

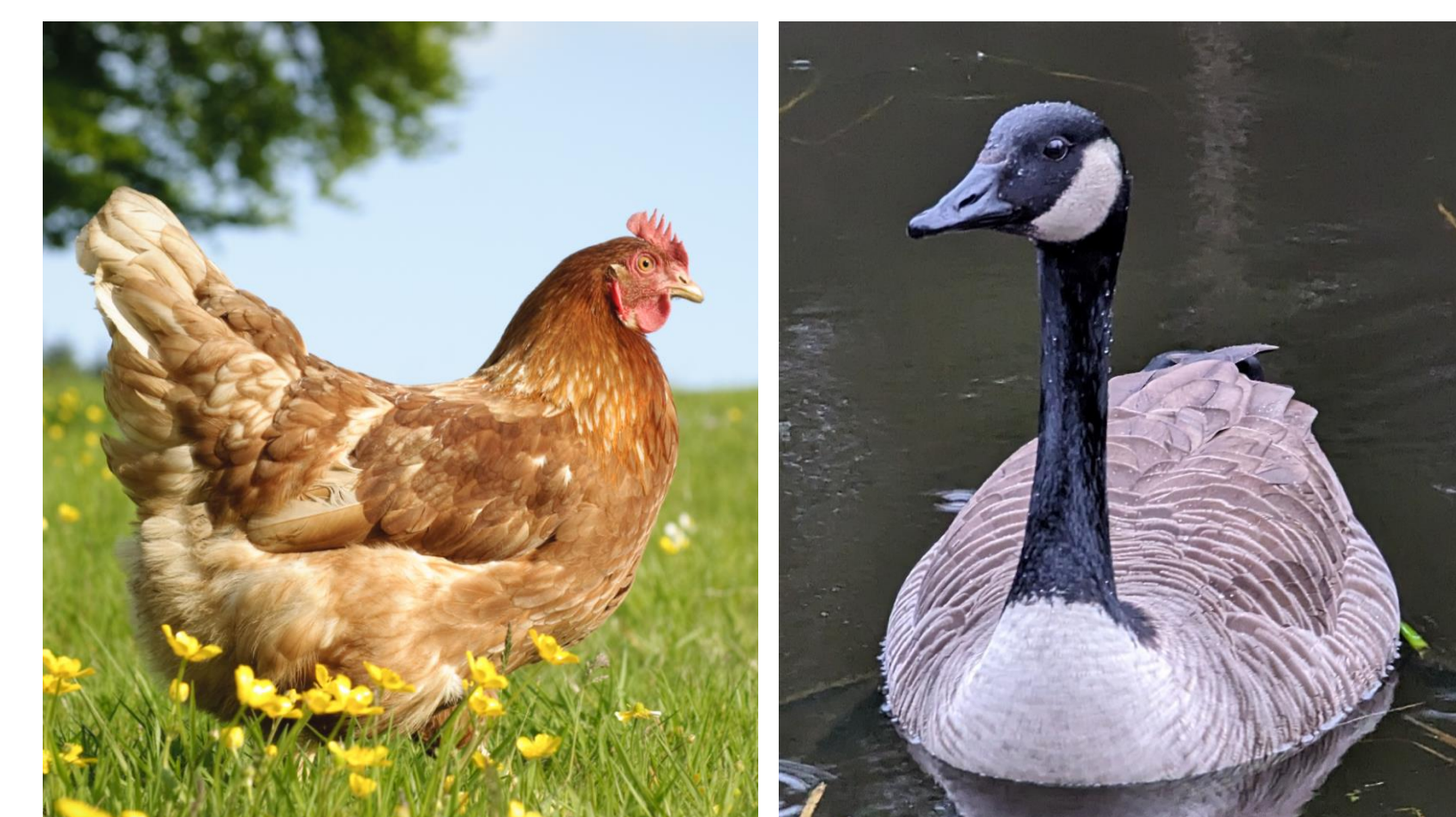
BACKGROUND

In Great Britain, between 1st October 2021 and 1st January 2024:

- 363 poultry premises confirmed infected with Highly-Pathogenic Avian Influenza (HPAI).
- 3,212 wild birds of over 80 species confirmed infected with HPAI.

To track HPAI surveillance results in wildlife and domestic birds, APHA/DEFRA created:

- HPAI Dashboard - Microsoft Power BI for internal use.
- Wild Bird and Wild Mammal Surveillance Interactive Map and Dashboard - ArcGIS for public access.



APHA HIGHLY PATHOGENIC AVIAN INFLUENZA (HPAI) DASHBOARD

Notifiable avian disease reports from farmers and private vets are investigated and laboratory tested by APHA.

Dataset of characteristics (e.g. species, production type, confirmation date, flock size) of infected premises (IPs) maintained with weekly dashboard updates.

Figure 1 = screenshot of number of HPAI IPs in 2021-22, 2022-23, 2023-2024 outbreak seasons:

- Bar chart of daily number of IPs since 1st October 2021.
- Bar charts of weekly number of IPs by season.
- Bar charts of IPs by premises type.
- Spatial distribution of IPs.

Dead wild birds are reported by the public and through patrols by wild bird reserve wardens and collected for laboratory testing for HPAI via the APHA/DEFRA passive wild bird surveillance scheme.

Dataset of location, species and collection details of confirmed HPAI positive wild bird cases.

Figure 2 = screenshot of the numbers of wild bird HPAI cases in the 2022-2023 season:

- Bar chart – weekly number of positive cases.
- Number of positive cases by taxonomic order.
- Top 10 positive wild bird species.
- Spatial distribution of positive wild bird cases.

Figure 1 Poultry cases cross season comparison

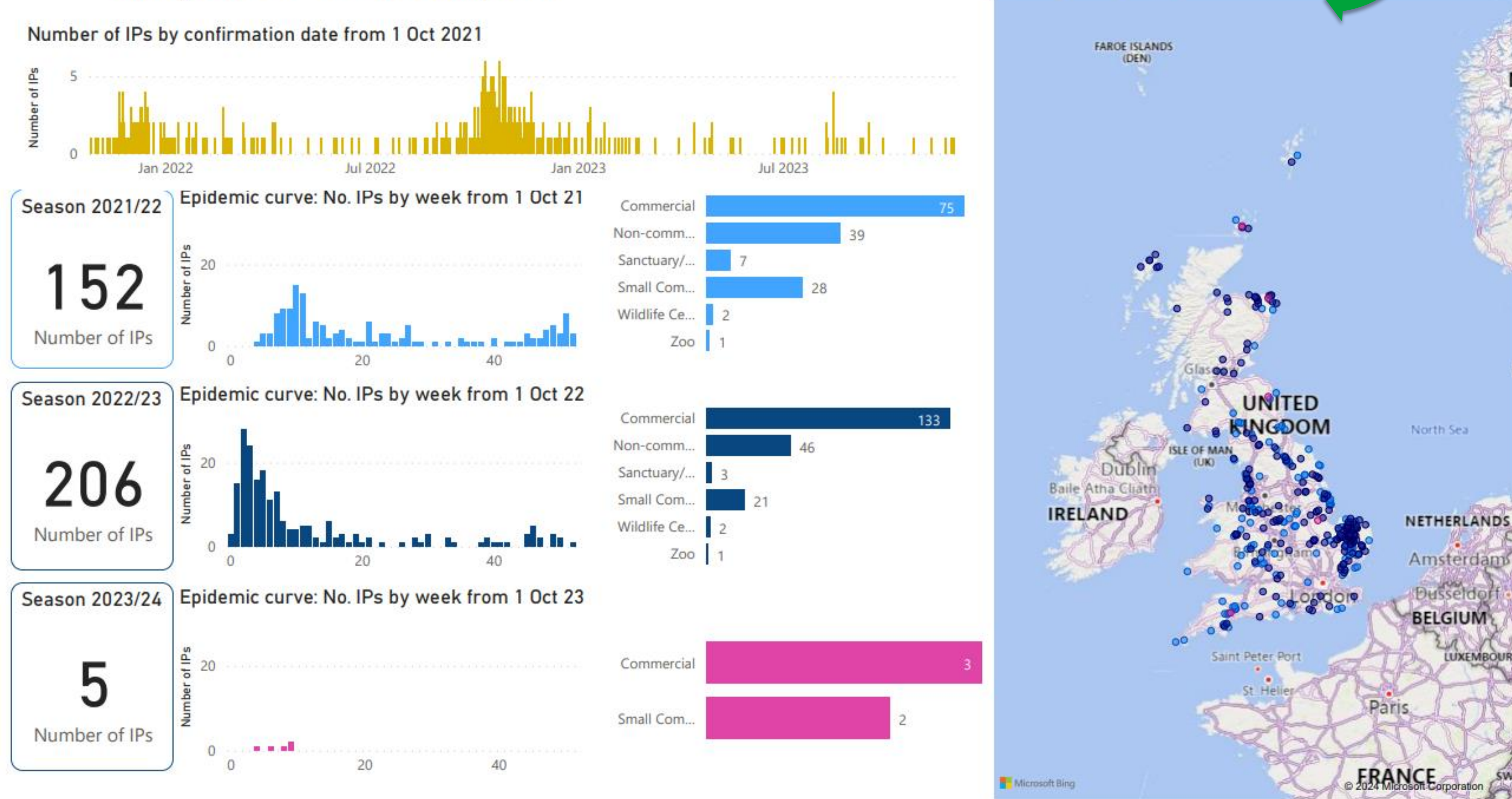


Figure 2 Wild bird cases 22/23 season

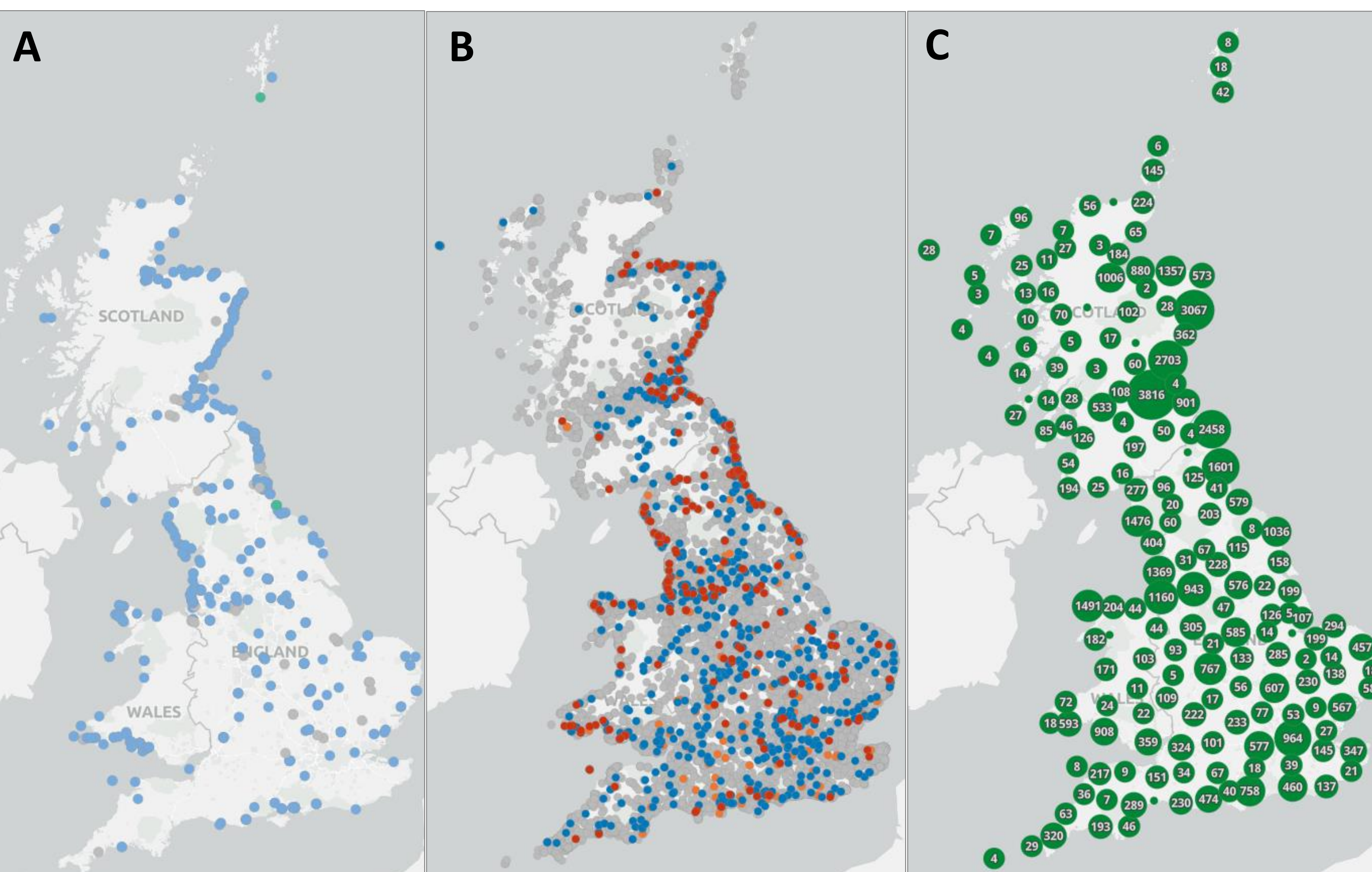
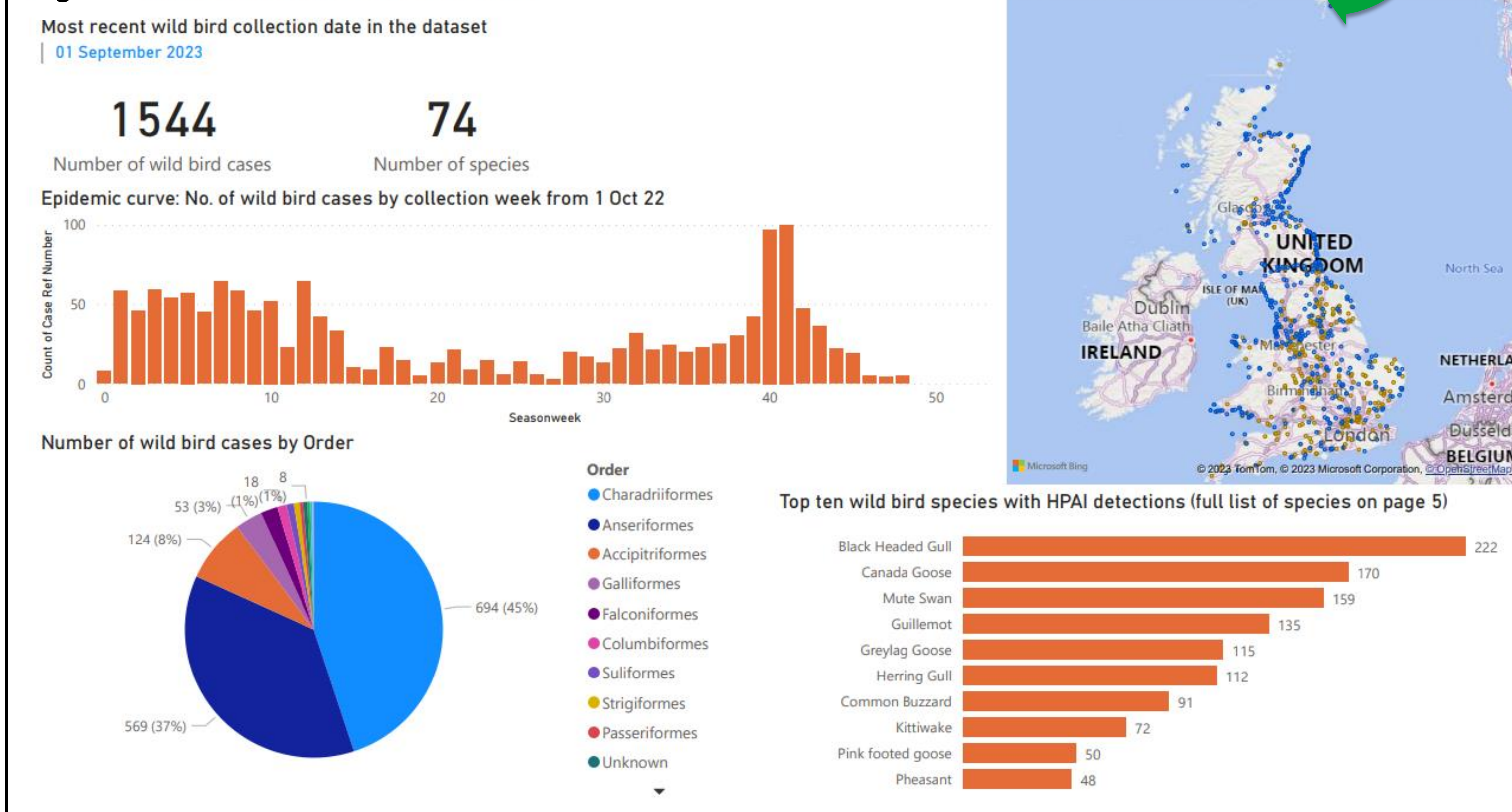


Figure 3: Sample of selectable layers available on the APHA/DEFRA WILD BIRD AND WILD MAMMAL SURVEILLANCE TOOL

APHA/DEFRA WILD BIRD AND WILD MAMMAL SURVEILLANCE

Publicly available interactive map and dashboard, displaying reported wild bird deaths from the APHA/DEFRA passive wild bird surveillance scheme, results of wild bird and wild mammal HPAI laboratory testing.

Figure 3 = screenshot of interactive map, 1st April - 1st October 2023 results:

- **A** - Identified strains of HPAI, H5N1 (blue), with H5N5 (green), H5Nx (grey).
- **B** - Locations of wild bird reported, that were not collected (grey), collected but not tested (orange), tested negative (blue) and positive (red).
- **C** - Number of dead wild birds reported per location.



Please scan these QR codes to explore the wild bird and wild mammal surveillance results in GB



CONCLUSIONS

- Standardised HPAI datasets maintained in real-time for dashboard production were a resource for additional analysis and research.
- Visual summaries of infected premises data were made available to all APHA personnel, supporting communication of outbreak information across the organisation during a large ongoing outbreak.
- These outputs allowed pattern and trend visualisation for hypothesis generation useful for guiding outbreak investigation and research questions.
- Interactive tools displaying outcomes of dead wild bird reports provides feedback for members of the public who submit reports and could encourage continued participation in the passive surveillance system.

ACKNOWLEDGEMENTS

Many people across APHA and DEFRA are involved in the investigation and laboratory testing of notifiable avian disease reports and wild bird surveillance cases, data management and visualisation: Field Delivery teams, Pathology, Avian Virology & Mammalian Influenza Research Workgroup, Epidemiology & Risk Team, Field Epidemiology Team, Department of Epidemiology. Additional thanks go to Scotland's Rural College and the Wildfowl and Wetland Trust which contribute to passive wild bird surveillance, and to UK Farmcare Ltd. for facilitating the collection of dead wild birds. Further thanks go to the members of the public who have reported dead wild birds. Please see the following link to report a dead wild bird in GB: <https://www.gov.uk/guidance/report-dead-wild-birds>