

Updated Outbreak Assessment #31

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

01 August 2022

Ref: VITT/1200 HPAI in the UK and Europe

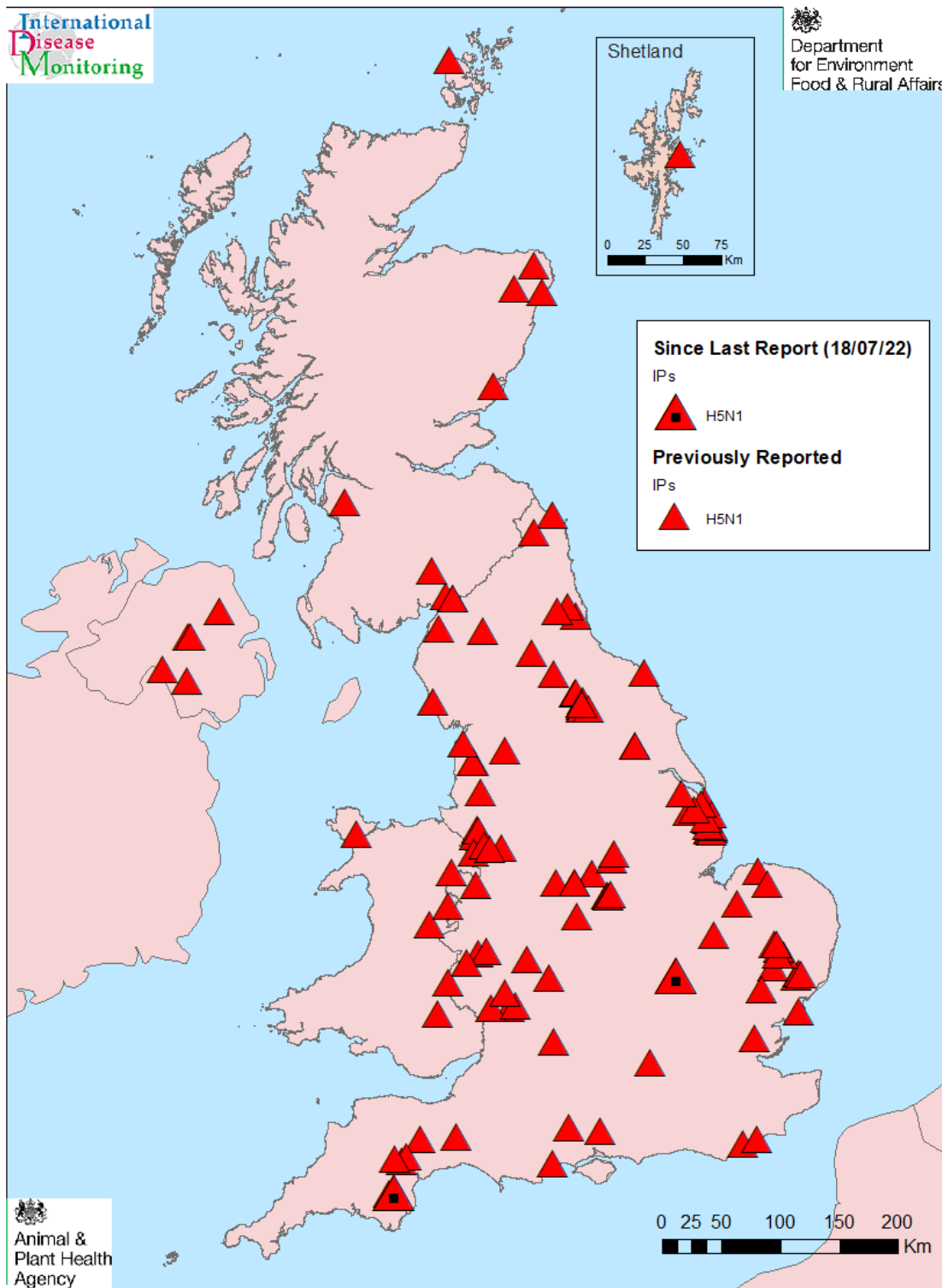
Disease report

Since our last outbreak assessment on 18 July 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 two new infected premises (IPs) confirmed with HPAI H5N1 in England; one in domestic poultry, and the second in a special category premises. There have been 25 further HPAI H5 events detected in wild birds in Great Britain (GB) since our last assessment.

The World Organisation for Animal Health (WOAH) has reported further IPs with HPAI H5N1 in domestic poultry in France, Germany, Poland and the Netherlands since our last report.

Wild bird cases in Europe have been decreasing since the unprecedented third peak earlier in the summer, with cases reported in Finland, France, Germany, Norway, Poland, Russia and Sweden since our last report.

Map 1: HPAI H5 outbreaks in domestic poultry¹ and captive birds across the United Kingdom, October 2021 to 01 August 2022



Date: 02/08/2022
Map prepared by IDM

UK HPAI IPs
October 2021 - August 2022

Situation assessment

United Kingdom

Since the first HPAI H5N1 detection on 15 October 2021, there have been 120 further confirmed IPs with HPAI H5N1 in poultry and captive birds across Great Britain (Map 1), (Table 1). Of these 121 IPs in total, 105 have occurred in England, 11 have occurred in Scotland (including the Scottish Islands), and five in Wales. The AIPZ, which requires personnel working with poultry and hobbyists to take additional biosecurity measures, remains in place in England, Wales and Scotland.

Since our last assessment on 18 July 2022, HPAI H5N1 has been confirmed at two further commercial premises in England: one in Devon and another in Bedfordshire.

There have been no new premises with HPAI H5N1 confirmed in Northern Ireland (NI) since our last report on 18 July 2022. Following the lifting of the AIPZ in Northern Ireland on 1 June 2022, the total number of poultry IPs remains at six; including the counties of Tyrone, Antrim, Armagh and Fermanagh (DAERA, 2022). There have been no further confirmed cases of HPAI in wild sea birds in NI since our last report. As of 28 July 2022, the number of wild bird findings of HPAI H5 in Northern Ireland is 17 (IZSve, 2022).

Table 1: Current poultry¹ and captive bird premises with High Pathogenicity Avian Influenza (HPAI) H5N1 in Great Britain and Scottish Isles as of 01 August 2022. For outbreaks which were resolved before 06 July, see our [previous outbreak assessment](#)

Outbreak Number	Date HPAI H5N1 confirmed	Location, County	Description	Date resolved ²
111	7 May 2022	Near Lowdham, Nottinghamshire	Commercial laying hens	
112	19 May 2022	Near Southwell, Nottinghamshire	Commercial smallholder mixed species	

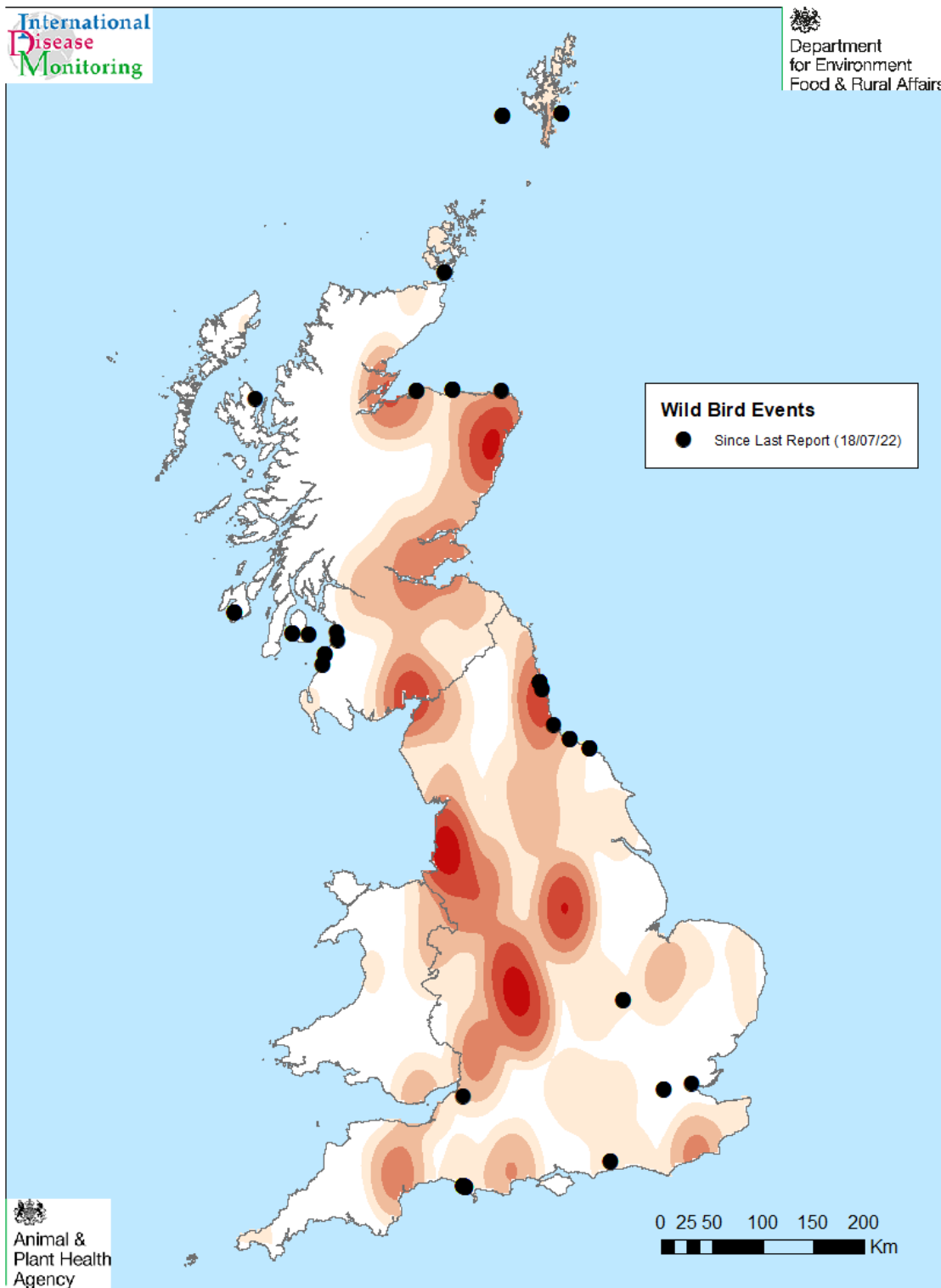
¹ According to the 2021 WOAHP definition of poultry: [Terrestrial Code Online Access - WOAHP - World Organisation for Animal Health](#)

Outbreak Number	Date HPAI H5N1 confirmed	Location, County	Description	Date resolved ²
114	1 June 2022	Near Ludlow, Shropshire	Commercial fattening turkeys	
115	7 June 2022	Near Ludlow, Shropshire	Commercial fattening turkeys	
116	15 June 2022	Near Bexhill-on-Sea, East Sussex	Backyard chickens	
117	21 June 2022	Near Hastings, East Sussex	Wildlife rehabilitation centre	
118	6 July 2022	Near Birsay, Orkney	Backyard chickens	
119	8 July 2022	Near Tiverton, Devon	Backyard mixed species	
120	23 July 2022	Near Newton Abbott, Devon	Commercial broiler	
121	28 July 2022	Near Sandy, Bedfordshire	Mixed ornamental duck & geese	

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

² Date resolved refers to the date when all disease control restrictions (3km Protection Zone, 10km Surveillance Zone, 3km Captive Bird Monitoring Controlled Zone) have been removed from the premises

Map 2: Map showing the relative density of, and most recent HPAI H5 positive findings in, wild birds across Great Britain October 2021 to 01 August 2022



Date: 02/08/2022
Map prepared by IDM

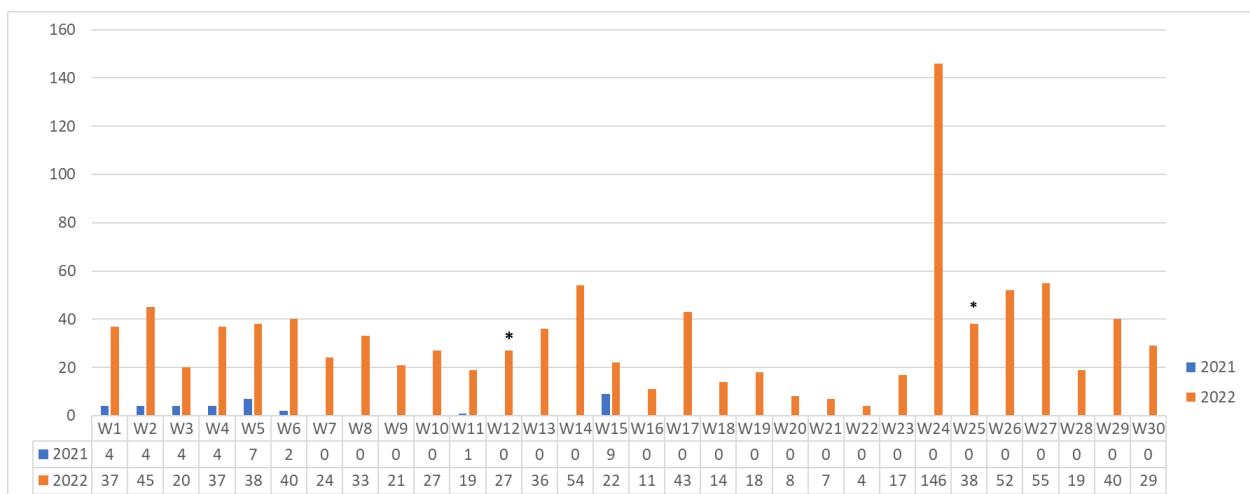
GB HPAI Wild Bird Events
October 2021 - August 2022

Since our last outbreak assessment on 18 July 2022, HPAI H5 has been detected in wild birds in 25 locations in Great Britain and the Scottish Isles, 11 of which have not had HPAI reported in wild birds previously. This brings the total to 354 separate wild bird positive locations, involving 63 different bird species (listed in Table 2), in 78 counties. The total number of positive wild bird findings is 1,491, with most in England (Table 2). The findings reported within the last two weeks were largely focussed around the Scottish coastline and northeast coast of England. Most of these findings were seabird species, involved in mass mortality events, although there has been a mute swan reported in Cambridgeshire.

The majority of wild birds that have tested positive for HPAI H5 in Great Britain during the 2021 to 2022 season have been infected with the H5N1 strain. As HPAI continues to be detected in wild birds, there have been many more reports between January and August 2022 compared to the same period in 2021 (Figure 1).

There have been 58 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. The NA could not be determined for a total of eight H5 HPAI samples from wild birds, due to very low viral loads.

Figure 1: Wild bird HPAI H5N1 positives per week across Great Britain: January to August 2021 and 2022. Asterisks denote changes in surveillance sensitivity¹. For earlier data from both HPAI seasons, see our [previous outbreak assessment](#).



¹Increased sensitivity of surveillance in England in week 12 and decreased sensitivity of surveillance in heavily affected seabird populations across Great Britain in week 25.

The species of wild birds affected by HPAI in mainland Great Britain have varied throughout the 2021 to 2022 season, including a greater variety of wild bird species overall compared to [previous seasons](#) (in 2020/21 315 birds, 30 species, in 43 counties). An increasing proportion of birds of prey/raptor species (*Accipitriformes*) and

other resident species (*Passeriformes*, *Columbiformes*) have become infected as the outbreak has progressed and more recently, many seabirds including gannets, gulls, guillemots and great skua have become infected throughout summer. For further information on the “order shift” of HPAI during the 2021/2022 epizootic season, see our [previous outbreak assessment](#).

This increased number of cases in sea birds may be in part due to breeding patterns, with auk species such as guillemot now at coastal breeding sites where birds are closely packed on vertical cliff faces, rather than dispersed out to sea. The number of reports in sea birds will likely decrease over the next few weeks as breeding colonies disperse. For further details, please see the report (updated weekly) on findings of [HPAI in wild birds](#) in Great Britain and [Northern Ireland](#).

As of 01 August 2022, there has been a total of 54 wild bird HPAI findings from across the Scottish islands of Shetland (36), Orkney (12) and the Western Isles (6).

Table 2: Wild bird species in Great Britain that have tested positive for HPAI H5 as of 01 August 2022

Region and species	Total number of birds testing positive
England (below)	876
Arctic Tern	1
Barnacle Goose	13
Bewick's Swan	1
Black headed gull	36
Black Swan	2
Canada Goose	157
Common Buzzard	60
Common Eider	1
Common Tern	8
Coot	2
Cormorant	4
Curlew	2
Gadwall	1
Gannet	26
Goshawk	1
Great-crested Grebe	3
Grey Heron	3
Greylag goose	38
Guillemot	12
Gull sp.	11

Region and species	Total number of birds testing positive
Hen Harrier	3
Herring Gull	85
Kestrel	6
Kittiwake	1
Lapwing	1
Little Egret	1
Little Gull	1
Magpie	1
Mallard Duck	16
Moorhen	5
Mute Swan	242
Oystercatcher	1
Peregrine Falcon	5
Pheasant	8
Pied Wagtail	6
Pink Footed goose	18
Puffin	1
Razorbill	1
Red Kite	2
Roseate Tern	1
Sandwich Tern	9
Sea Eagle	1
Sparrowhawk	7
Tawny Owl	1
Tufted Duck	1
Unidentified Swan	17
Unspecified Dove	2
Unspecified Duck	1
Unspecified Goose	16
Unspecified pigeon	1
White Fronted Goose	1
Whooper Swan	31
Widgeon	1
Wales (below)	45
Black headed gull	1
Canada Goose	4
Carrion Crow	2
Common Buzzard	4
Goshawk	1
Greylag goose	1

Region and species	Total number of birds testing positive
Herring Gull	3
Mute Swan	15
Peregrine Falcon	1
Pheasant	5
Sparrowhawk	1
Unidentified Swan	1
Unspecified Goose	5
Unspecified pigeon	1
Scotland (below)	570
Arctic Tern	4
Barnacle Goose	34
Bird of Prey Unspecified	5
Black headed gull	2
Blackbird	1
Canada Goose	3
Common Buzzard	63
Common Eider	13
Gannet	111
Golden Eagle	2
Great black backed gull	43
Great skua	22
Greylag goose	26
Guillemot	44
Gull sp.	16
Herring Gull	16
Kestrel	1
Kittiwake	2
Magpie	1
Mallard Duck	1
Manx Shearwater	1
Mute Swan	28
Pink Footed goose	80
Puffin	1
Razorbill	3
Red Kite	3
Sandwich Tern	1
Sea Eagle	43
Sparrowhawk	5
Unidentified Swan	16
Unspecified Crow	1

Region and species	Total number of birds testing positive
Unspecified Duck	2
Unspecified Goose	42
Unspecified Gull	1
Unspecified Skua	1
Unspecified waterfowl	1
Whooper Swan	9
Wood Pigeon	1
Grand Total	1,491

Europe

The total numbers of IPs with HPAI H5 in poultry and cases in wild birds in Europe are presented in Table 3. New disease reports are still being made to the World Organisation for Animal Health (WOAH) on a daily basis. Numbers reported are from WOAH's WAHIS platform.

Table 3: Events (to 01 August 2022) of HPAI H5 in domestic poultry (P) and cases in wild birds (WB) since 01 October 2021 in the UK and Europe, according to WOAH report date and WOAH definitions

Country	H5 (WB)	H5 (P)	H5N1 (WB)	H5N1 (P)	H5N8 (WB)	H5N8 (P)	H5N2 (WB)	H5N2 (P)	H5N3 (WB)	H5N5 (WB)	Total
Albania			1			4					5
Austria			35								35
Belgium	7		87	3							97
Bosnia and Herzegovina			2								2
Bulgaria	1	32									33
Croatia			8	3							11

Country	H5 (WB)	H5 (P)	H5N1 (WB)	H5N1 (P)	H5N8 (WB)	H5N8 (P)	H5N2 (WB)	H5N2 (P)	H5N3 (WB)	H5N5 (WB)	Total
Czech Republic			21	6							27
Denmark		1	156	4	1	1					163
Estonia			10		2	1					13
Faroe Islands			8								8
Finland			28		2						30
France			190	1,124							1,314
Germany			1,093	76			1		1		1,169
Greece			7								7
Hungary			33	306							339
Iceland			20	1							21
Ireland			77	6							83
Italy			21	249							270
Latvia			2								2
Lithuania			6								6
Luxembourg			4								4
Moldova				1							1
Netherlands	1		251	49	2						303

Country	H5 (WB)	H5 (P)	H5N1 (WB)	H5N1 (P)	H5N8 (WB)	H5N8 (P)	H5N2 (WB)	H5N2 (P)	H5N3 (WB)	H5N5 (WB)	Total
Norway			21	2						16	39
Poland			36	105				1			142
Portugal			13	4							17
Republic of North Macedonia			3								3
Romania			14	5							19
Russia	35	12	29	9							85
Serbia and Montenegro			3		3		1				7
Slovakia			22	4	1						27
Slovenia			39	1							40
Spain			59	31							90
Sweden			65	4	1						69
Switzerland			3								3
Ukraine	2	1									3
United Kingdom			466	86	1						550
Total	46	46	2,833	2,079	13	6	2	1	1	16	4,490

Northern Europe

Belgium

Between 18 July and 01 August, WOAHA has not reported any further HPAI outbreaks in poultry but has reported two further cases of HPAI H5N1 in wild and captive birds. These cases involved one peregrine falcon (*Falco peregrinus*) and one European herring gull (*Larus argentatus*).

Finland

Since our last assessment, WOAHA has not reported any further HPAI IPs but has reported four further cases of HPAI H5N1 in two wild white-tailed eagles (*Haliaeetus albicilla*) and two great cormorants (*Phalacrocorax carbo*).

France

According to WOAHA, there has been one outbreak of HPAI H5N1 in a backyard flock in Normandy since the last report on 18 July. Epidemiological links with another IP have been cited according to WOAHA.

WOAHA has also reported 17 cases of HPAI H5N1 in wild birds, involving 65 European herring gulls (*Larus argentatus*), one black-headed gull (*Chroicocephalus ridibundus*), three northern gannets (*Morus bassanus*), and one common tern (*Sterna hirundo*),

Germany

There have been four further poultry IPs with HPAI H5N1 reported by WOAHA for Germany since our last assessment. Three of these were geese fattening farms with between 5,500 and 13,000 geese, the production type for the fourth farm is not described. All IPs are located in northern Germany. There have also been a further 26 reports of H5N1 in wild birds, including unspecified Laridae (12), Anatidae (4), Threskiornithidae (2) and Sulidae (8) birds.

Netherlands

Between 19 July and 01 August, there have been two reports of HPAI H5N1 in poultry. Both outbreaks were on commercial farm premises, one which housed broilers and one which housed fattening ducks. There were no cases in wild birds reported by WOAHA.

Norway

There have been no further reports of HPAI H5N1 in poultry since 04 July, but there have been two further cases of HPAI H5NI reported in wild birds by WOAHA since our

last report on 18 July. These cases comprised of a single Barnacle Goose (*Branta leucopsis*) and a single Northern Gannet (*Morus bassanus*).

Sweden

There have been no further reports of HPAI in poultry since our last assessment but there have been nine cases of HPAI H5N1 reported in wild birds, involving a total of two Canada geese (*Branta canadensis*), one common eider (*Somateria mollissima*), two common murre (*Uria aalge*), two great black-backed gulls (*Larus marinus*), one peregrine falcon (*Falco peregrinus*) and two razorbills (*Alca torda*).

Poland

Between 18 July and 01 August, WOAHP has reported one outbreak of HPAI H5N1 in poultry on a commercial farm premises with 639 birds. Bird types for this premises were not listed. No further cases of HPAI in wild birds have been reported since our last assessment.

Russia

Between 18 July and 01 August, WOAHP has reported 16 outbreaks of HPAI H5N1 in non-commercial non-poultry. These were on backyard premises housing fewer than 200 birds. One outbreak was on a village premises housing 5,562 birds where a Rock Dove (*Columba livia*) also tested positive. One backyard premises housed chickens and ducks, and bird types were not listed for the remaining premises. No further cases of HPAI in wild birds have been reported since our last assessment.

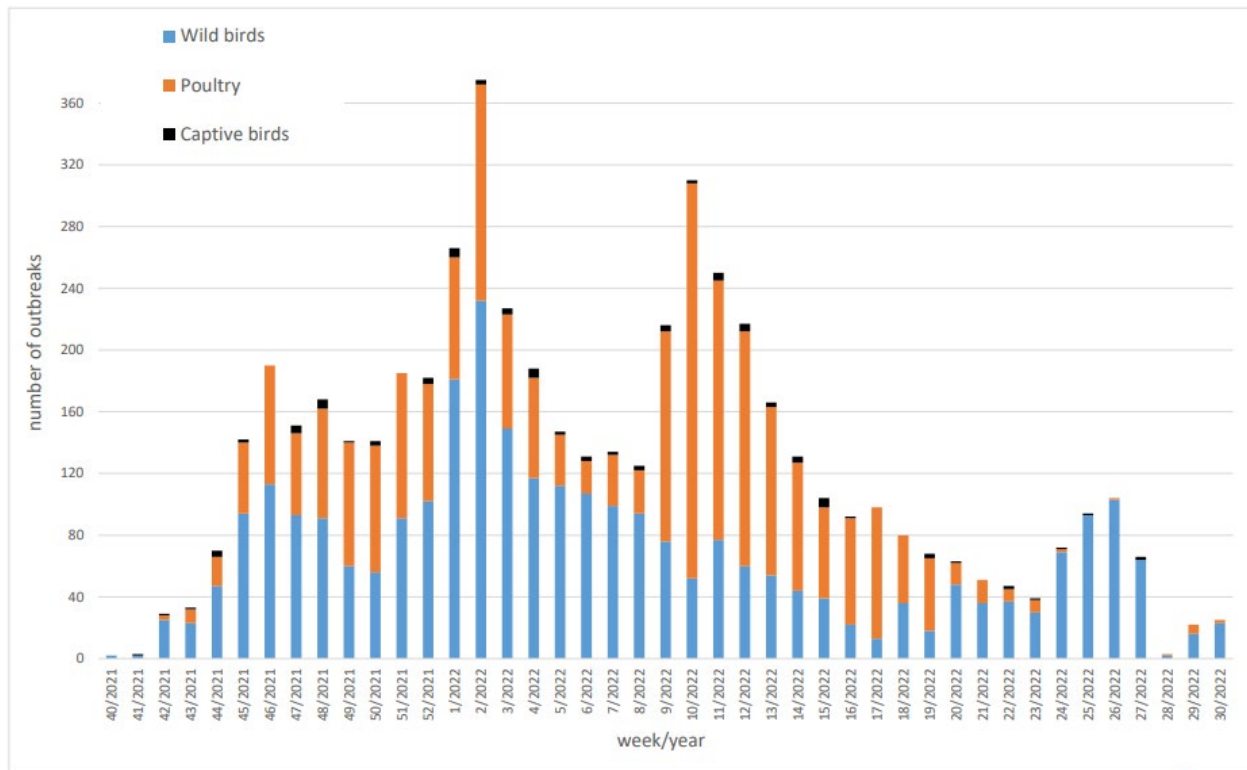
Southern Europe

Spain

Since 18 July 2022, WOAHP has not reported any further HPAI IPs with domestic poultry, but has reported one further case of HPAI H5N1 in wild birds. This case involved six greylag geese (*Anser anser*).

According to the WOAHP, there have been no further reports of HPAI H5 outbreaks in domestic poultry or cases in wild birds between 18 July and 01 August in; Albania, Austria, Bosnia and Herzegovina, Bulgaria, Croatia, Czech Republic, Denmark, Estonia, Greece, Hungary, Iceland, Italy, Latvia, Lithuania, Luxembourg, Moldova, North Macedonia, Portugal, Republic of Ireland, Romania, Serbia and Montenegro, Slovakia, Slovenia, Switzerland or Ukraine.

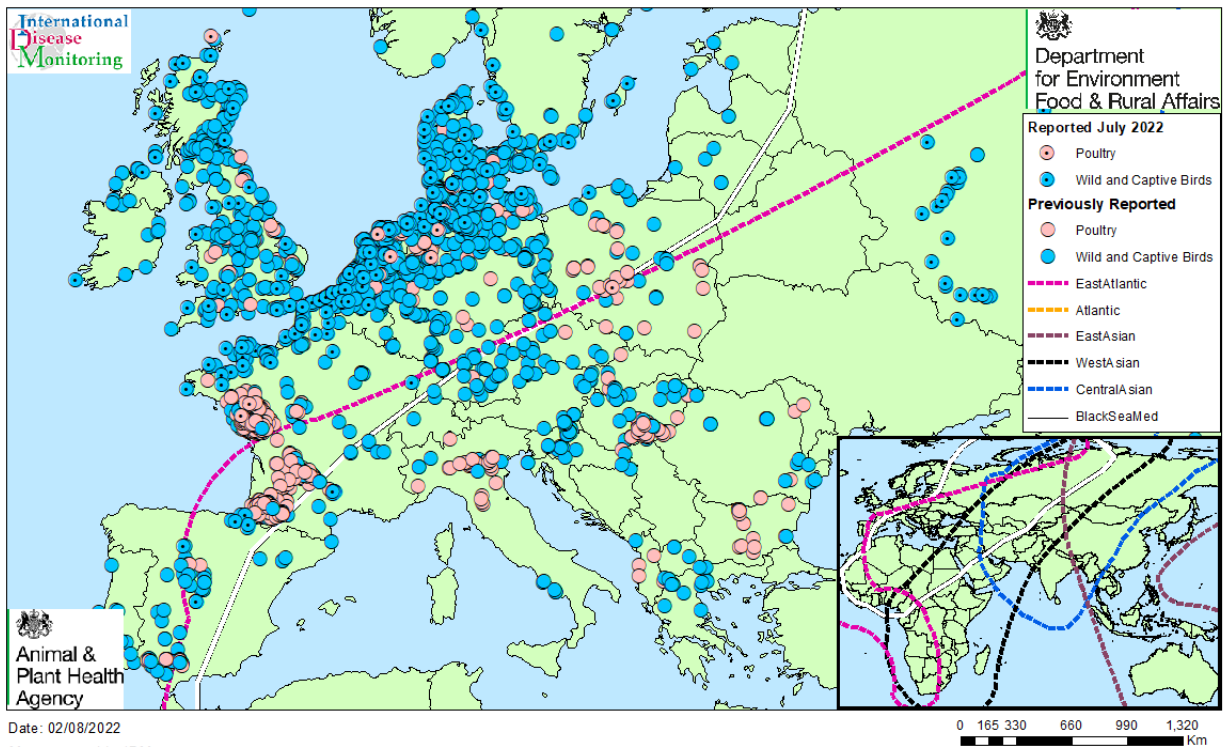
Figure 2: Number of HPAI positive events reported in poultry, captive and wild birds each week in Europe from October 2021 to 01 August 2022 (IZSVe, 2022)



Across Europe, the number of poultry IPs reported weekly by IZSVe is still very low at one to five per week, but there has been an increase in the last two weeks (Figure 2). The weekly number of HPAI cases in wild birds has decreased from the peak of over 100 in week 26, which is the highest number of cases observed in one week since February 2022 (Figure 2).

Map 3 shows the distribution of HPAI H5 outbreaks in poultry and captive birds, together with cases in wild birds, in Europe, reported by WOAHA between January 2022 and 01 August 2022. Those events reported since our last outbreak assessment on 18 July are identified with black central dots.

Map 3: HPAI outbreaks (from WOAH) in poultry, captive, and wild birds across Europe, January 2022 to 01 August 2022.



**Highly Pathogenic Avian Influenza in Poultry, Captive and Wild Birds
January - August 2022**

Overlay: migratory bird flyways

(WOAH Data Only)

Implications for GB

The ongoing situation with HPAI H5N1 in breeding birds over the summer months in GB and north-west Europe is unprecedented, and we are in uncharted territory with mass die-offs continuing in seabird breeding colonies around the GB coastline. In previous years HPAI has generally not been detected in wild birds in the summer months, and the national risk level for HPAI H5 in wild birds has typically been at low for several weeks by this time of year.

While seabirds typically forage in the sea, gull species may fly inland and scavengers such as raptors and corvids could bring infection inland from affected coastal sites. Indeed, there have recently been cases of H5N1 in wild birds inland in England. These inland cases together with the affected gull colonies in coastal areas present a period of uncertainty and warrant maintaining the national risk level for HPAI H5 in wild birds at medium.

The recent mass mortality events observed in seabirds are not anticipated to pose the same level of onward risk to the poultry population as the peak numbers of wild bird mortalities observed earlier in the 2021/2022 epizootic, which included predominantly waterfowl and raptor species. This is due to differences in nesting and feeding behaviours. However, residual infectivity 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 here, and 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 late September and early October. This could lead to infection in large numbers of geese at coastal sites around south-east England, which would be unprecedented, and could serve as a further source of infection to poultry this coming winter.

The number of wild bird cases in Europe have been decreasing since the unprecedented third peak of over 100 in week 26 (Figure 2). Most of the wild bird cases are in northern Europe, running along the English Channel through the northern coast of France and Belgium onto The Netherlands, northern Germany and as far east as southern Sweden (Map 3). It should be noted that trends in wild bird cases in Europe are of minimal significance as a predictor for UK incursions at this time of year. However, the presence of HPAI in seabirds 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 the UK this autumn.

This summer, resident wild birds may continue to circulate HPAI H5 virus and consequently act as a future source of infection to poultry. Poultry outbreaks appear to be continuing to decrease both in Europe and the UK after the unprecedented number of outbreaks this last season (2021/2022). This is perhaps due to high temperatures (from recent heat waves), and long hours of sunlight inactivating the virus and so reducing environmental spread at inland sites. This inactivation of the virus would not however diminish transmission between the seabirds, which congregate on top of each other on vertical cliffs at this time of year. In the next few weeks, those seabird breeding colonies will start to disperse, with the birds flying out to sea, and it is expected that the transmission in seabirds will reduce as they leave their colonies and disperse.

Though there are gaps in scientific knowledge, the direct risk to GB poultry from infected seabirds at coastal locations is currently assumed to be relatively low, such that the risk to poultry is uncoupled from that in this specific wild bird population. This is due to behaviour of the seabird species affected, and their coastal locations, with few opportunities for mixing with inland poultry. While there have been sporadic, detections of HPAI positive wild birds at inland locations, these are most likely due to environmental exposure and not sustained transmission within the inland wild bird

populations. The fact that the increase in seabird cases has not translated into poultry outbreaks suggests that the infection pressure from wild birds even where biosecurity is sub-optimal, has improved since May when the risk levels to poultry were last decreased, accepting that there may be geographical variation, dependant on proximity to coastal areas and mass mortality sites.

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 lifting of housing measures on 2 May 2022. The ongoing wild bird infection pressure will likely expose any weaknesses that exist, even where biosecurity is good, particularly on coastal areas in close proximity to mass mortality events.

Conclusion

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

There have been 1,491 confirmed cases of HPAI H5 in wild birds in Great Britain to 01 August 2022 across a range of species, with multiple detections in wild birds in the last two weeks, albeit many of these represented mass mortality events associated with sea bird breeding colonies (Figure 1). The [previously described](#) wild bird species 'order shift' observed between November 2021 and June 2022 reflects the spread of HPAIV infection from migratory water birds to native, sedentary wild bird species, including now seabird populations. The overall number of detections in wild birds, and wild bird infection pressure, are still high for this time of year but have been decreasing in recent weeks (Figure 1).

In most years, the risk of HPAIV H5 falls rapidly over the summer months as the migratory waterbirds leave the UK in April. The mass die-offs this summer together with sustained transmission in breeding birds over the summer in GB and Europe is unprecedented. Even though the migratory waterbirds departed the UK some months ago, infection is maintained in tightly packed seabird colonies at coastal sites. There are still immunologically naïve, susceptible, resident bird species in the UK which could become infected from residual environmental contamination. Furthermore, the number of these susceptible birds will increase as the juvenile birds from this season fledge and disperse. Higher environmental temperatures, together with increasing sunlight intensities must be greatly reducing environmental levels of HPAI H5N1 and may be contributing to the reduced number of poultry outbreaks both in Europe and GB. Additionally, seabirds will soon be dispersing which will likely result in fewer reports

The risk of HPAI H5 infection in wild birds in GB remains at **MEDIUM**.

The risk of exposure of poultry across the whole of Great Britain is maintained at **low** (with low uncertainty) where good biosecurity is applied, and is reduced from medium (with low uncertainty) to **low** (with high uncertainty) where biosecurity is suboptimal. The high uncertainty reflects that there may be differences based on geographical location i.e., coastal areas and also wild bird movements between the coast and inland sites at this time of year. This assessment takes into consideration the Avian Influenza Protection Zone (AIPZ) and assumes that bird keepers are taking the additional biosecurity measures required.

On 24 November 2021, the Chief Veterinary Officers for England, Scotland, Wales, and Northern Ireland announced housing measures, which came into force on the 29 November 2021. The housing measures were subsequently [lifted across the UK on Monday 2 May 2022](#), though the AIPZ still remains in place, and biosecurity requirements should be adhered to.

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, even though the outbreak appears to be waning and sunnier, warmer weather is forecast. 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.

- In England contact 03000 200 301
- In Wales, contact 0300 303 8268
- In Scotland, contact your [local field services office](#)

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 WOA, 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 Wild bird Helpline (Telephone: 03459 33 55 77 – select option 7):

- 3 or more swans, geese, ducks, gulls and waders
- Any number of birds of prey, including owls
- five or more birds of any species

It is advisable that you do not touch these birds.

Authors

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- 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 (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 \(pdf\)](#)



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