Department for Environment, Food and Rural Affairs

Updated Outbreak Assessment #39

Highly pathogenic avian influenza (HPAI) in the UK and Europe

6 February 2023

Disease report

Since our last outbreak assessment on 4 January, there have been further reports of high pathogenicity avian influenza (HPAI) H5 both in domestic poultry and in wild birds in the United Kingdom (UK) and Europe. These include 13 new infected premises (IPs) confirmed with HPAI H5N1 in Great Britain, 9 in commercial poultry premises and 4 in non-commercial premises. There have been 74 HPAI H5 events in wild birds in Great Britain since our last assessment.

The **wild bird risk** across Great Britain is maintained at **very high.** The risk to **poultry with stringent biosecurity** is maintained at **medium, with medium uncertainty,** and the risk to **poultry with suboptimal biosecurity** is maintained at **high, with low uncertainty**.

Housing measures came into force across the whole of England on 7 November 2022. This means that all bird keepers in these areas (whether they have pet birds, commercial flocks or just a few birds in a backyard flock) are required by law to take a range of biosecurity precautions, including housing their birds (except in very specific circumstances). These housing measures build on the strengthened biosecurity requirements of the Avian Influenza Prevention Zones (AIPZs) which were declared in England, Scotland, Wales, and Northern Ireland on 17 October 2022.

On 02 December, additional compulsory biosecurity and housing measures came into force across Wales, whereby keepers of poultry and captive birds are legally required to keep their birds housed or otherwise separated from wild birds. Keepers must also complete and act upon a bespoke biosecurity review of the premises where birds are kept.

Across Europe, HPAI continues to be reported in domestic poultry and non-poultry species, including wild birds. The World Organisation for Animal Health (WOAH) has reported outbreaks of HPAI H5N1 in domestic poultry in Austria, Belgium, Czech Republic, Denmark, France, Germany, Hungary, Moldova, the Netherlands, Poland and Romania. HPAI H5N1 events in non-poultry species, including wild birds, have been reported by WOAH in Austria, Belgium, Czech Republic, Denmark, France, Germany, Hungary, Ireland, Italy, Luxembourg, Poland, Romania, Russia, Serbia, Slovakia, Slovenia, Spain, Sweden and Switzerland.

Situation assessment

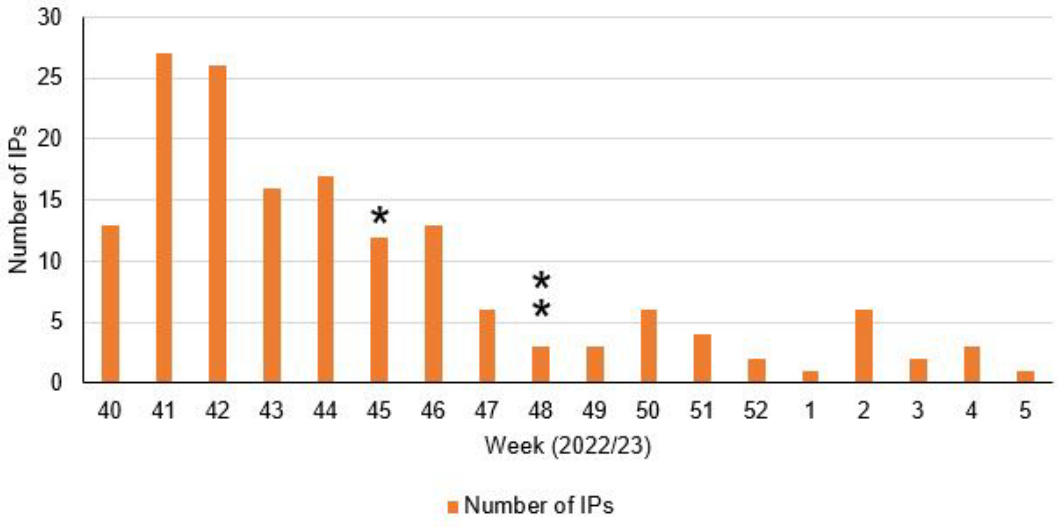
Here, a HPAI H5 event refers to a report of HPAI H5 in poultry or a location with at least one HPAI H5 positive wild bird. Individual HPAI H5 positive wild birds are referred to as cases.

United Kingdom

Since our last report on 4 January, to 6 February 2023 there have been 13 further confirmed IPs with HPAI H5N1 in poultry[1] and captive birds; 7 in England and 6 in Scotland (Map 1). These IPs comprise of 9 commercial premises (more than 50 birds) and 4 non-commercial premises (50 and fewer birds). Of the 9 commercial IPs, 4 were located in Norfolk (3 with turkeys, 1 with ducks) and there were single IPs in Aberdeenshire and Highland (both with mixed poultry), and also in Cumbria, Dumfries and Galloway and Fife (all with chickens).

The 4 non-commercial IPs were comprised of 3 smallholder premises (between 10 and 50 birds) in Herefordshire (with geese), Derbyshire and Inverurie (both with chickens). The fourth IP was a premises with 2 captive Harris Hawks in Clackmannanshire.

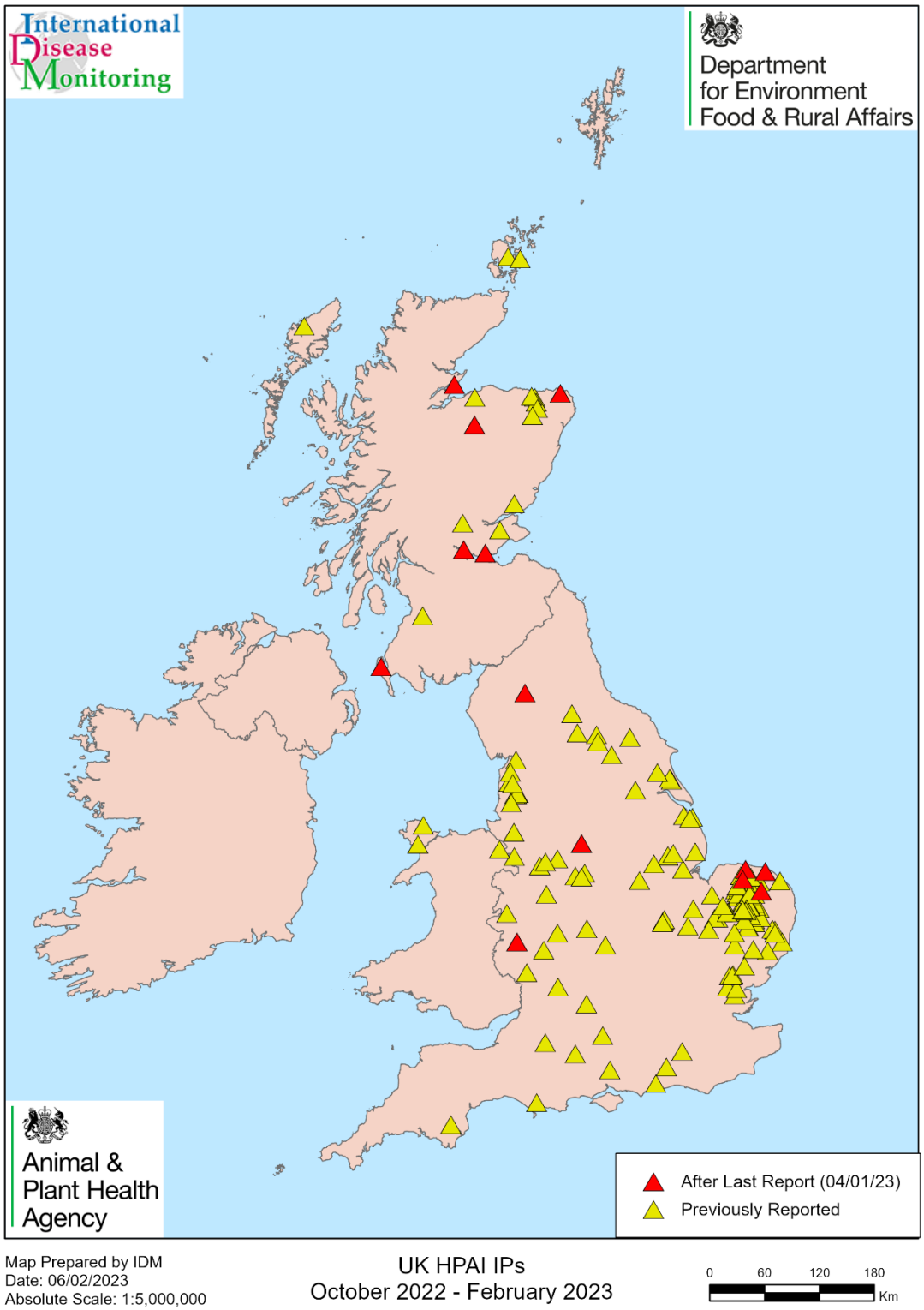
Figure 1: Number of IPs confirmed with HPAI H5N1 in Great Britain between week 40 2022 (start of October) and week 5 2023 (start of February). Asterisks denote when housing measures were introduced across England (single) and Wales (double).



For further details, please see the reports on the latest situation regarding HPAI in domestic poultry and captive birds in England, Scotland, Wales and Northern Ireland.

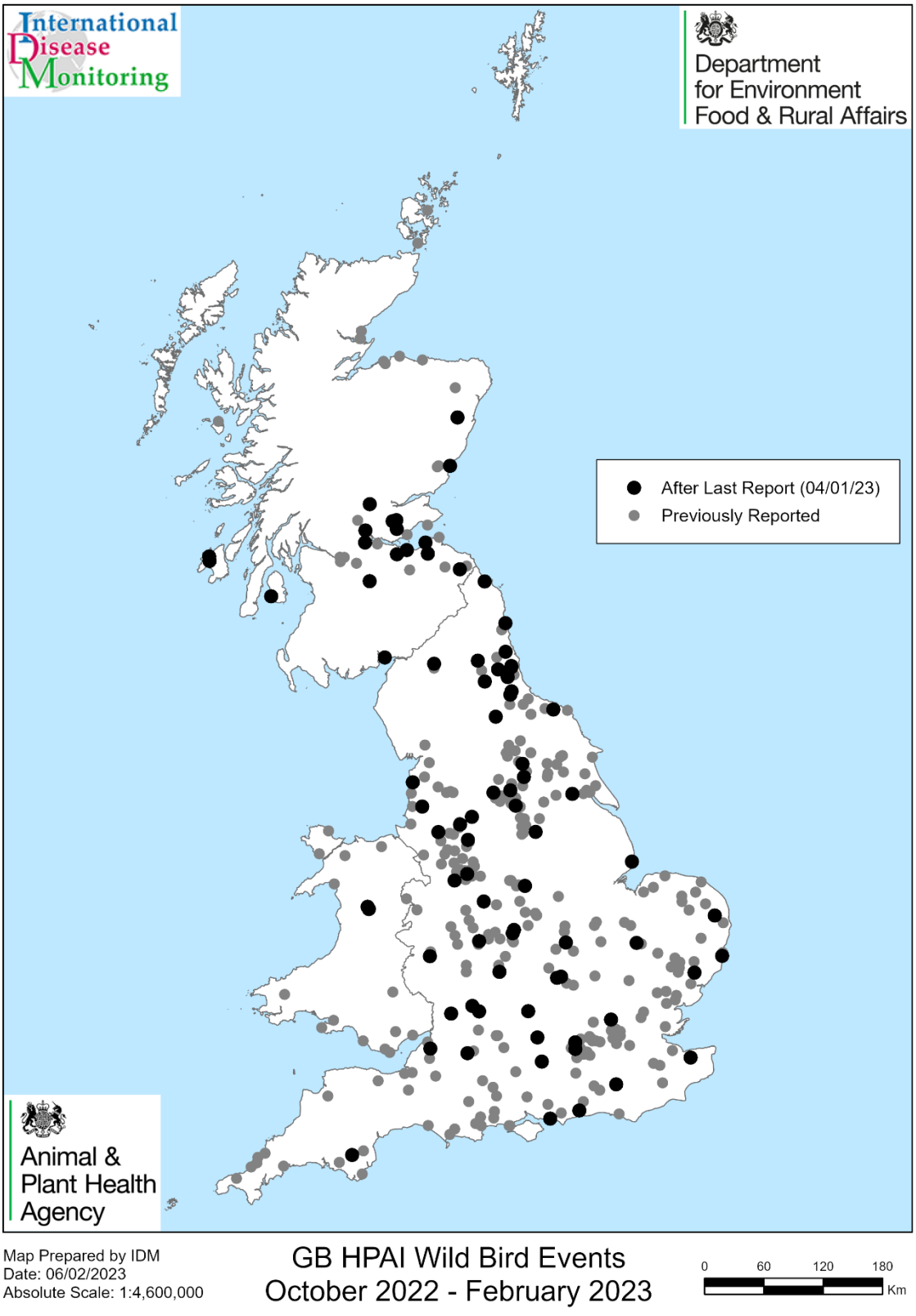
[1] According to the 2021 WOAH definition of poultry: Terrestrial Code Online Access - WOAH - World Organisation for Animal Health

Map 1: HPAI H5 outbreaks in poultry[1] and captive birds across the United Kingdom, 1 October 2022 to 6 February 2023.



[1] According to the 2021 WOAH definition of poultry: Terrestrial Code Online Access - WOAH - World Organisation for Animal Health

Map 2: Map showing the HPAI H5 positive findings in wild birds across Great Britain which were confirmed between 1 October 2022 and 6 February 2023.

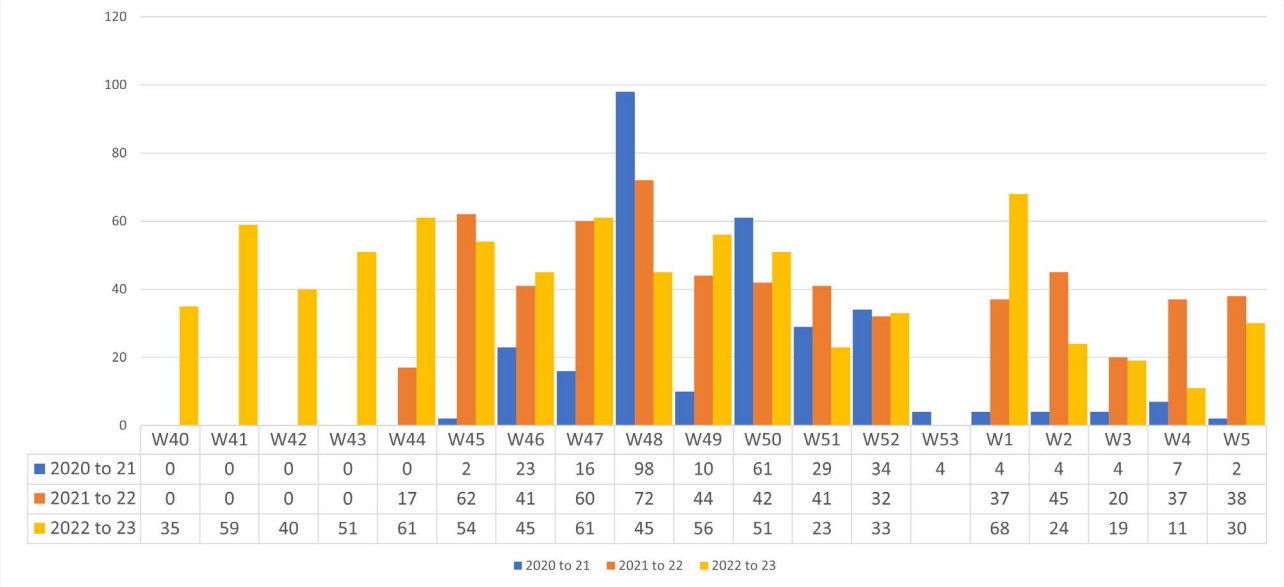


Wild birds

Between 4 January and 6 February 2023, HPAI H5 has been detected in 152 wild birds in 74 separate locations in Great Britain, including 16 wild bird species (listed in Appendix 1), in 48 counties. Most of the findings were in England, however wild birds which were located in Scotland and Wales have also tested positive (see Appendix 1). As in previous weeks, HPAI-positive findings were widespread across Great Britain including both coastal and inland locations and the greatest number of findings were in waterbirds/waders (105). The other detections occurred in a variety of species including birds of prey (42), gulls (4) and 1 pigeon.

From 4 January to 6 February 2023, there have been 7 further cases for which the HPAI H5 genotype has been identified, with characterisation of neuraminidase (NA) subtype in progress.

Figure 2: Wild bird HPAI H5 positive cases* per week across Great Britain in each season: from week 40 2022 (approximately the start of October) to week 5 2023 (approximately the start of February).



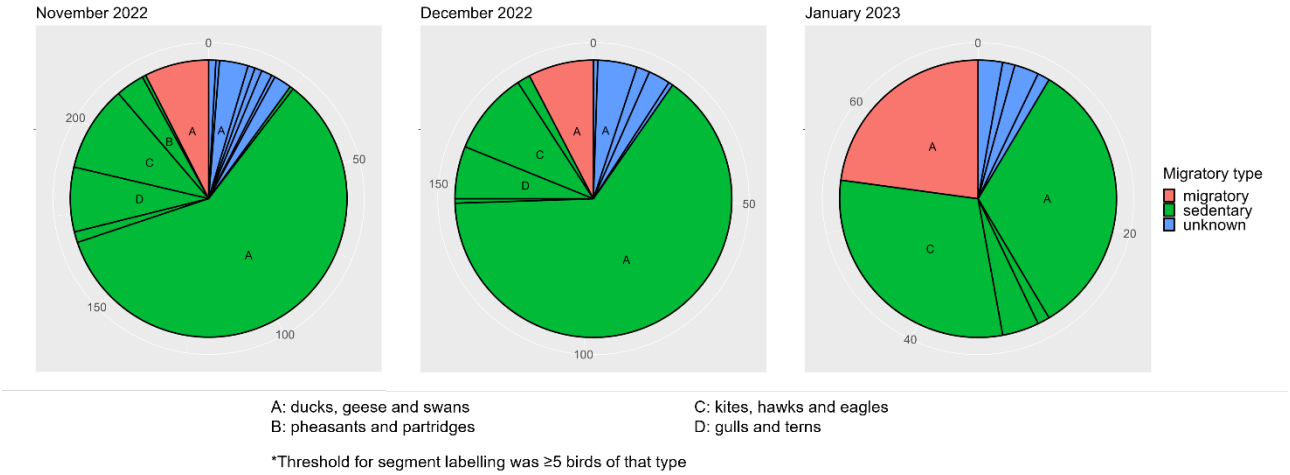
	W40	W41	W42	W43	W44	W45	W46	W47	W48	W49	W50	W51	W52	W53	W1	W2	W3	W4	W5
2020 to 21	0	0	0	0	0	2	23	16	98	10	61	29	34	4	4	4	4	7	2
2021 to 22	0	0	0	0	17	62	41	60	72	44	42	41	32		37	45	20	37	38
2022 to 23	35	59	40	51	61	54	45	61	45	56	51	23	33		68	24	19	11	30

*Note that the wild bird sampling strategy may vary between, and within, seasons. Between weeks 40 and 48, the threshold for collection of wild birds was 3 in 2020 and 2022, and 1 in 2021. The threshold was 5 for geese and swans in England from 12 December 2022, then reduced back to 3 on 30 January 2023.

There have been relatively few detections in migratory birds so far this season compared with detections in sedentary species (Figure 3), although migratory birds are not specifically targeted during surveillance. Total numbers of migrating wild water birds (ducks, geese, and some swan species) will now have peaked in GB and the majority of

wintering water birds have now arrived. For further details, please see the report (updated weekly) on findings of HPAI in wild birds in Great Britain and Northern Ireland.

Figure 3: HPAI H5-positive wild birds detected in November, December 2022 and January 2023, grouped by bird type and migratory status.



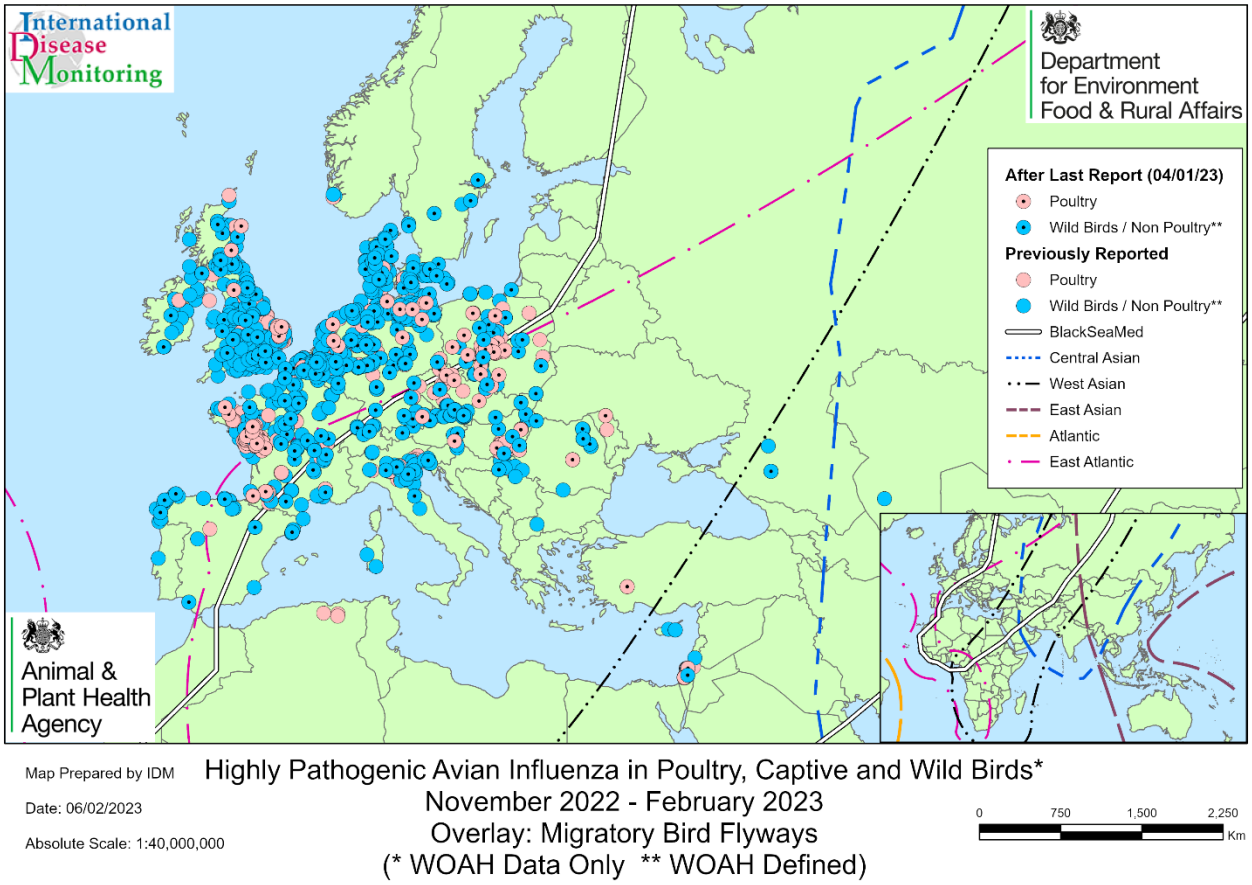
Throughout November, December (2022) and January (2023), the vast majority of HPAI H5-positive wild birds have been waterbirds, most of which have been sedentary species, though migratory waterbird species have been detected across all months and with a considerable increase in detections during January (Figure 3). The relative proportion of migratory waterbirds remains small compared to that of sedentary waterbirds, however it should be noted that some species of waterbirds (Mallard ducks for example) may also show migratory behaviour, albeit less clearly understood than for species such as barnacle geese and pink footed geese.

Non-avian wildlife

Since 4 January, there has been a further 5 positive HPAI H5N1 detections in non-avian wildlife species from Great Britain (for map see Appendix 2). These positive detections comprised of 3 harbour seals, 1 grey seal and 1 red fox. The seal samples were collected in 2021 and 2022 and the fox sample was collected in January 2023. For further details, please see the report on findings of HPAI in non-avian wildlife in Great Britain.

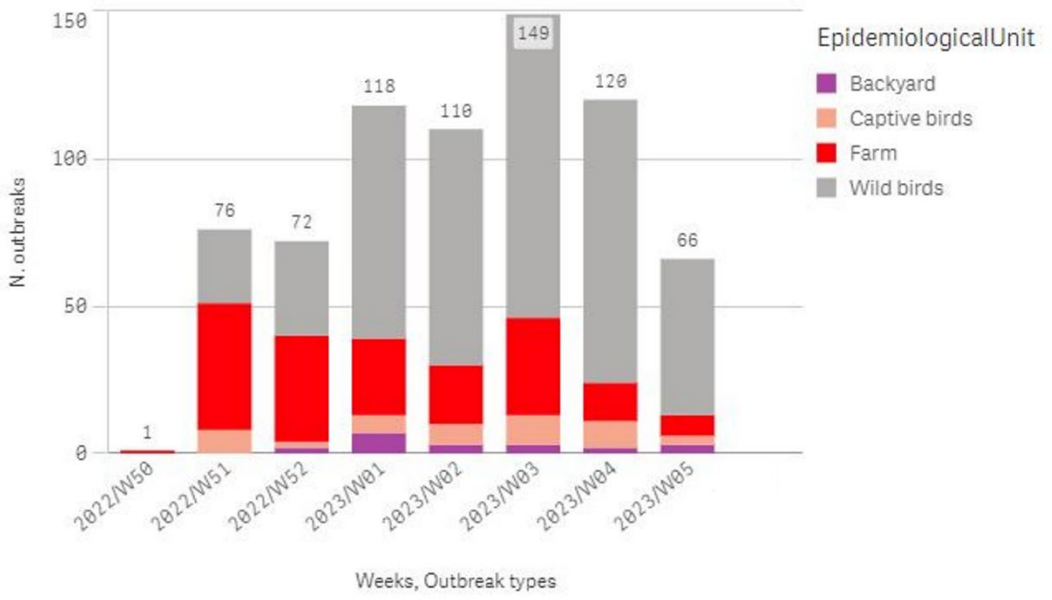
Europe

Map 3: Map showing HPAI H5 events in domestic poultry and wild birds in Europe reported by WOAH between 1 November 2022 and 6 February 2023 (WOAH, 2023).



Between 4 January and 6 February 2023, there have been a total of 535 HPAI H5N1 events reported by the WOAH in domestic poultry and non-poultry including wild birds across Europe. Of these, 129 outbreaks of HPAI H5N1 were reported in domestic poultry in: Austria (3), Belgium (3), Czech Republic (11), Denmark (1), France (38), Germany (15), Hungary (4), Moldova (1), the Netherlands (3), Poland (48) and Romania (2). 406 HPAI H5N1 events were reported in non-poultry/wild birds in: Austria (60), Belgium (42), Czech Republic (3), Denmark (29), France (53), Germany (128), Hungary (5), Ireland (2), Italy (9), Luxembourg (2), Poland (21), Romania (9), Russia (3), Serbia (2), Slovakia (2), Slovenia (2), Spain (10), Sweden (18) and Switzerland (6).

Figure 4: Weekly outbreaks of HPAI in poultry and captive birds and cases in wild birds reported across Europe between December 2022 and early February 2023 (IZSVe, 2023)



The number of outbreaks of HPAI in poultry farms each week across Europe has fluctuated over the last 4 weeks but shown a decreasing trend since the end of 2022, with around 20 outbreaks in week 2, around 35 in week 3, approximately 10 outbreaks in week 4 and around 5 in week 5. The number of cases in wild birds appears to have remained fairly high in weeks 2, 3 and 4 then has decreased , with around 50 cases reported in in week 5. It is important to note that wild bird surveillance methods may differ between countries and may contribute to the variability in the number of wild birds reported each week.

Implications for Great Britain

The numbers of migratory waterbirds (ducks, geese and swans) that over-winter in Great Britain will have peaked in December and January with most staying on in Great Britain until early April when they will start to depart on their outward migration to their breeding grounds in northern Europe. Any additional impact on poultry IPs from those migratory ducks, geese and swans will have been observed by now. Since HPAIV H5 was already circulating in the “more sedentary” waterbird species in Great Britain prior to the arrival of the migratory birds, the role of the migrants in the introduction of the virus this year may have been less significant than in previous years. They may have played some role in maintaining the virus over the winter although the small proportion of positive cases in migrant species compared to resident wild bird species suggests this is relatively small. This raises the question of how much their departure in early April will contribute to reducing the risk to poultry. Of greater importance in reducing prevalence in wild birds may be the general dispersion of wild birds from areas that they gather, particularly at wetland sites, in early spring as the resident wild birds move to their remote breeding sites across the country. At their breeding sites, bird to bird contacts will be greatly reduced for most

species compared to at the winter gathering sites. Most resident GB waterbird species that breed in UK do not breed together in large numbers, the exception being seabirds around the coast that will start to return to their breeding colonies from February/March. The increase in day length and ambient temperatures in the coming weeks will reduce survival of the HPAI H5N1 virus in the environment although circulation of virus in waterbirds may be maintained until their spring dispersal in early April. It remains to be seen what effect the gathering of seabirds to breeding colonies has on virus transmission in those species.

Wild bird cases appear to be increasing in continental Europe in January (Figure 4) with detections across much of central and eastern Europe and not just in north-western Europe as earlier in the winter (see map 3). There is still an ongoing cluster of wild bird cases in north-east Italy. The ongoing presence of HPAIV in wild birds in north-western Europe in early February is of little concern to Great Britain compared to four months ago as a potential source of infection for ducks, geese and swans migrating west to Great Britain because all of those birds arrived in Great Britain at least a month ago.

The overall infection pressure from wild birds on poultry in Great Britain is undoubtedly still very high given the ongoing levels of wild bird detections and the high environmental viral load which will remain infectious for prolonged periods, particularly with the low temperatures in winter in Great Britain. For these reasons, the national risk level for HPAI H5 in wild birds is maintained at **very high**.

The number of poultry IPs in Great Britain has generally declined week on week since the peaks of 27 and 26 in the second and third weeks of October (Figure 1). This may reflect the implementation of the housing order in England and Wales and the removal of Christmas turkey flocks due to seasonal slaughter. New IPs, however, are still occurring weekly with six in the second week of January, and from a risk assessment perspective, the current risk levels to poultry cannot be reduced while the wild bird risk is still at very high. Therefore, the risk of infection of poultry in Great Britain with sub-optimal biosecurity is maintained at **high,** with **low uncertainty**. The risk of infection of poultry in Great Britain with stringent biosecurity is maintained at **medium,** with **medium uncertainty**. It remains to be seen how long into the spring that new IPs will be reported. It is imperative that biosecurity is maintained to the highest extent possible to mitigate against the ongoing risk of infection posed by wild birds across the UK. The ongoing wild bird infection pressure will expose any weaknesses that exist, even where a good biosecurity plan is in place. If this plan is not properly implemented, and there are biosecurity breaches (such as poor maintenance of buildings) exposure of housed poultry to virus could occur, resulting in infection.

Conclusion

Cases of HPAI H5 in wild birds, and confirmations in poultry premises have continued to be reported across Europe and in Great Britain since our last assessment.

Since 1 October 2022, there have been 794 confirmed cases of HPAI H5 in wild birds in Great Britain, spanning a range of waterfowl, seabirds, and birds of prey.

The risk of HPAI H5 infection in wild birds in Great Britain is maintained at **VERY HIGH**. There is currently a very high infection pressure on poultry from wild birds. Temperature conditions favouring increased virus survival during the current cold weather will prolong survival of residual virus infectivity in the environment with implications for fomite transmission to poultry, even though they are housed, through poor biosecurity, or where there are biosecurity breaches.

Although the number of IPs fell week by week between the October peak and early December, the infection pressure from both wild birds and residual environmental infectivity remains very high, and several IPs are still being reported weekly. Therefore, the risk of exposure of poultry across Great Britain where biosecurity is suboptimal is maintained at **HIGH** (with low uncertainty) while the risk to poultry in Great Britain where biosecurity is stringent is maintained at **MEDIUM** (with medium uncertainty).

Additional housing measures came into force across England on 7 November 2022. This means that all bird keepers in these areas (whether they have pet birds, commercial flocks or just a few birds in a backyard flock) are required by law to take a range of biosecurity precautions, including housing their birds. These housing measures build on the strengthened biosecurity requirements of the Avian Influenza Prevention Zones (AIPZs) which were declared in England, Scotland, Wales, and Northern Ireland on 17 October 2022.

On 02 December, additional compulsory biosecurity and housing measures came into force across Wales, whereby keepers of poultry and captive birds are legally required to keep their birds housed or otherwise separated from wild birds. Keepers must also complete and act upon a bespoke biosecurity review of the premises where birds are kept

We are continuing to closely monitor the situation and review the risk.

It is particularly important that stringent adherence to good biosecurity practices is still maintained, particularly with the onset of cold and wet weather. **Strict attention should be made to ensure compliance with reviewed contingency plans, with regular maintenance checks and repairs being carried out promptly not only on buildings, but to fencing and boundaries of outdoor areas where permitted under housing orders, such as fully netted enclosures and runs in England and Wales and fenced enclosures and ranges in Scotland where there is currently an AIPZ but no housing order in place, to minimise contact with wild birds.**

Reinforcement of good biosecurity awareness behaviours and practices should be a constant reminder to all personnel working with birds; any lapse of these measures could still easily result in disease being introduced to poultry and captive birds. This could be via direct contact with wild birds (getting in to housing or on the range in Scotland) or indirect contact, such as contact with contaminated feed, water, bedding, equipment, vermin or clothing including footwear of people in contact with infected birds or contaminated environment including flood water. Special consideration should be made when bringing in equipment and materials,

especially bedding and outer packages which may have become contaminated following environmental exposure whilst stored outside.

If you keep poultry (including game birds or as pets), you should follow our biosecurity best practice advice on GOV.UK.

Remain vigilant for any signs of disease in your flock and report any suspicious clinical signs of avian influenza to the Animal and Plant Health Agency. Contact:

- 03000 200 301 in England
- 0300 303 8268 in Wales
- your local field services office in Scotland

Further guidance about Avian Influenza including updated biosecurity advice for poultry keepers in:

- England is available on GOV.UK
- Wales is available on the Welsh Government's website
- Scotland is available on the Scottish Government's website
- North Ireland is available on DAERA's website

The WOAH, FAO International Reference Laboratory and the UK National Reference Laboratory at Weybridge has the necessary diagnostic capability for strains of avian influenza virus, whether of low or high pathogenicity, and continually monitors changes in the virus on a wide scale whilst utilising global networks to gain early insights to epidemiological trends and potential emergence of new genotypes which might change the risk profile.

We will continue to report on any updates to the situation in Europe and in particular, any changes in disease distribution or wild bird movements which may increase the risk to the UK.

In England, Scotland and Wales, any findings of the following dead wild birds found at the same location at the same time should be reported online (https://www.gov.uk/guidance/report-dead-wild-birds) or to the Defra wild bird helpline on 03459 33 55 77:

- 1 or more dead birds of prey (such as an owl, hawk or buzzard)
- 3 or more dead birds that include at least 1 gull, swan, goose or duck
- 5 or more dead wild birds of any species

It is advisable that you do not touch these birds.

Appendix 1: 2022-2023 HPAI season; Wild bird species in Great Britain that have tested positive for HPAI H5 between 1 October 2022 and 6 February 2023

Region and species	Total number of birds testing positive with HPAI H5 since last assessment (4 January 2023)	Total number of birds testing positive with HPAI H5 since 1 October 2022
England	**113**	**658**
Black Swan	0	1
Canada Goose	26	168
Great White Egret	0	1
Grey Heron	0	1
Greylag Goose	22	107
Herring Gull	1	6
Kestrel	1	6
Mute Swan	18	139
Pink footed goose	9	16
Unspecified Goose	0	5
Unspecified Swan	0	2
Whooper swan	1	15
Common Buzzard	21	52
Red Kite	0	2
Pheasant	0	31
Curlew	0	1

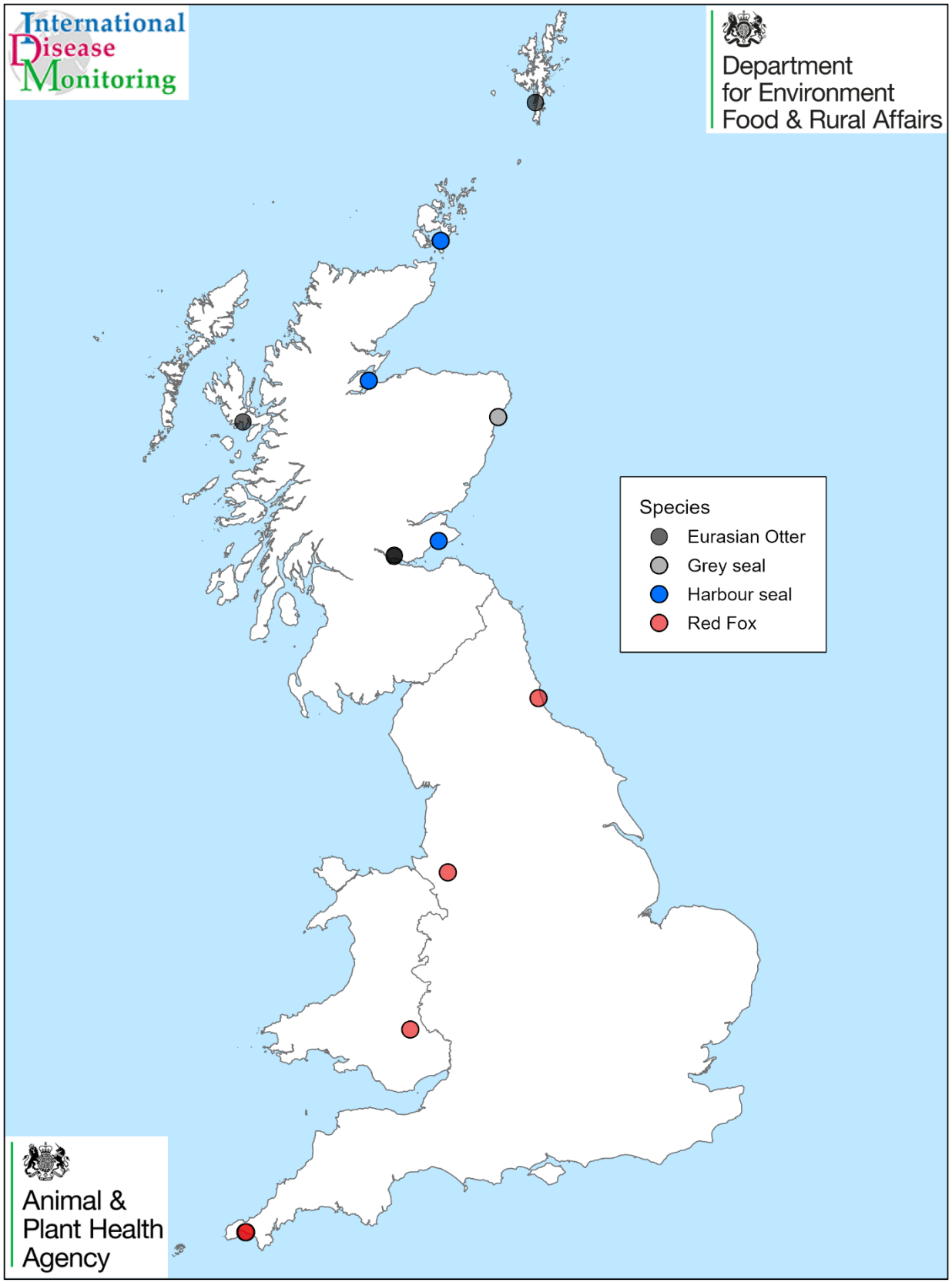
Region and species	Total number of birds testing positive with HPAI H5 since last assessment (4 January 2023)	Total number of birds testing positive with HPAI H5 since 1 October 2022
Barnacle goose	0	3
Mallard duck	0	5
Black Headed Gull	1	17
Sparrowhawk	5	17
Wood Pigeon	0	4
Common Gull	0	1
Tawny Owl	3	6
Gannet	0	7
Razorbill	0	1
Little Egret	0	1
Rock Dove	0	10
Lesser black-backed gull	0	1
Crow	0	1
Pintail duck	0	1
Peregrine	4	9
Unidentified Avian	0	2
Barn Owl	0	2
Red Legged Partridge	0	1

Region and species	Total number of birds testing positive with HPAI H5 since last assessment (4 January 2023)	Total number of birds testing positive with HPAI H5 since 1 October 2022
Goosander	0	1
Red Breasted Goose	0	2
Fantail Dove	0	1
Unspecified Bird of Prey	0	1
Other Crow	0	2
Unlisted Goose	0	3
Unspecified Pheasant	0	3
Shoveler	0	1
Greater Spotted Woodpecker	0	1
Dove Pigeon	1	1
Scotland	**37**	**97**
Greylag Goose	2	4
Herring Gull	1	10
Mute Swan	5	14
Pink footed goose	8	10
Unspecified Goose	1	3
Whooper swan	2	2
Common Buzzard	3	5

Region and species	Total number of birds testing positive with HPAI H5 since last assessment (4 January 2023)	Total number of birds testing positive with HPAI H5 since 1 October 2022
Pheasant	0	4
Barnacle goose	9	16
Black Headed Gull	1	1
Sparrowhawk	1	1
Guillemot	0	1
Hen Harrier	0	1
White Fronted Goose	0	2
Unspecified Gull	0	6
Common Gull	0	5
Fulmar	0	1
Lesser black-backed gull	0	2
Osprey	0	1
Unspecified Tern	0	3
Barn Owl	1	1
Red-throated Diver	0	1
Unspecified Heron	1	1
Ringed Plover	1	1
Unknown Buzzard	1	1

Region and species	Total number of birds testing positive with HPAI H5 since last assessment (4 January 2023)	Total number of birds testing positive with HPAI H5 since 1 October 2022
Wales	**2**	**39**
Canada Goose	0	3
Greylag Goose	0	5
Mute Swan	0	10
Common Buzzard	2	3
Pheasant	0	9
Mallard duck	0	2
Guillemot	0	1
Hen Harrier	0	1
Moorhen	0	1
Gannet	0	2
Lesser black-backed gull	0	1
Unspecified Bird of Prey	0	1
Grand Total	**152**	**794**

Appendix 2: Non-avian wildlife species in Great Britain that have tested positive for HPAI H5N1 from retrospective testing of samples collected in 2021, 2022 and 2023.



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References

All outbreaks and cases were taken from the World Organisation for Animal Health (WOAH). Please note that changes in format and level of detail are due to the change of data source for this report, from EU's Animal Disease Notification System (ADNS) to World Organisation for Animal Health (WOAH).

- DAERA (2023) Department of Agriculture, Environment and Rural Affairs Avian influenza information page
- IZSVe (2023) EURL Avian Flu Data Portal (izsvenezie.it)
- WOAH (2023) WAHIS (woah.org)

This publication is available at https://www.gov.uk/government/collections/animal-diseases-international-monitoring.

Any enquiries regarding this publication should be sent to us at iadm@apha.gov.uk.