Department for Environment, Food and Rural Affairs

Updated Outbreak Assessment #43

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

6 June 2023

Disease report

Since our last outbreak assessment on 4 May, there have been further reports of high pathogenicity avian influenza (HPAI) H5 in domestic poultry in the United Kingdom (UK). These include 3 new infected premises (IPs) confirmed with HPAI H5N1 in Great Britain. All 3 outbreaks were in commercial poultry premises. There have been 43 HPAI H5 events in wild birds in Great Britain since our last assessment.

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

Housing measures which came into force across the whole of England on 7 November 2022 and across Wales on 2 December 2022 were lifted on 18 April 2023. 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 are still applicable.

Across Europe, HPAI H5N1 continues to be reported in domestic poultry and non-poultry species, including wild birds, with a decreased number of reports compared with last month (around 260 in May versus 300 in April). The World Organisation for Animal Health (WOAH) has reported outbreaks of HPAI H5N1 in domestic poultry in Czech Republic, France, Poland, and Russia. HPAI H5N1 events in non-poultry species, including wild birds, have been reported by WOAH in Austria, Belgium, Czech Republic, Denmark, Estonia, France, Germany, Hungary, Latvia, Lithuania, Luxembourg, Poland, Russia, Serbia, Slovenia, Sweden and Switzerland. There was 1 report of HPAI H5Nx, in Belgium. There was also 1 report of untyped or partially typed HPAI in Belgium. The over representation of black-headed gull cases in wild birds in Europe has continued since our last assessment, however overall numbers are continuing to decrease.

Situation assessment

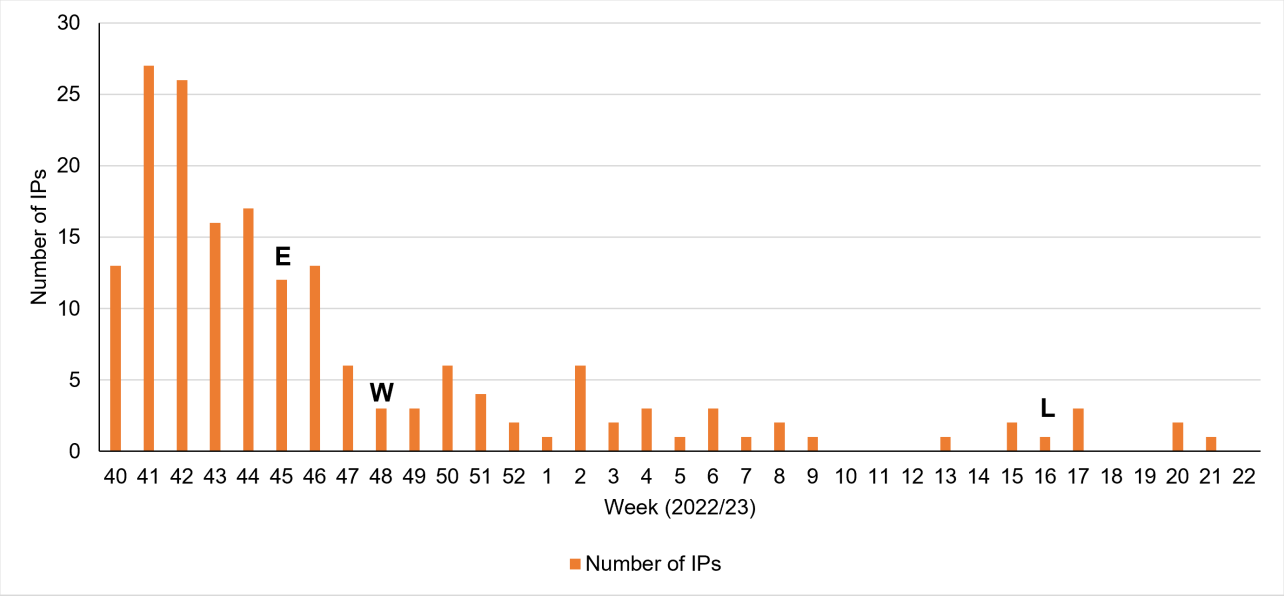
Here, a HPAI H5 event refers to a report of HPAI H5 in poultry or a location with at least one HPAI H5 positive wild bird. Individual HPAI H5 positive wild birds are referred to as cases.

United Kingdom

Since our last report on 4 May to 6 June 2023 there have been 3 further confirmed IPs with HPAI H5N1 in poultry[1] and captive birds. All 3 IPs were in England (Map 1), comprising of 3 commercial premises (more than 50 birds) located in Sussex (with ducks), North Lincolnshire (with chickens), and Lincolnshire (with chickens).

In Northern Ireland, housing measures were lifted on 18 April 2023, and the Avian Influenza Prevention Zone (AIPZ) and ban on poultry gatherings was lifted on 2 June 2023.

Figure 1. Number of IPs confirmed with HPAI H5N1 in Great Britain between week 40 2022 (start of October) and week 22 2023 (start of June). Letters denote when housing measures were introduced across England (E) and Wales (W) and when measures were lifted in both administrations (L).

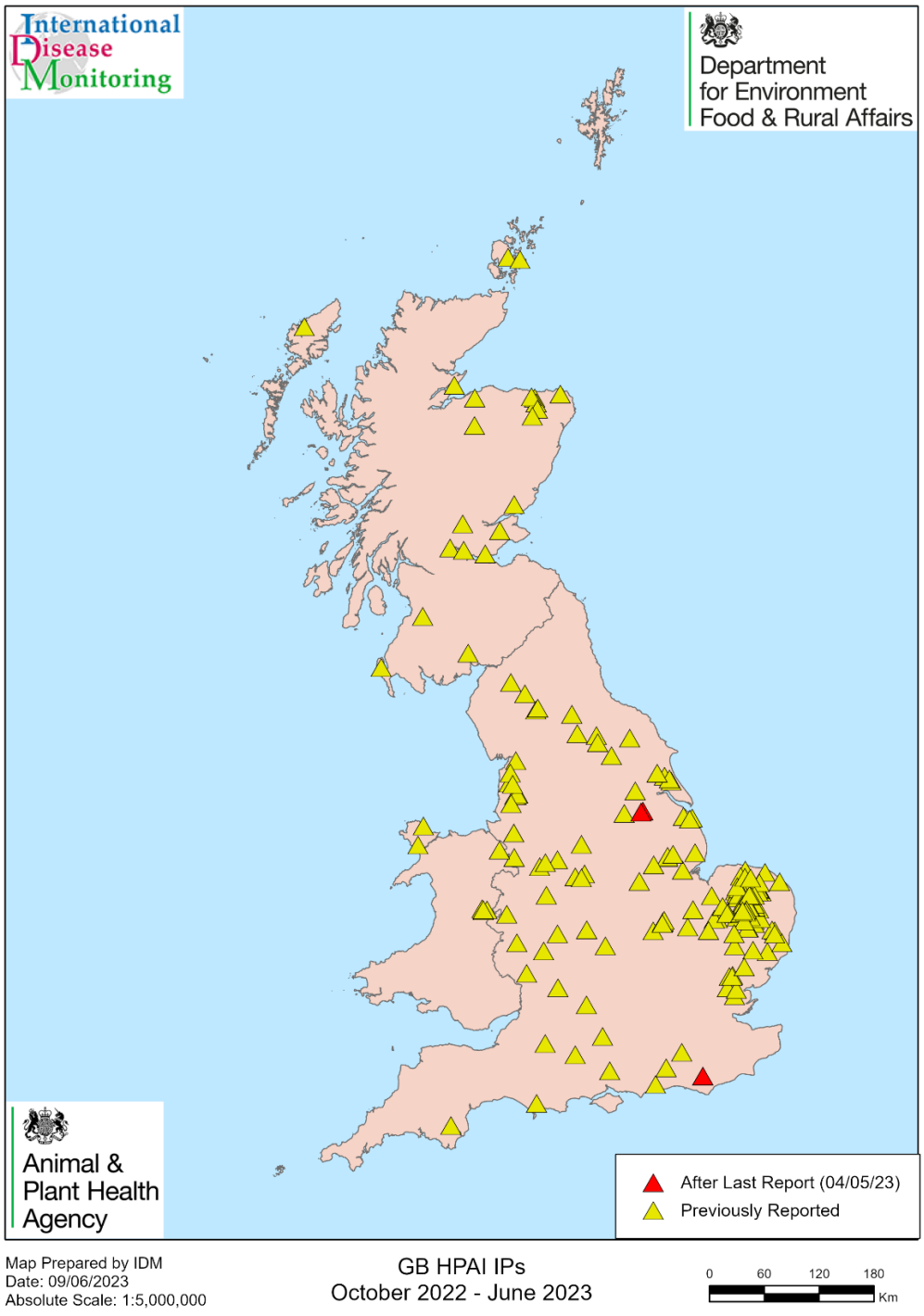


Description of Figure 1. Bar chart showing the number of infected premises with HPAI H5N1 in Great Britain between the start of October 2022 and start of June 2023. The number of infected premises has fluctuated in the last 4 weeks, with 0, 2, 1 and 0 premises confirmed, respectively.

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

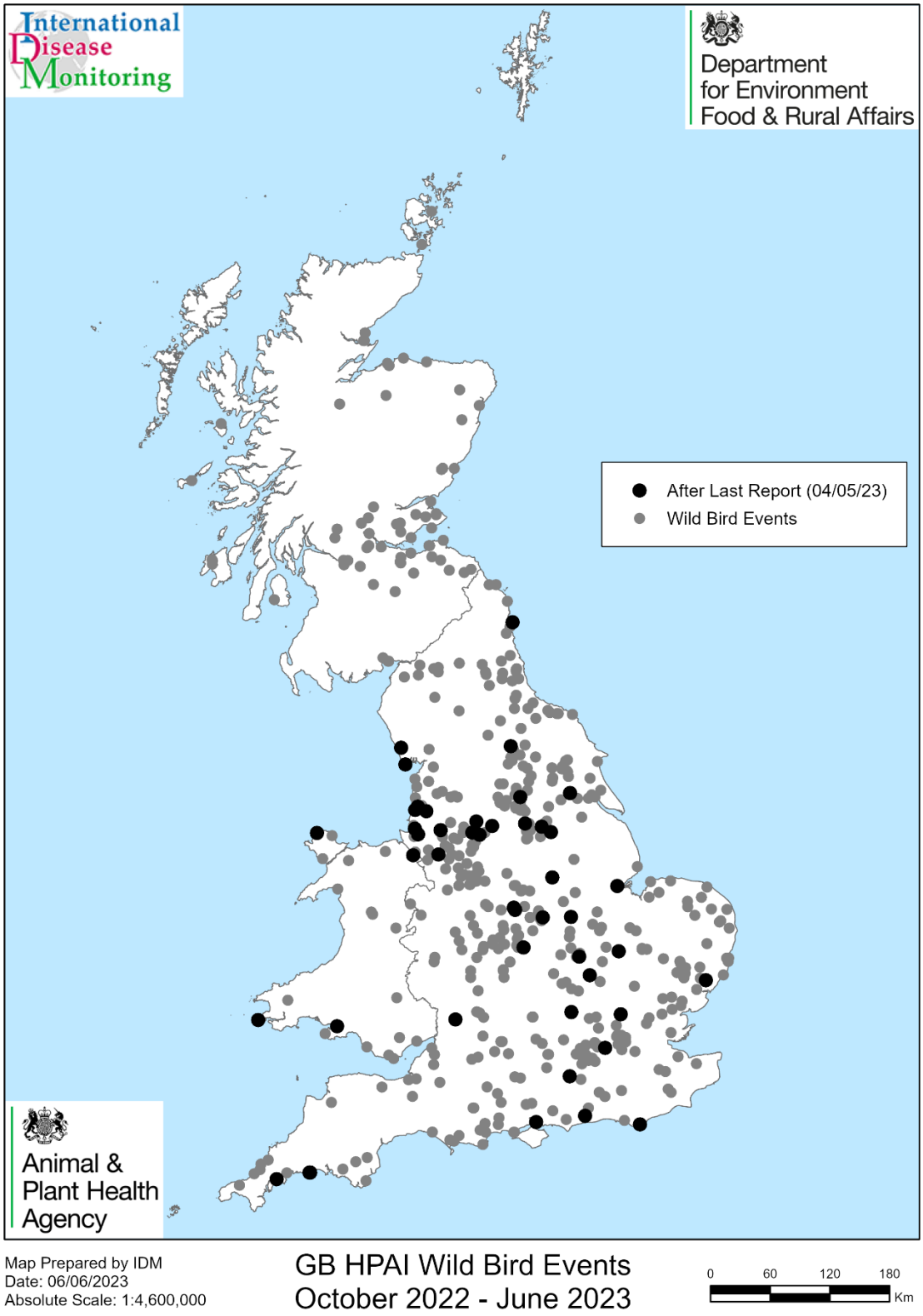
Map 1. HPAI H5 outbreaks in poultry[2] and captive birds across Great Britain, 1 October 2022 to 6 June 2023.



Description of Map 1. Across Great Britain, there have been outbreaks of HPAI H5N1 confirmed in Sussex, North Lincolnshire and Lincolnshire.

[2] 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 June 2023.



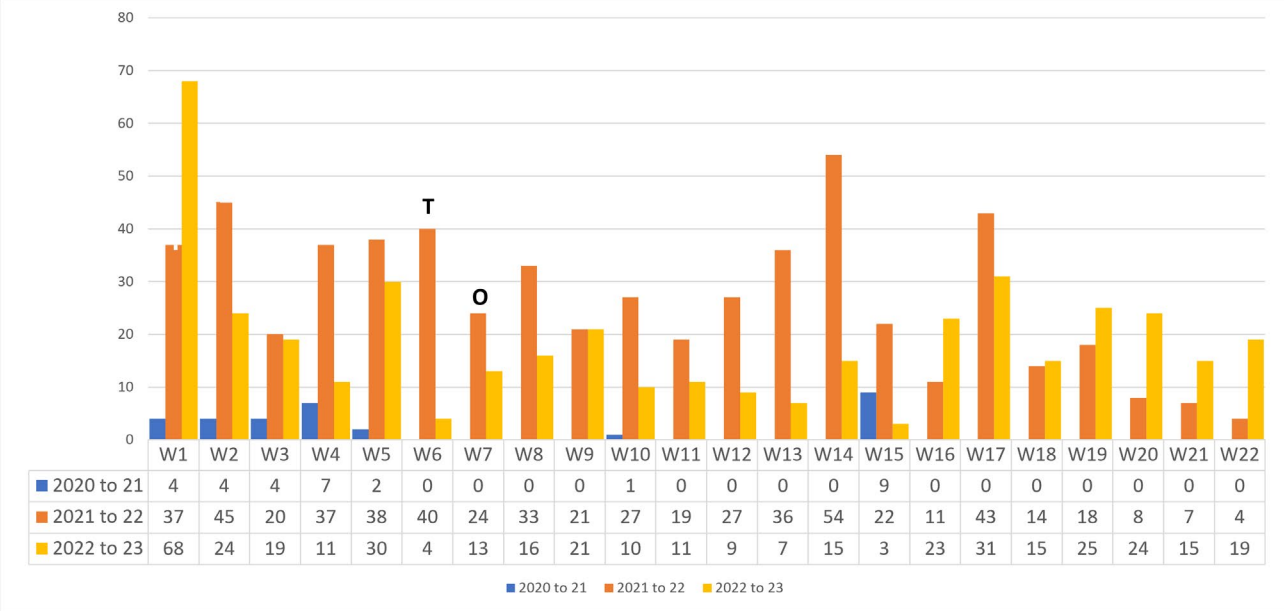
Description of Map 2. Across Great Britain, wild birds have been confirmed with HPAI H5 in widespread locations including coastal and inland parts of England and Wales since our last report.

Wild birds

Between 4 May and 6 June 2023, HPAI H5 has been detected in 107 wild birds in 43 separate locations in Great Britain, including 8 wild bird species (listed in Appendix 1), in 33 counties. Most of the findings were in England (95) with 12 wild bird cases located in Wales (see Appendix 1). As in previous weeks, HPAI-positive findings were widespread across Great Britain including both coastal and inland locations. The majority of detections (92) were in gulls, with 7 detections in birds of prey, 7 in seabirds and 1 detection in a wood pigeon.

From 4 May to 6 June 2023, there have been 9 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[a] per week across Great Britain in each season from week 1 (start of January) to week 22 (start of June). Letters denote change in carcass collection threshold for geese and swans from 5 to 3 (T) in England and from 3 to 1 (O) across Great Britain.



	W1	W2	W3	W4	W5	W6	W7	W8	W9	W10	W11	W12	W13	W14	W15	W16	W17	W18	W19	W20	W21	W22
2020 to 21	4	4	4	7	2	0	0	0	0	1	0	0	0	0	9	0	0	0	0	0	0	0
2021 to 22	37	45	20	37	38	40	24	33	21	27	19	27	36	54	22	11	43	14	18	8	7	4
2022 to 23	68	24	19	11	30	4	13	16	21	10	11	9	7	15	3	23	31	15	25	24	15	19

[a] Note that the wild bird sampling strategy may vary between, and within, seasons.

Description of Figure 2. Over the last 4 weeks, the number of wild birds detected with HPAI H5 in Great Britain was 25, 24, 15 and 19, respectively. The weekly number of detections in wild birds has varied considerably over the last 8 weeks with 3 detections in week 15 up to 31 detections in week 17.

While the number of HPAI H5 detections in wild birds has varied over the last 8 weeks, these numbers have been largely influenced by mass die-offs involving black-headed gulls. These events to date appear to have remained localised to aggregated (and often protected) colonies of birds. Similar events in black headed gulls observed across Europe have not yet led to any large increase in the number of infected poultry premises, however as fledging and further foraging occurs in the coming months, this may provide a further opportunity for interactions between black headed gulls and poultry.

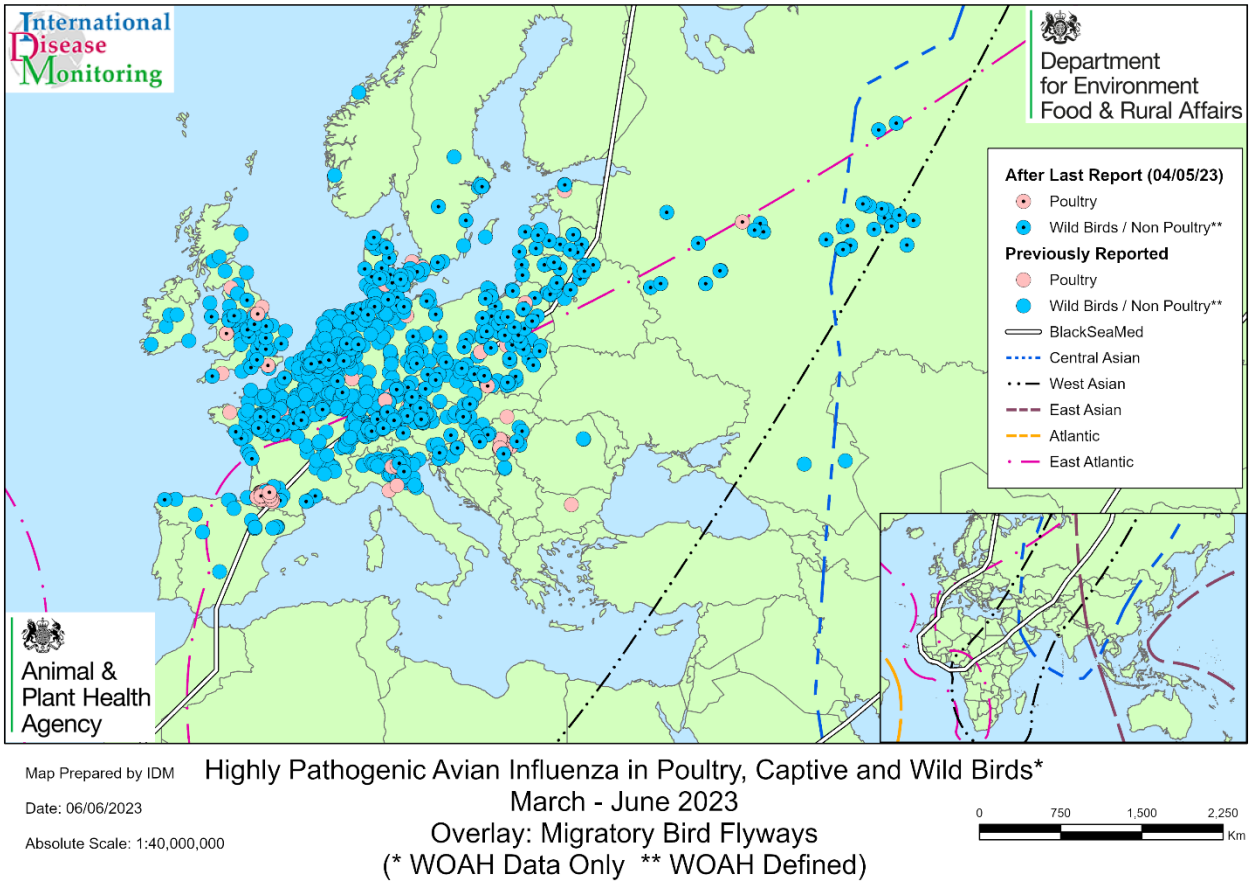
The first detections in seabirds this year have been reported, involving common, sandwich and artic tern species. It is important to note that these figures are based on passive surveillance of found dead birds and as such, may be affected by several factors including frequency of visiting areas with dead birds, as well as the size and location of carcasses. We will continue to monitor the situation closely. For further details, please see the report (updated weekly) on findings of HPAI in wild birds in Great Britain and Northern Ireland.

Non-avian wildlife

Since 4 May to 6 June, there have been no further positive HPAI H5N1 detections in non-avian wildlife in Great Britain. The 8 positive detections in mammals collected since 1 October 2022 comprise of 2 red foxes in Powys and Perth and Kinross, a Eurasian otter in Shropshire, a harbour porpoise in East Yorkshire, 2 common dolphins in Pembrokeshire and Devon and 2 grey seals in Cornwall (for map see Appendix 2). For further details and for previously reported detections in non-avian wildlife from retrospective testing, please see the report on findings of HPAI in non-avian wildlife in Great Britain.

Europe

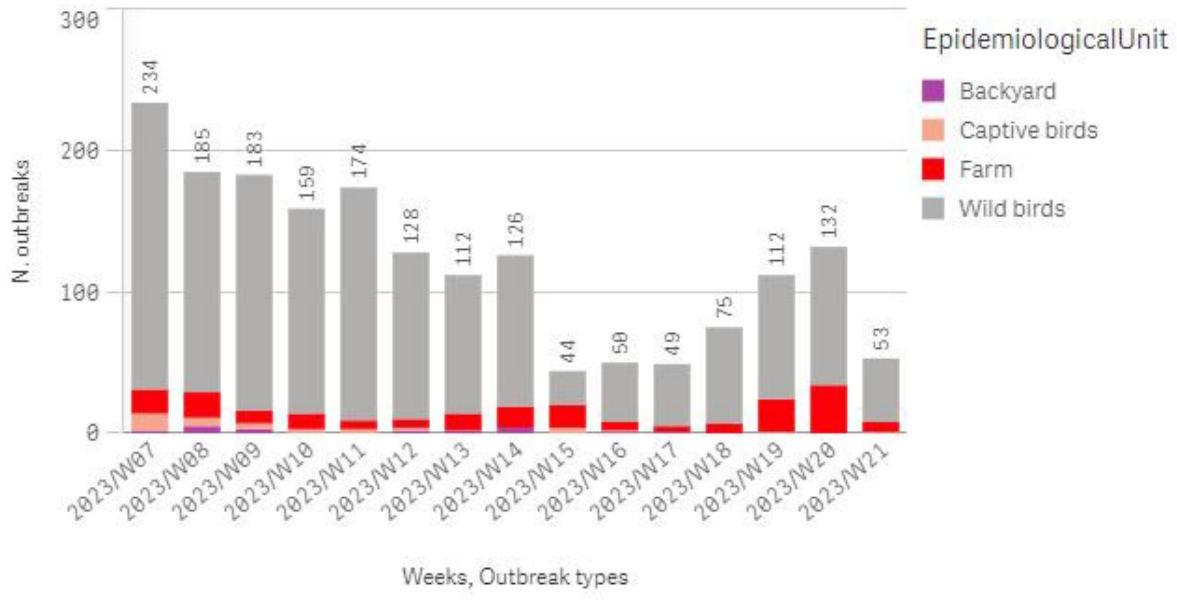
Map 3. Map showing HPAI H5 events in domestic poultry and wild birds in Europe reported by WOAH between 1 March and 31 May 2023 (WOAH, 2023).



Description of Map 3. Since 4 May 2023, HPAI H5 events in poultry, captive and wild birds have been widely reported across Europe by the WOAH, however the number of reports is decreasing.

Between 4 May and 31 May 2023, there have been a total of 260 HPAI H5N1 events reported by the WOAH in domestic poultry and non-poultry including wild birds across Europe. A total of 78 outbreaks of HPAI H5N1 were reported in domestic poultry in Czech Republic (1), France (75), Poland (1), Russia (1). 182 HPAI H5N1 events were reported in non-poultry including wild birds and mammals in Austria (5), Belgium (2), Czech Republic (5), Denmark (5), Estonia (2), France (1), Germany (24), Hungary (8), Latvia (14), Lithuania (14), Luxembourg (1), Poland (56), Russia (34), Serbia (1), Slovenia (2), Sweden (3) and Switzerland (3). There was 1 case of HPAI H5 reported in non-poultry including wild birds in Belgium. Additionally, there was 1 case of untyped or partially typed HPAI reported in non-poultry, this was a red fox in Belgium.

Figure 3. Weekly outbreaks of HPAI in poultry and captive birds and cases in wild birds reported across Europe between mid-February and the end of May 2023 (IZSVe, 2023)



Description of Figure 3. The number of outbreaks of HPAI H5 in poultry and captive birds and cases in wild birds reported across Europe has increased steadily then decreased sharply over the last 4 weeks, with report totals of 75, 112, 132 and 53 for weeks 18, 19, 20 and 21 of 2023, respectively.

The number of outbreaks of HPAI in poultry farms each week across Europe has fluctuated over the last 4 weeks, with 7 outbreaks in week 18, 23 outbreaks in week 19, 36 outbreaks in week 20, then dropping to 18 outbreaks in week 21. The number of cases in wild birds has followed a similar pattern, with 68 cases reported in week 18, 94 in week 19, 101 in week 20 and then 77 cases were reported in week 21. The majority (63.1%) of these findings in wild birds comprise of black headed gulls (IZSVe, 2023). 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

Migratory waterbirds (ducks, geese and swans) have now left Great Britain on their outward migration to their breeding grounds in northern Europe and Russia. Most resident GB waterbird species that breed in UK do not breed together in large colonies, instead breeding in well-defined dispersed territories, the exception being seabirds around the coast together with certain gull species such as black-headed gulls. The seabirds have now returned to their breeding colonies around the Great Britain coast, although it remains to be seen how HPAI H5 will affect them this summer. The increased number of detections associated with mass die-off events in black headed gulls both in Great Britain and across Europe may spill over into seabirds. The current long day lengths, high sunlight (UV) intensities and high ambient temperatures will reduce survival of the HPAI H5N1 virus in the environment although circulation of virus in seabird colonies, and even in black-headed gull colonies, may be maintained through close bird-to-bird contacts as was observed in summer 2022.

Wild bird cases in continental Europe declined through March and April from the peak of around 200 cases per week in the second week of February (Figure 3) but have increased again in May with around 100 cases per week in weeks 20 and 21. In Europe, wild bird cases are now spread across much of northern and central Europe extending as far east as the Baltic States and Moscow (see Map 3). This likely reflects the eastern migration of wintering ducks and geese in April and indeed there are few cases in southern Europe. The ongoing presence of HPAIV in wild birds in northern Europe is of little direct concern to Great Britain compared to early autumn as a potential source of HPAI entry to Great Britain. However, trends in Europe, particularly in north-western Europe, may reflect those later to be seen in Great Britain, particularly in black-headed gull populations as the breeding season in Great Britain is later than that in Europe. It is speculated that the spread of HPAI through black-headed gulls in Europe and Great Britain is due to the birds aggregating at breeding sites in spring where they have much closer behavioural contacts than when not breeding. Indeed, the northward spread of black-headed gull cases in Great Britain over the last few weeks is apparent (see Map 2).

The number of wild bird positive detections per week has dropped substantially since the beginning of January (68 detections in week 1 versus 15 detections in week 17), indicating an overall decrease in infection pressure since the winter peak (Figure 2). However, the overall infection pressure within wild bird populations in Great Britain remains high (Figure 2) with the number of detections per week over the last few weeks between 20 and 30 per week mainly due to black-headed gull mortalities, and higher than observed at the same time of year in previous seasons. A further northward spread in black-headed gull cases is anticipated over the next few weeks. For these reasons, the national risk level for HPAI H5 in wild birds is maintained at **high**.

The number of poultry IPs in Great Britain remains significantly lower than the peaks of 27 and 26 in the second and third weeks of October, with an average of less than one IP confirmation per week since week 18 (Figure 1). The effects of lifting housing measures across England and Wales on 18 April 2023 and any resulting increased exposure to

poultry from wild birds would by now have become apparent in increased IP detections. Previously, the uncertainties in the risk levels for poultry were at medium while the effect the spread of HPAI through black-headed gulls in Great Britain would have on IP numbers was unknown. It was noted that unlike seabird, black-headed gulls not only nest at inland sites but also may forage near poultry ranges, raising the possibility of a strong linkage. However, looking at Europe, the earlier spread of HPAI through black-headed gulls did not correlate with increased numbers of poultry IPs offering some reason for optimism. We now feel more certain that the poultry risk in Great Britain is not going up despite the ongoing cases in gulls at this moment in time, but as foraging behaviours change following fledging there may be more opportunity for interactions between black headed gulls and poultry in late summer. We have seen the northward progression of the cases in black-headed gulls in England and Wales through high density poultry areas on a national scale with no translation into poultry outbreaks. There have been no backyard outbreaks recently. Many wild bird cases are now coastal, and most poultry premises are not coastal but inland. Therefore, risk of infection of poultry in Great Britain with stringent biosecurity is maintained at **low** but now with **low uncertainty (reduced from medium)**. The risk of infection of poultry in Great Britain with sub-optimal biosecurity is maintained at **medium,** but now with **low uncertainty (reduced from medium)**.

It remains to be seen how long into the summer that new IPs will continue to occur in Great Britain. It also remains to be seen whether HPAI will spill over into other wild bird species during the summer such that infection is maintained into the autumn. 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 Great Britain. The ongoing high 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, albeit at a decreasing rate.

Since 1 October 2022, there have been 1,043 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 **HIGH**. There is currently a high infection pressure on poultry from wild birds. While lengthening daylight hours and increased UV intensity will favour a reduction in environmental virus contamination, the continued detections in wild birds demonstrate that the infection pressure is still present. This presents opportunities for transmission to poultry through poor biosecurity, or where there are biosecurity breaches. There have been some black-headed gull die-offs and it remains to be seen whether this will transfer into seabird

colonies around the coast of Great Britain, with a small number of terns being detected as infected over the last week.

The number of IPs has reduced substantially since the peak in mid-October and the infection pressure from wild birds and residual environmental infectivity has reduced. Therefore, the risk of exposure of poultry across Great Britain where biosecurity is stringent is maintained at **LOW** (with low uncertainty), while the risk to poultry in Great Britain where biosecurity is suboptimal is maintained at **MEDIUM** (with low uncertainty).

Housing measures that came into force across England on 7 November and across Wales on 2 December 2022 were lifted on 18 April 2023. 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 are still applicable.

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, such as fully netted enclosures and runs, and fenced enclosures and ranges where there is currently an AIPZ 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 into housing or on the range) 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
- Northern Ireland is available on DAERA's website

The WOAH, FAO International Reference Laboratory and the UK National Reference Laboratory at Weybridge have the necessary diagnostic capability for strains of avian influenza virus, whether of low or high pathogenicity, and continually monitor changes in the virus on a wide scale, whilst utilising global networks to gain early insights into 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 to 2023 HPAI season - wild bird species in Great Britain that have tested positive for HPAI H5 between 1 October 2022 and 6 June 2023.

Region and species	Total number of birds testing positive with HPAI H5 since last assessment (4 May 2023)	Total number of birds testing positive with HPAI H5 since 1 October 2022
England		
Black Swan	0	1
Canada Goose	0	173
Great White Egret	0	1
Grey Heron	0	1
Greylag Goose	0	112
Herring Gull	9	22
Kestrel	0	6
Mute Swan	0	143
Pink footed goose	0	27
Unspecified Goose	0	5
Unspecified Swan	0	2
Whooper swan	0	15
Common Buzzard	0	77
Red Kite	1	3
Pheasant	0	31

Region and species	Total number of birds testing positive with HPAI H5 since last assessment (4 May 2023)	Total number of birds testing positive with HPAI H5 since 1 October 2022
Curlew	0	1
Barnacle goose	0	3
Mallard duck	0	6
Unspecified duck	0	2
Black Headed Gull	75	132
Sparrowhawk	0	19
Goshawk	0	1
Wood Pigeon	1	5
Unspecified Gull	1	1
Common Gull	0	2
Tawny Owl	0	6
Gannet	0	7
Great Black Backed Gull	0	1
Common Tern	2	2
Carrion Crow	0	1
Razorbill	0	1
Little Egret	0	1
Rock Dove	0	10

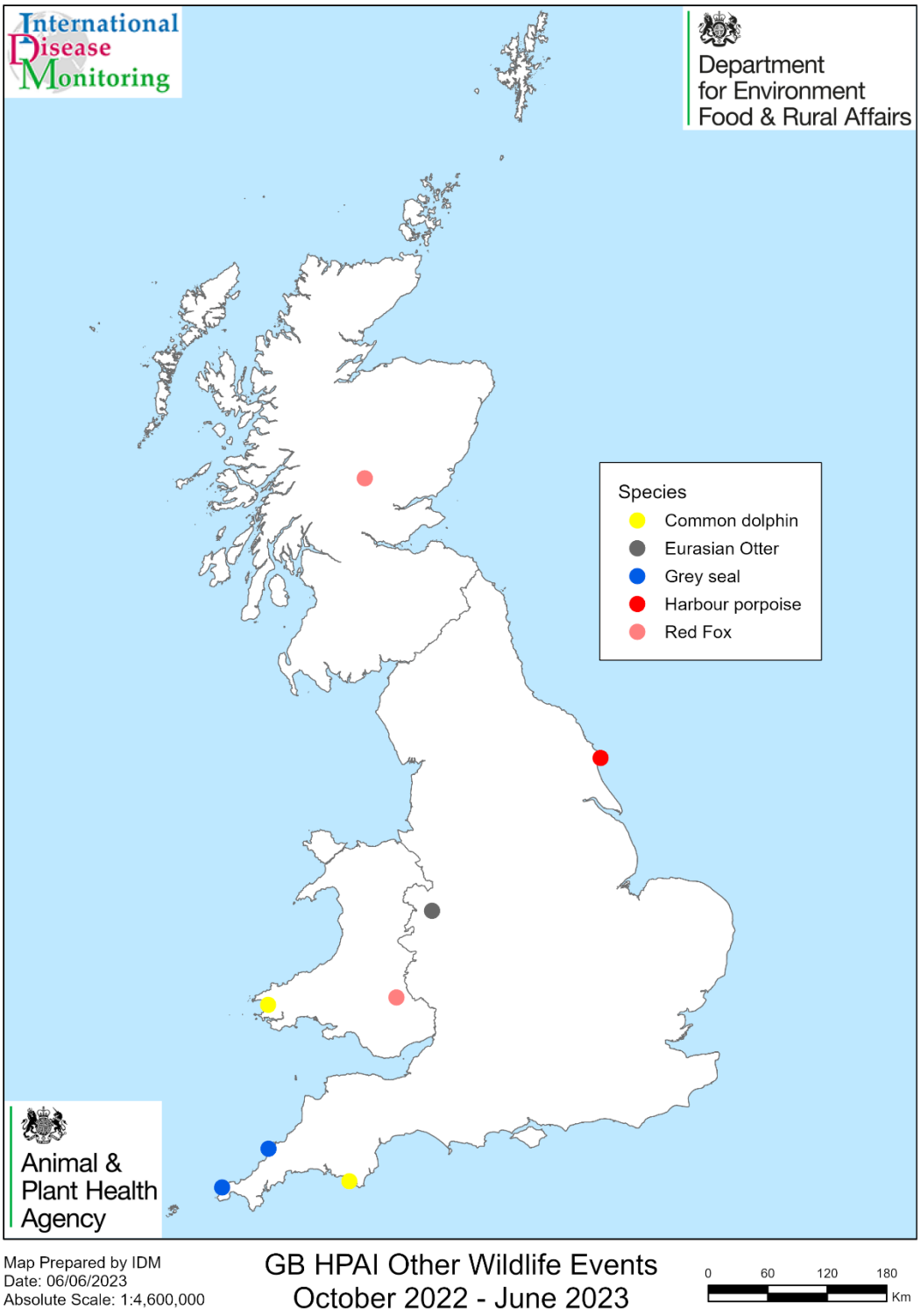
Region and species	Total number of birds testing positive with HPAI H5 since last assessment (4 May 2023)	Total number of birds testing positive with HPAI H5 since 1 October 2022
Lesser black-backed gull	0	1
Crow	0	1
Pintail duck	0	1
Peregrine	3	18
Unidentified Avian	0	2
Barn Owl	0	2
Red Legged Partridge	0	1
Goosander	0	1
Red Breasted Goose	0	2
Fantail Dove	0	1
Unspecified Bird of Prey	3	5
Other Crow	0	2
Unlisted Goose	0	3
Unspecified Pheasant	0	3
Shoveler	0	1
Greater Spotted Woodpecker	0	1
Dove Pigeon	0	1

Region and species	Total number of birds testing positive with HPAI H5 since last assessment (4 May 2023)	Total number of birds testing positive with HPAI H5 since 1 October 2022
Teal	0	1
England total	**95**	**867**
Scotland		
Greylag Goose	0	4
Herring Gull	0	10
Mute Swan	0	14
Pink footed goose	0	23
Unspecified Goose	0	4
Whooper swan	0	2
Common Buzzard	0	10
Pheasant	0	4
Barnacle goose	0	19
Black Headed Gull	0	1
Sparrowhawk	0	2
Guillemot	0	1
Hen Harrier	0	1
White Fronted Goose	0	2

Region and species	Total number of birds testing positive with HPAI H5 since last assessment (4 May 2023)	Total number of birds testing positive with HPAI H5 since 1 October 2022
Unspecified Gull	0	6
Common Gull	0	5
Tawny Owl	0	1
Fulmar	0	1
Lesser black-backed gull	0	2
Osprey	0	1
Unspecified Tern	0	3
Barn Owl	0	1
Red-throated Diver	0	1
Unspecified Heron	0	1
Ringed Plover	0	1
Unknown Buzzard	0	3
Scotland total	**0**	**123**
Wales		
Canada Goose	0	3
Greylag Goose	0	5
Herring Gull	1	1

Region and species	Total number of birds testing positive with HPAI H5 since last assessment (4 May 2023)	Total number of birds testing positive with HPAI H5 since 1 October 2022
Mute Swan	0	10
Common Buzzard	0	4
Pheasant	0	9
Mallard duck	0	2
Black Headed Gull	6	6
Guillemot	0	1
Hen Harrier	0	1
Moorhen	0	1
Gannet	0	2
Arctic Tern	1	1
Common Tern	2	2
Sandwich Tern	2	2
Lesser black-backed gull	0	2
Unspecified Bird of Prey	0	1
Wales total	**12**	**53**
Grand total	**107**	**1043**

Appendix 2. Non-avian wildlife species in Great Britain that have tested positive for HPAI H5 between 1 October 2022 and 6 June 2023.



Description of Appendix 2. Since 1 October 2022, HPAI H5 has been detected in Perth and Kinross (red fox), Powys (red fox), Shropshire (Eurasian otter), East Yorkshire (harbour porpoise), Pembrokeshire (common dolphin), Devon (common dolphin) and Cornwall (2 grey seals).

Authors

- Candida Adridge
- Dr Lorna Freath
- Dr Paul Gale
- Dr Lauren Perrin

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.