Department for Environment, Food and Rural Affairs

Updated Outbreak Assessment #36

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

7 November 2022

Disease report

Since our last outbreak assessment on 24 October 2022, 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 36 new infected premises (IPs) confirmed with HPAI H5N1 in Great Britain, 29 in commercial poultry premises and 7 in non-commercial premises. There have been 47 HPAI H5 events detected 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 high uncertainty** and the risk to **poultry with suboptimal biosecurity** is maintained at **high, with low 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 (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.

The Housing Order and AIPZ in England is additional to the AIPZ which was declared in Norfolk, Suffolk and parts of Essex on 27 September 2022, and the subsequent additional housing measures that came into force for Norfolk, Suffolk, and parts of Essex on 12 October 2022.

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 Belgium, France, Germany, Hungary, Italy, the Netherlands and Russia. The World Organisation for Animal Health (WOAH) has reported an outbreak of HPAI H5Nx in domestic poultry in Bulgaria. HPAI H5N1 events in non-poultry species, including wild birds, have been reported by WOAH in Belgium, Denmark, France, Ireland, Italy, Serbia and Montenegro, Slovenia, Sweden and Spain.

In previous years, the risk of incursion for HPAI in wild birds in Great Britain was informed primarily by detections of HPAI in migratory wild birds in Northern Europe. However, the wild bird events observed in Great Britain over the summer of 2022, and the rapidly changing situation in domestic poultry demonstrate the need to consider additional risk drivers. The increased number of HPAI detections in resident wild waterfowl species, particularly at inland locations, increases the risk to poultry. Furthermore, migratory waterfowl are continuing to arrive in Great Britain at their wintering sites, with numbers of arrivals expected to peak in the coming weeks, which will increase infection pressure for wild birds.

As we head towards the winter months and the return of increasing numbers of wild waterfowl, we will continue to monitor HPAI events in wild birds across Europe as these migratory birds could be sources of new HPAI virus introduction to the UK.

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

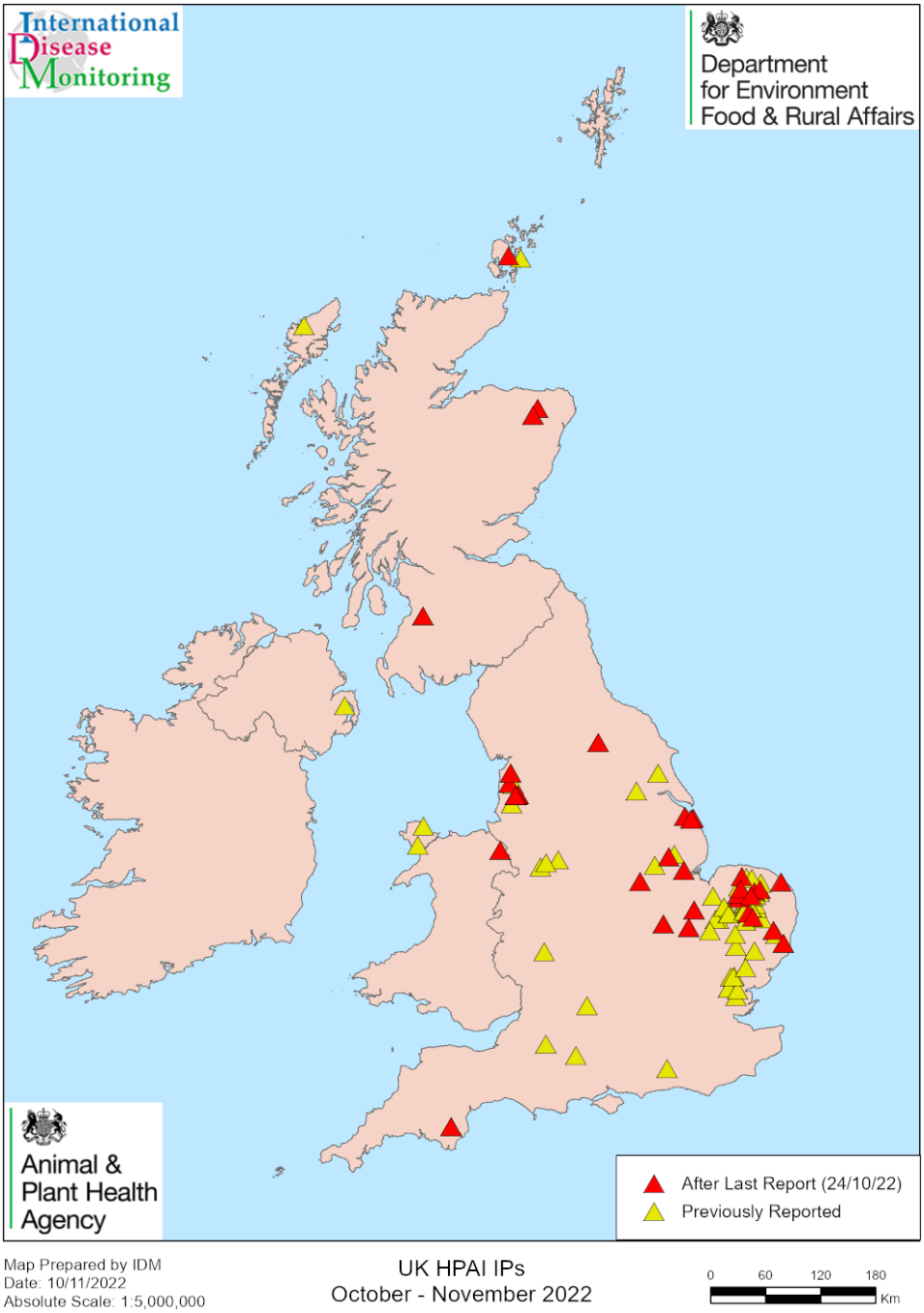
Since our last report on 24 October 2022, and to 7 November 2022 at time of writing, there have been 36 further confirmed IPs with HPAI H5N1 in poultry[1] and captive birds; 31 in England, four in Scotland and one in Wales. These IPs comprise of 29 commercial premises (more than 50 birds) and seven non-commercial premises (50 and fewer birds). Of the 29 commercial IPs, ten were located in Norfolk (three IPs with chickens, six with turkeys, and one with a mixed poultry flock), six were in Lancashire (three IPs with chickens, two with turkeys, and one with a mixed poultry flock), five were in Lincolnshire (four with turkeys and one with a mixed poultry flock), two were in Suffolk (both with ducks), two were in Aberdeenshire (both with chickens), one IP in each of: Ayrshire (with chickens), Cambridgeshire (with chickens), Northamptonshire and York (with turkeys).

The seven non-commercial IPs were comprised of three small holder premises (between 10 and 50 birds) with mixed species, (one IP in Cambridgeshire, one IP in Lancashire and one IP in Lincolnshire) and three IPs in backyard holdings (fewer than 10 birds), one in each of Devon (geese and chickens), Flintshire (mixed poultry), Lancashire (ducks) and on the Orkney islands (mixed poultry).

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 to 7 November 2022.



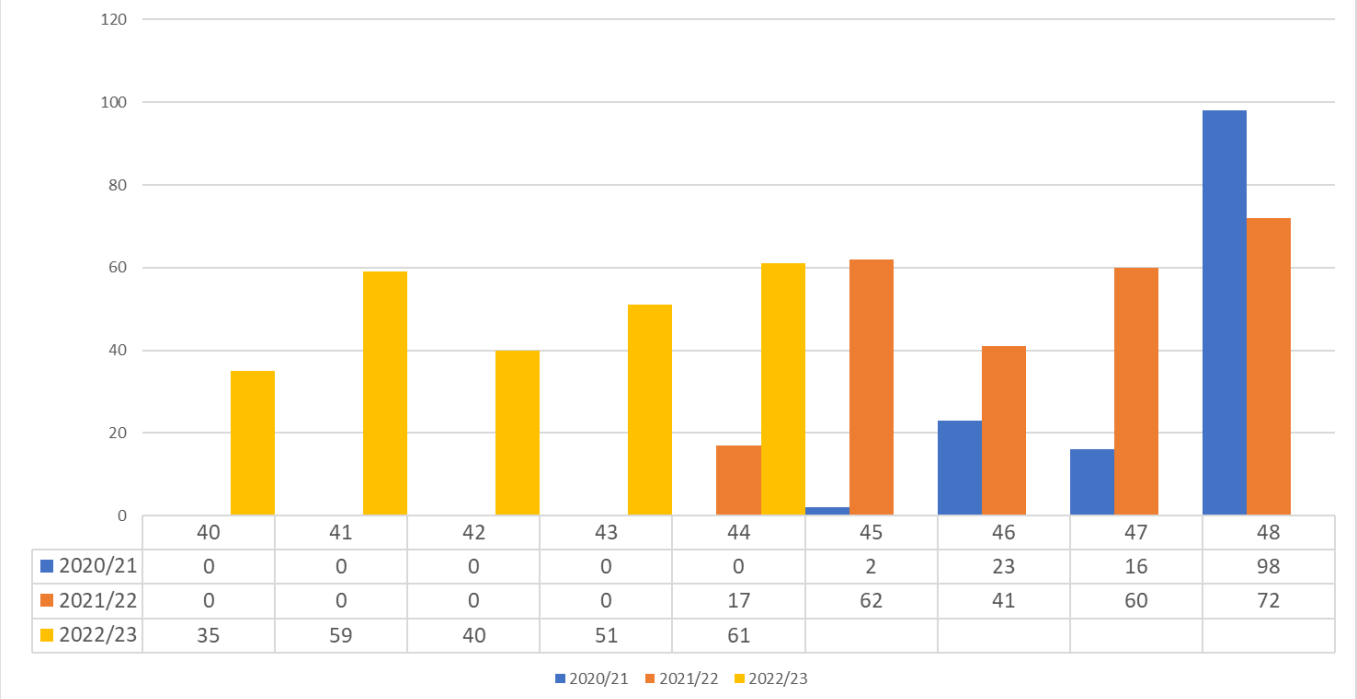
Map 2: Map showing the HPAI H5 positive findings in wild birds across Great Britain between 1 October and 7 November 2022.

Wild birds

Between 24 October and 7 November 2022, HPAI H5 has been detected in 112 wild birds in 47 separate locations in Great Britain, including 18 wild bird species (listed in Appendix 1), in 24 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, findings have been at both coastal and inland locations, however the greatest number of findings were in waterfowl (92), two of which were in a barnacle goose and a pink-footed goose that were likely to be migratory. The other detections were in seabirds (5), pheasants (10), gulls (7) and birds of prey (5).

From 24 October to 7 November 2022, there have been three further cases for which the HPAI H5 genotype has been identified, but characterisation of neuraminidase (NA) subtype is in progress due to low viral loads in samples.

Figure 1: Wild bird HPAI H5 positive cases* per week across Great Britain in each season: from week 40 (approximately the start of October) to week 48 (approximately the start of December).



	40	41	42	43	44	45	46	47	48
2020/21	0	0	0	0	0	2	23	16	98
2021/22	0	0	0	0	17	62	41	60	72
2022/23	35	59	40	51	61				

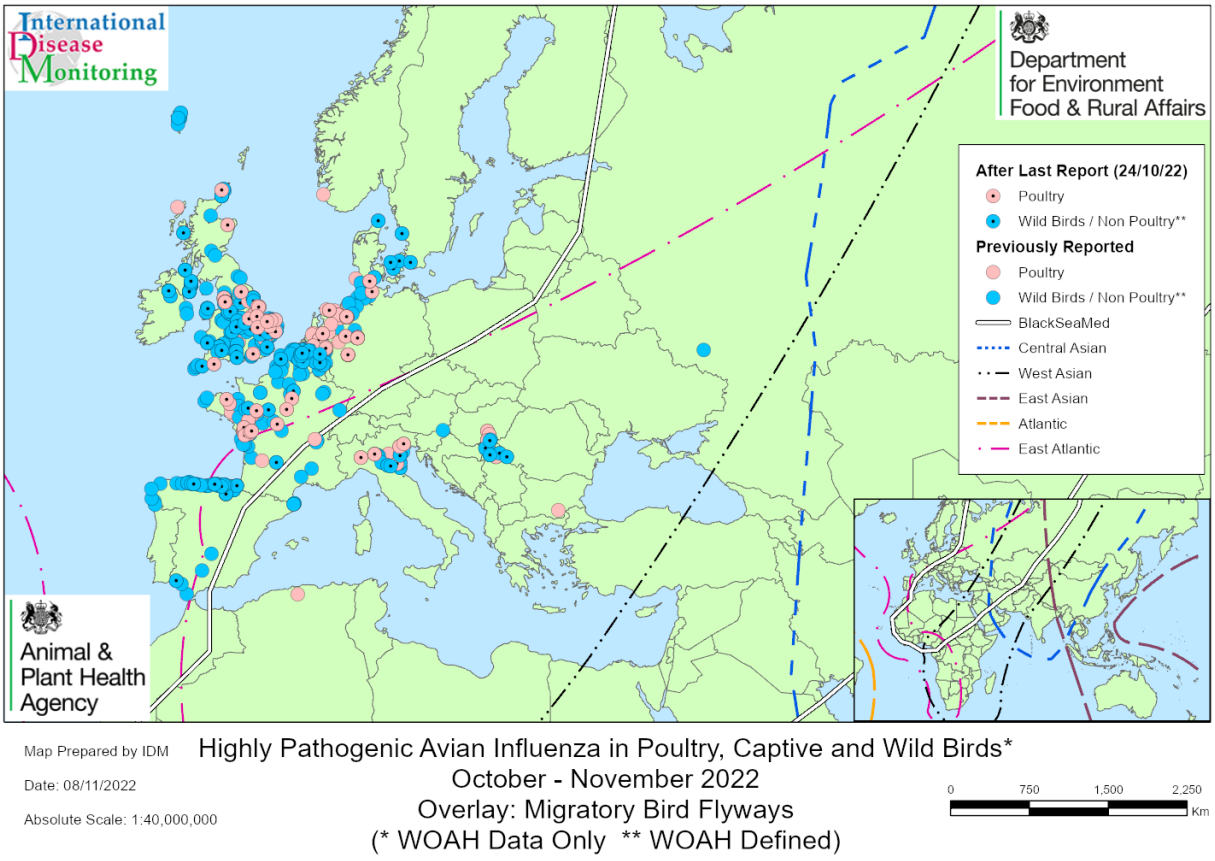
*Note that the wild bird sampling strategy may vary between, and within, seasons. Between weeks 40 and 48, the threshold for collection of wild birds was three in 2020 and 2022, and one in 2021.

There continues to be a high number of detections observed in indigenous waterfowl in recent weeks, particularly in inland locations, which suggests a high infection pressure amongst resident bird species. There have been comparatively few detections in migratory birds so far this season although these are not specifically targeted during surveillance.

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

Europe

Map 3: Map showing HPAI H5 events in domestic poultry and wild birds from 1 October to 7 November 2022 in Europe according to WOAH report date (WOAH, 2022).



Between 24 October and 7 November 2022, there has been a total of 97 HPAI H5N1 events reported by the WOAH in domestic poultry and non-poultry including wild birds across Europe, and one report of HPAI H5Nx (Table 2). Of these, 12 events were in Serbia, which had start dates between December 2021 and May 2021. Of the remainder, 40 outbreaks were reported in domestic poultry in: Belgium (2), France (11), Germany (13), Hungary (2), Italy (5), the Netherlands (6) and Russia (1). 49 events were reported in non-poultry/wild birds in: Belgium (13), Denmark (5), France (6), Ireland (1), Italy (3), Serbia and Montenegro (1), Slovenia (1), Spain (13) and Sweden (2). There was one outbreak of H5NX in poultry in Bulgaria.

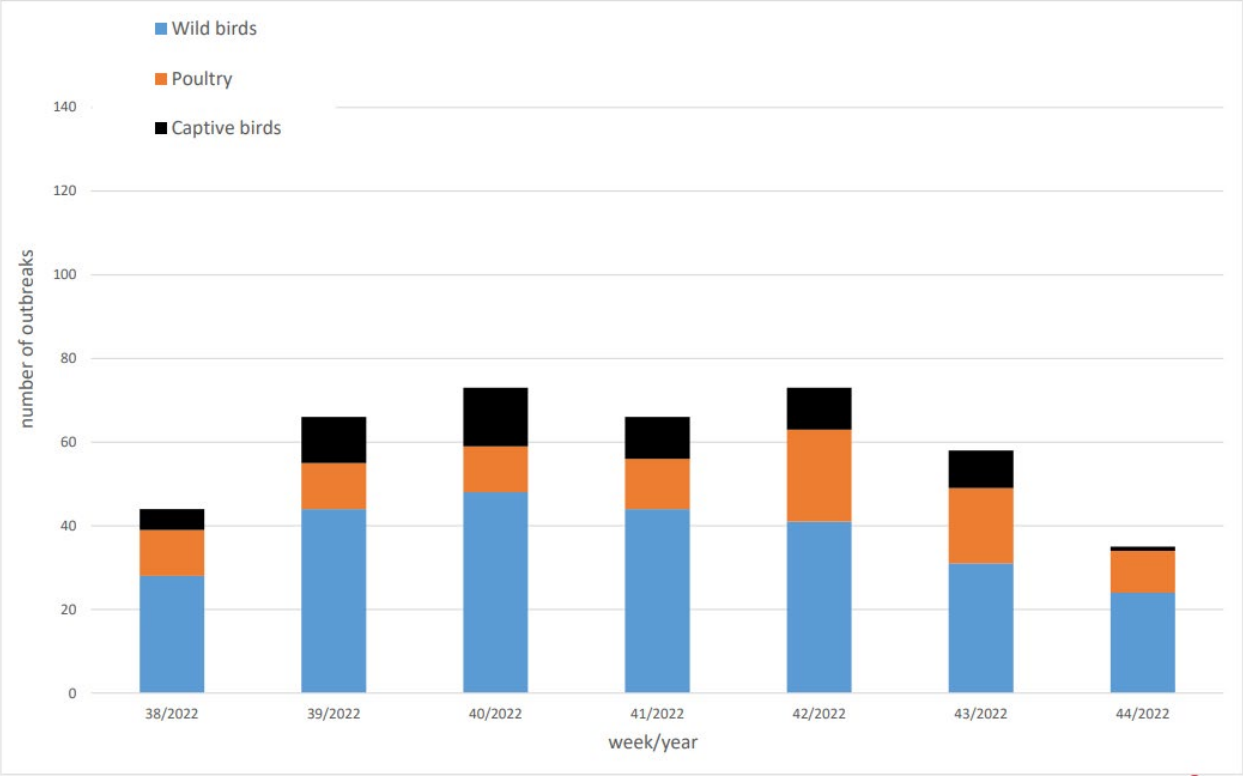
Across Europe, the number of poultry IPs reported weekly by IZSVe has increased to around 20 per week for the last two weeks (Figure 2). The weekly number of HPAI events in wild birds has been decreasing over the past 3 weeks, with cases dropping from 40 in week 42 to around 25 so far in week 44. Despite the decrease there continues to be a greater number of wild bird cases being reported in Autumn 2022 compared with the same time in 2021. For example, in week 40 to 41 in 2021, there were fewer than 5 cases in wild

birds reported per week. Also, outbreaks in poultry were not reported in Europe until week 42 in 2021, whereas they continued throughout 2022 with reports from this season in week 38 (Figure 2).

Most of the recent wild bird events in Europe are in north-western Europe (and the Iberian Peninsula), running along the English Channel through the northern coast of France and Belgium into the Netherlands and northern Germany. The presence of HPAI in wild birds in northern Europe at this time of year is of concern as a potential source of infection for ducks, geese and swans migrating west to Great Britain, many of them flying through the Baltics and west through the Netherlands to Great Britain. Many geese and swans will be currently flying into the UK via Norway, Svalbard, Iceland and off Greenland (Jan Mayen Island for example), including whooper swans, Greenland barnacle geese, pink-footed geese. Also, white-fronted geese from Greenland and Iceland, and Solway Barnacle geese from Svalbard. Some of these locations, such as Norway and Iceland, have reported HPAI H5N1 in wild birds and poultry this month.

Residual infectivity from affected seabird colonies at coastal sites in southern and eastern England could serve as a source of infection for the dark-bellied brent geese and pink-footed geese which overwinter in the UK. These geese will be returning from their summer breeding sites (along the arctic coast of Russia for dark bellied brent geese, Iceland, and Greenland for the pink-footed geese) in the next few weeks.

Figure 2: Number of HPAI positive events reported in poultry, captive, and wild birds in Europe between 19 September and 7 November 2022 (IZSVe, 2022).



Implications for Great Britain

In autumn 2022, disease events in Great Britain started to occur in domestic poultry and wild birds at a much earlier point in time than in previous years, due to HPAI continuing to circulate in breeding birds, mainly seabirds, over the summer. This is different from previous epizootic years where HPAI virus entered Great Britain with the migratory waterbirds in the autumn. Many of the wild birds currently detected with HPAI H5 are resident waterbirds with fewer migratory species reported.

The recent increase in outbreaks in domestic poultry in Great Britain reported herein is occurring concurrently with increasing numbers of cases in wild birds, particularly in resident waterfowl species. Whereas in previous years, confirmation of disease in wild birds has preceded the first outbreaks to occur in domestic poultry, this is not the case at present. The arrival of migratory waterfowl in Great Britain is now well underway, and although it is currently unclear whether migratory birds are arriving with HPAI or whether they are infected upon arrival, the resultant increase in bird population numbers may increase infection pressure in the environment, with further spread of infection. Furthermore, HPAI H5 detections in wild birds and poultry have been reported in north-west continental Europe (France, Germany, Denmark and the Netherlands) which in previous years have preceded increases in the risk in wild birds in Great Britain. For these reasons, the national risk level for HPAI H5 in wild birds is maintained at **very high**.

In view of the continuing poultry outbreaks in both the UK and north-west Europe, 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 GB with stringent biosecurity is maintained at **medium,** with **high uncertainty**, reflecting the ongoing high wild bird infection pressure. 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, especially since the infection pressure in wild birds may increase further in the coming months. The ongoing wild bird infection pressure will likely expose any weaknesses that exist, even where a good biosecurity plan is in place; if this is not properly implemented, and there are biosecurity breaches (such as poor maintenance of buildings).

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 and the start of the 2022 to 2023 HPAI outbreak season, there have been 246 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 high infection pressure from wild birds, which is anticipated to be further increased by the arrival of migratory waterfowl, although there have been relatively few HPAI H5 positive migratory waterbirds reported so far. Temperature conditions favouring increased virus survival during the coming cooler winter months will mean residual infectivity in the environment lingers for longer with implications for fomite transmission to poultry through poor biosecurity, or where there are biosecurity breaches.

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 high 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.

The Housing Order and AIPZ in England is additional to the AIPZ which was declared in Norfolk, Suffolk and parts of Essex on 27 September 2022, and the subsequent additional housing measures that came into force for Norfolk, Suffolk, and parts of Essex on 12 October 2022.

We are continuing to closely monitor the situation and reviewing 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 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. 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 to the Defra wild bird helpline on 03459 33 55 77 and select option 7:

- 3 or more swans, geese, ducks, gulls, and waders
- any number of birds of prey, including owls
- 5 or more 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 and 24 October 2022

Region and species	Number of birds testing positive since last update (24 October 2022)	Total number of birds testing positive (since 1 October 2022)
England (below)	**96**	**209**
Barnacle goose	1	2
Black headed hull	4	7
Canada goose	51	74
Common buzzard	2	5
Crow	0	1
Gannet	0	7
Greylag goose	13	37
Herring gull	1	1
Lesser black-backed gull	0	1
Mallard duck	1	2
Mute Swan	8	28
Pheasant	4	23
Pink footed goose	1	3
Pintail duck	0	1
Rock dove	0	4
Tawny owl	1	1

Region and species	Number of birds testing positive since last update (24 October 2022)	Total number of birds testing positive (since 1 October 2022)
Red kite	0	1
Peregrine	1	2
Unspecified swan	0	1
Whooper swan	6	6
Grey heron	1	1
Kestrel	1	1
Scotland (below)	**7**	**10**
Common gull	1	1
Hen harrier	0	1
Mute swan	1	2
Osprey	0	1
Fulmar	1	1
Unspecified tern	1	3
Unspecified gull	1	1
Wales (below)	**9**	**27**
Gannet	0	2
Greylag goose	2	5
Lesser black-backed gull	0	1

Region and species	Number of birds testing positive since last update (24 October 2022)	Total number of birds testing positive (since 1 October 2022)
Mallard duck	0	2
Mute swan	1	8
Pheasant	6	9
Grand Total	**112**	**246**

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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 (2022) Department of Agriculture, Environment and Rural Affairs Avian influenza information page
- IZSVe (2022) IZSVe report - Number of highly pathogenic avian influenza positive events notified by country and poultry category (pdf)
- WOAH (2022) 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.