, due to the fact that SER's records contain a larger variety of sources, in comparison to iRecord.

Sand Martin Prevalence in the Transforming the Trent Valley scheme area, 2019-2023



Sand Martin sightings have steadily increased from 2015-2023 in the southern part of TTTV's scheme area, as well as around Uttoxeter.

Contact Details

Interested in volunteering, or want to know more? Our contact details are listed below.

Address

Transforming the Trent Valley
19 Lower Brook Street
Rugeley
Staffordshire
WS15 2BZ

Phone number

01889 588150

Email

tttv@staffs-wildlife.org.uk



Fig 18. TTTV's Rugeley Office ©Keeley Beeston (2023)