Updated Outbreak Assessment #27

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

06 June 2022 Ref: VITT/1200 HPAI in the UK and Europe

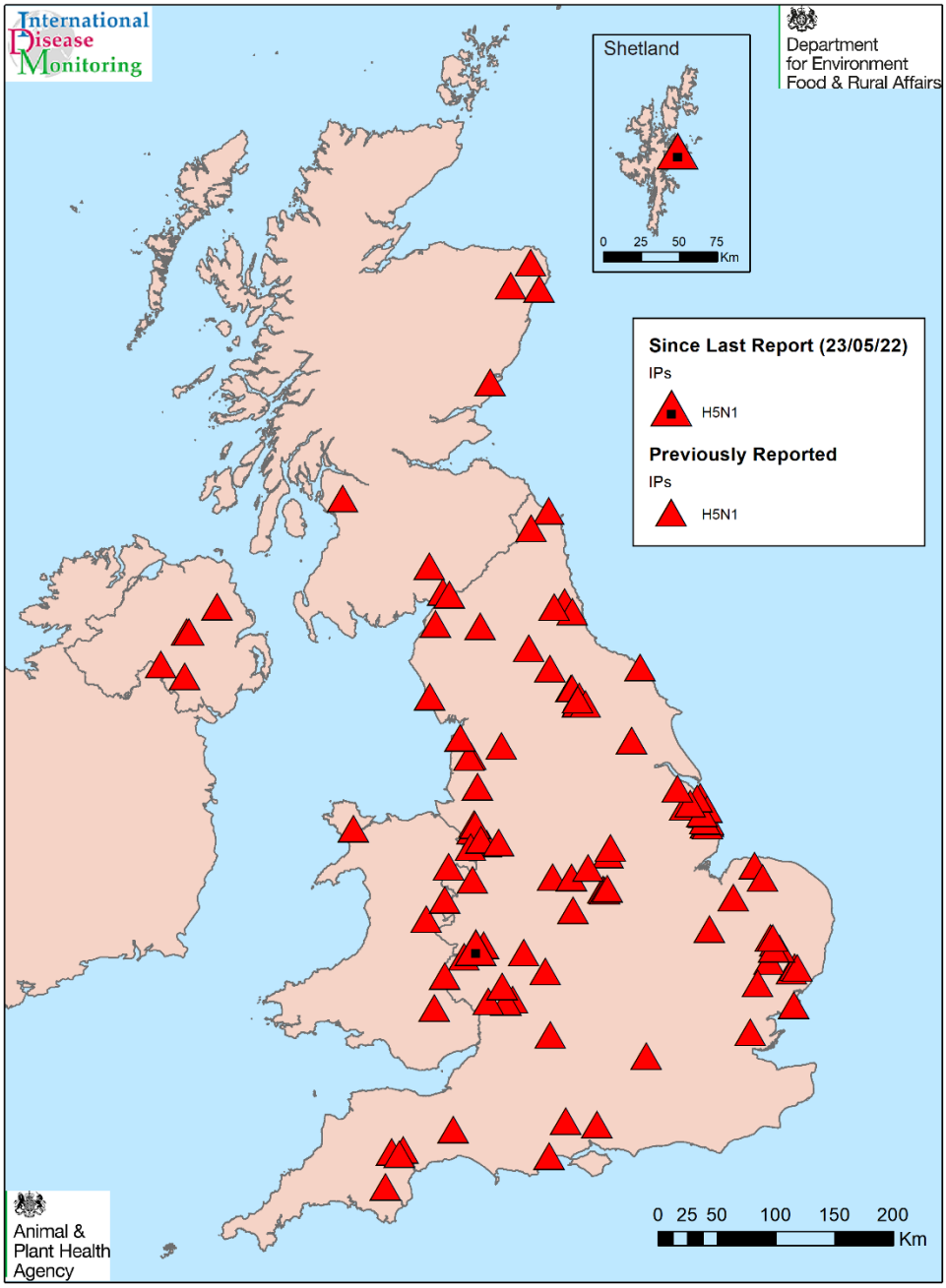
Disease report

Since our last outbreak assessment on 23 May 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 infected premises (IPs) confirmed with HPAI H5N1 in domestic poultry in the UK; one on the Shetland Islands north of Scotland and the other in England. There have been seven further HPAI H5 events detected in wild birds in Great Britain (GB) since our last assessment. In Northern Ireland, the Avian Influenza Prevention Zone (AIPZ) which was introduced to help stop the spread of HPAI was lifted on 01 June 2022 (DAERA, 2022).

The World Organisation for Animal Health (WOAH) has also reported new IPs with HPAI H5N1 in domestic poultry in France, Hungary and Slovakia since our last report.

Wild bird cases of HPAI H5N1 continue to be reported in Finland, France, Germany, the Netherlands, Norway and Spain.

Map 1: HPAI H5 outbreaks in domestic poultry[1] and captive birds across the United Kingdom, October 2021 to 6 June 2022



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

Situation assessment

United Kingdom

The first detection of HPAI H5N1 virus during this 2021 to 2022 HPAI season was in rescued wild swans and captive poultry at a swan sanctuary in Worcester (England) on 15 October 2021. An AIPZ was declared in England, Wales and Scotland on 3 November 2021, requiring personnel working with poultry and hobbyists to take additional biosecurity measures. Additional housing measures came into force from 29 November 2021. These housing measures were lifted on 2 May 2022 but the AIPZ remains in place.

Since the first HPAI H5N1 detection on 15 October 2021, there have been 112 further confirmed IPs with HPAI H5N1 in poultry and captive birds across Great Britain (Map 1), (Table 1) and one on the Shetland Islands off Scotland. Of these 114 IPs in total, 99 have occurred in England, 10 have occurred in Scotland (including the Shetland Islands), and five in Wales.

Since our last assessment on 23 May 2022, HPAI H5N1 has been confirmed at two further poultry premises, one on the Shetland Islands and one in England. The new IPs were a small commercial free-range layer premises in Shetland, and a commercial fattening turkey premises in Shropshire.

There have been no new premises with HPAI H5N1 confirmed in Northern Ireland since our last report on 23 May 2022. Following the lifting of the AIPZ in Northern Ireland on 1 June 2022, the total number of poultry IPs remains at six: across the counties of Tyrone, Antrim, Armagh and Fermanagh (DAERA, 2022). The number of wild bird findings of HPAI in Northern Ireland is seven (IZSVe, 2022).

Table 1: Current poultry[1] and captive bird premises with High Pathogenicity Avian Influenza (HPAI) H5N1 in Great Britain and Shetlands as of 6 June 2022. For outbreaks which were resolved before 23 May, see our previous outbreak assessment

Outbreak Count	Date HPAI H5N1 confirmed	Location, County	Description	Date resolved[2]
79	22 January 2022	Near Inverurie, Aberdeenshire	Backyard mixed species	
93	26 February 2022	Near Westhorpe, Suffolk	Smallholding mixed species	31 May 2022

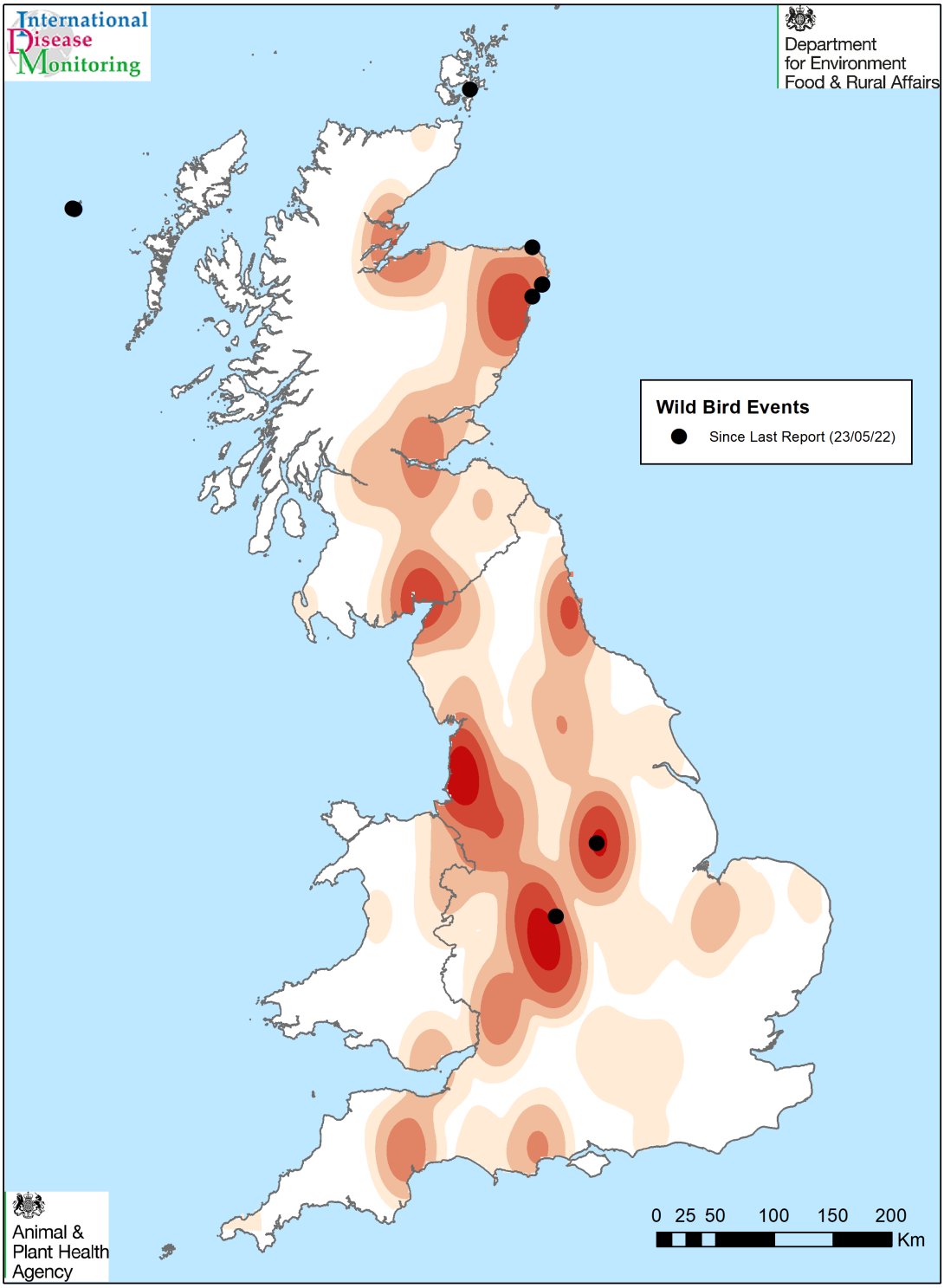
Outbreak Count	Date HPAI H5N1 confirmed	Location, County	Description	Date resolved[2]
94	1 March 2022	Near Redgrave, Suffolk	Commercial fattening ducks	31 May 2022
96	11 March 2022	Near Diss, Suffolk	Commercial fattening ducks	31 May 2022
97	12 March 2022	Near Diss, Suffolk	Commercial fattening ducks and chickens	31 May 2022
100	20 March 2022	Near Woodbridge, Suffolk	Commercial broiler ducks	26 May 2022
101	27 March 2022	Near Tuddenham St Martin, Suffolk	Commercial layer ducks	26 May 2022
102	28 March 2022	Near Stowmarket, Suffolk	Backyard mixed species	31 May 2022
103	30 March 2022	Near Woodbridge, Suffolk	Backyard chickens	26 May 2022
104	06 April 2022	Near Exeter, Devon	Commercial mixed species	
105	06 April 2022	Near Ely, Cambridgeshire	Commercial fattening ducks	24 May 2022
106	07 April 2022	Near Exeter, Devon	Backyard mixed species	
107	08 April 2022	Near Ilminster, Somerset	Commercial mixed species	11 May 2022
108	08 April 2022	Near Eye, Suffolk	Commercial mixed species	31 May 2022

Outbreak Count	Date HPAI H5N1 confirmed	Location, County	Description	Date resolved[2]
109	13 April 2022	Near Teignbridge, Devon	Commercial mixed species	
110	24 April 2022	Near Ilkeston, Derbyshire	Smallholder mixed species	
111	7 May 2022	Near Lowdham, Nottinghamshire	Commercial laying hens	
112	19 May 2022	Near Southwell, Nottinghamshire	Commercial smallholder mixed species	
113	30 May 2022	Near the Island of Whalsay, Shetland	Commercial free range laying hens	
114	1 June 2022	Near Ludlow, Shropshire	Commercial fattening turkeys	

[1] According to the 2021 WOAH definition of poultry: Terrestrial Code Online Access - WOAH - 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 6 June 2022



Date: 06/06/2022
Map prepared by IDM

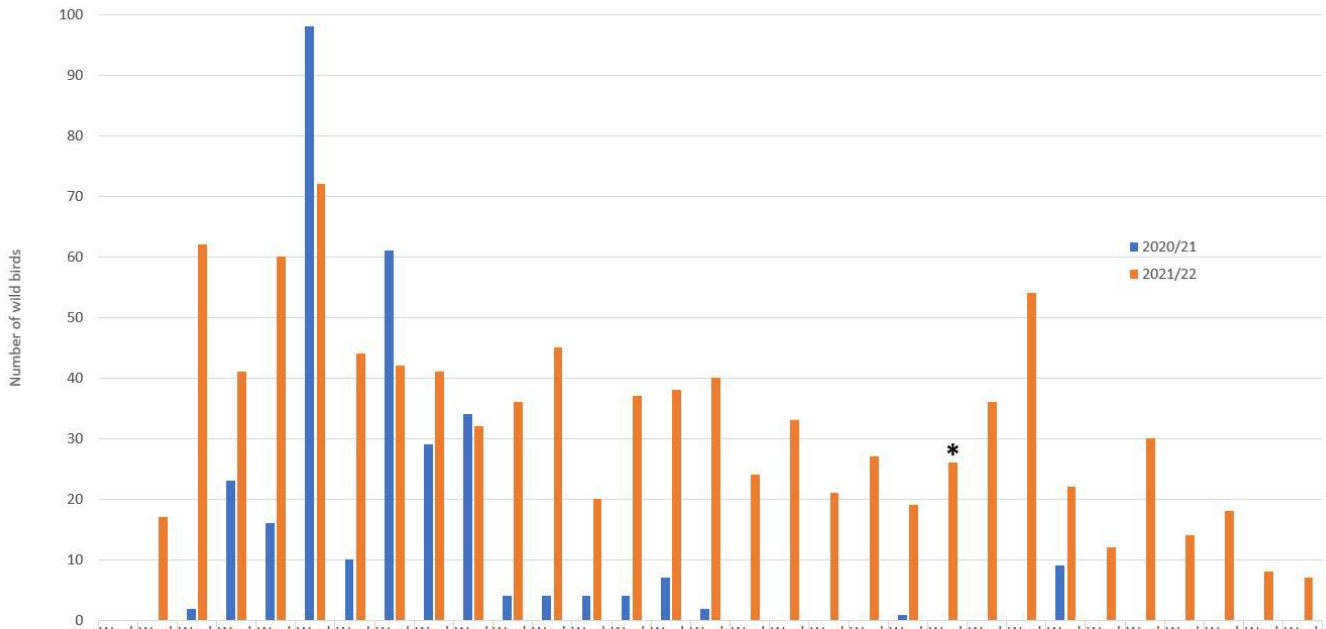
GB HPAI Wild Bird Events
October 2021 - June 2022

Since our last outbreak assessment on 23 May 2022, HPAI H5 has been detected in wild birds in seven locations in Great Britain, three of which have not had HPAI reported in wild birds previously, bringing the total to 291 separate wild bird positive locations, involving 50 different bird species (listed in Table 2), in 77 separate counties. The total number of positive wild bird findings is 1,085, with most in England (Table 2). The majority of the findings reported within the last two weeks are in Scotland (5) or on Scottish islands (4), with two findings in England.

The majority of wild birds that have tested positive for HPAI in Great Britain during the 2021 to 2022 season have been infected with the H5N1 strain. HPAI continues to be detected in wild birds, with many more reports in the 2021 to 2022 season compared to the 2020 to 2021 season (Figure 1). Given the location, time of year, migration patterns and wild bird behaviour, the HPAI positive wild birds on the Scottish Islands are not expected to disperse and bring more virus to the GB mainland. Excluding the wild bird findings from the Scottish islands, the number of wild bird findings observed across the whole of Great Britain in weeks 20 and 21 was six and one, respectively .

There have been 48 cases for which the HPAI H5 genotype has been identified, and 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 across Great Britain 2020 to 2021 and 2021 to 2022 seasons. The asterisk denotes an increase in surveillance sensitivity in England.



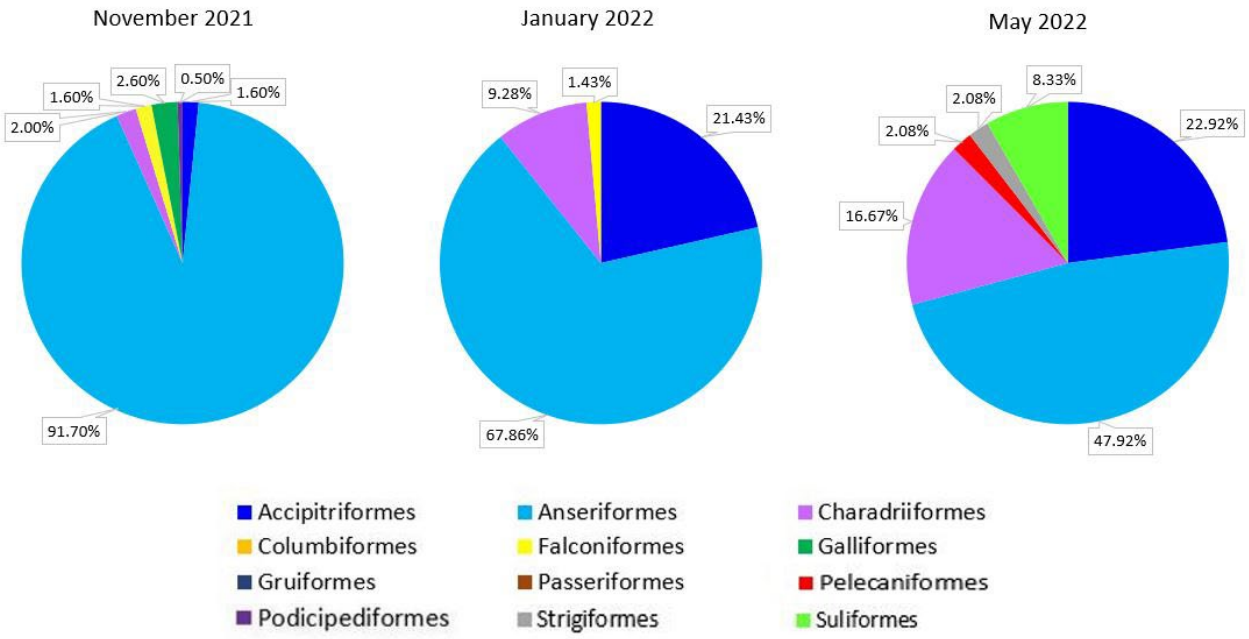
	Week 43	Week 44	Week 45	Week 46	Week 47	Week 48	Week 49	Week 50	Week 51	Week 52	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12	Week 13	Week 14	Week 15	Week 16	Week 17	Week 18	Week 19	Week 20	Week 21
2020/21	0	0	2	23	16	98	10	61	29	34	4	4	4	4	7	2	0	0	0	0	1	0	0	0	9	0	0	0	0	0	0
2021/22	0	17	62	41	60	72	44	42	41	32	36	45	20	37	38	40	24	33	21	27	19	26	36	54	22	12	30	14	18	8	7

The species of wild birds affected by HPAI in mainland Great Britain have varied throughout the current 2021 to 2022 season, including a greater variety of wild bird species overall. In particular, an increasing proportion of birds of prey/raptor (*Accipitriformes*) and other resident species (*Passeriformes, Columbiformes*) have become infected as the outbreak has progressed. Although Anseriformes (swans, geese and ducks) still represent the main order of birds affected, the proportion of HPAI-positive Anseriformes detected in May 2022 has decreased substantially compared with January 2022 (47.92% versus 67.86%; Figure 2). The proportion of Charadriiformes detections is higher in May compared with January (16.67% versus 9.28%; Figure 2). Charadriiformes is a diverse order of birds including waders, terns and pelagic birds such as auks and skuas. In May there were five gull cases, two guillemots and one oystercatcher. These eight Charadriiformes cases accounted for 16.67% of the 48 wild bird cases in May. This compares to January for example when there 140 wild bird cases, of which 13 (9.28%) were Charadriiformes.

The apparent increase in the proportion of Charadriiformes affected in May compared to January masks an overall decrease in the total number of Charadriiforme cases and reflects the fact that in May all the migrant ducks geese and swans have left GB, with auk species such as guillemot now at coastal breeding sites rather than out to sea. In the last two weeks, only one wild bird finding on mainland Great Britain has been in waterfowl (Greylag goose) with the other findings all being Charadriiformes. The described changes in the total number and order of birds affected during May 2022, together with the last detections in pink-footed geese being reported

on 05 May are consistent with the anticipated reduced contribution of overwintering wildfowl migrant species to HPAI in GB at this time of year.

Figure 2: Proportion of HPAI H5 wild bird positives by Order across the 2021 to 2022 HPAI season in mainland Great Britain as of 6 June 2022



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

As of 6 June 2022, there has been a total of 12 wild bird HPAI findings from across the Scottish islands of Shetland (7), St Kilda (3) and Orkney (2). These findings comprise of four Eider ducks, four great skua, two gulls, one gannet and one unspecified goose and were collected between 18 March and 23 May 2022. We are continuing to monitor the situation regarding HPAI in the Scottish islands, though we consider the islands to be epidemiologically distinct from mainland Great Britain and therefore do not consider this to impact the current infection risk to wild birds and poultry in Great Britain.

Table 2: Wild bird species in Great Britain that have tested positive for HPAI H5 as of 6 June 2022

Region and species	Total number of birds testing positive
England (below)	**681**
Barnacle Goose	13

Region and species	Total number of birds testing positive
Bewick's Swan	1
Black headed gull	17
Black Swan	2
Canada Goose	144
Common Buzzard	59
Common Eider	1
Coot	1
Curlew	2
Gadwall	1
Goshawk	1
Great-crested Grebe	3
Grey Heron	3
Greylag goose	38
Guillemot	1
Gull sp.	8
Hen Harrier	1
Herring Gull	9
Kestrel	6
Kittiwake	1
Lapwing	1
Little Gull	1
Magpie	1
Mallard Duck	15
Moorhen	3
Mute Swan	230
Oystercatcher	1
Peregrine Falcon	5
Pheasant	8
Pied Wagtail	6
Pink Footed goose	18
Red Kite	2
Sea Eagle	1
Sparrowhawk	7
Tawny Owl	1
Tufted Duck	1
Unidentified Swan	17
Unspecified Dove	2
Unspecified Duck	1
Unspecified Goose	14
Unspecified pigeon	1

Region and species	Total number of birds testing positive
White Fronted Goose	1
Whooper Swan	31
Widgeon	1
Wales (below)	**41**
Canada Goose	4
Common Buzzard	4
Goshawk	1
Greylag goose	1
Herring Gull	2
Mute Swan	15
Peregrine Falcon	1
Pheasant	5
Sparrowhawk	1
Unidentified Swan	1
Unspecified Goose	5
Unspecified pigeon	1
Scotland (below)	**363**
Barnacle Goose	34
Bird of Prey Unspecified	3
Black headed gull	1
Blackbird	1
Canada Goose	3
Common Buzzard	63
Common Eider	9
Gannet	5
Great black backed gull	1
Great skua	4
Greylag goose	26
Guillemot	2
Gull sp.	11
Herring Gull	8
Kestrel	1
Magpie	1
Mallard Duck	1
Mute Swan	28
Pink Footed goose	80
Red Kite	3
Sea Eagle	2
Sparrowhawk	5
Unidentified Swan	16

Region and species	Total number of birds testing positive
Unspecified Duck	2
Unspecified Goose	42
Unspecified Gull	1
Unspecified waterfowl	1
Whooper Swan	9
Wood Pigeon	1
Grand Total	**1,085**

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 6 June 2022) of HPAI H5 in domestic poultry (P) and cases in wild birds (WB) since 1 October 2021 in the UK and Europe, according to WOAH report date

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	6		63	3							72
Bosnia and Herzegovina			2								2
Bulgaria	1	31									32
Croatia			8	2							10
Czech Republic			21	6							27

Country	H5 (WB)	H5 (P)	H5N1 (WB)	H5N1 (P)	H5N8 (WB)	H5N8 (P)	H5N2 (WB)	H5N2 (P)	H5N3 (WB)	H5N5 (WB)	Total
Denmark		1	114	4	1	1					121
Estonia			10		2	1					13
Faroe Islands			1								1
Finland			20		2						22
France			98	1,073							1,171
Germany			1,040	70			1		1		1,112
Greece			7								7
Hungary			32	304							336
Iceland			2	1							3
Ireland			75	6							81
Italy			21	249							270
Latvia			2								2
Lithuania			5								5
Luxembourg			4								4
Moldova				1							1
Netherlands	1		214	42	2						259
Norway			11	2						6	19

Country	H5 (WB)	H5 (P)	H5N1 (WB)	H5N1 (P)	H5N8 (WB)	H5N8 (P)	H5N2 (WB)	H5N2 (P)	H5N3 (WB)	H5N5 (WB)	Total
Poland			32	103				1			136
Portugal			12	4							16
Republic of North Macedonia			3								3
Romania			14	5							19
Russia	35	12	13	9							69
Serbia and Montenegro			3		3		1				7
Slovakia			22	3	1						26
Slovenia			39	1							40
Spain			42	31							73
Sweden			40	4	1						45
Switzerland			3								3
Ukraine	2	1									3
United Kingdom			397	82	1						480

Northern Europe

Since our last outbreak assessment on 23 May 2022, HPAI H5 has been reported in eight European countries excluding the United Kingdom (WOAH). The total number of European countries affected this HPAI season according to EU reference laboratory data, (Istituto Zooprofilattico Sperimentale delle Venezie; IZSVe,2022) is currently 34.

Finland

Since our last assessment, the WOAH has not reported any further HPAI IPs, but has reported three further cases of HPAI H5N1 in wild birds, involving one great cormorant (*Phalacrocorax carbo*), one mallard duck (*Anas platyrhynchos*) and one whooper swan (*Cygnus cygnus*).

France

Between 23 May and 6 June 2022, the WOAH has reported 11 further 11 HPAI IPs with domestic poultry, though it should be noted that five of these started in April. The farms were located in the west and southwest regions of France. Eight of the IPs had ducks, two had chickens and one had turkeys. The number of birds ranged from 2,100 to 19,000.There is a time delay in the WOAH receiving case reports, however according to ADIS data, the last poultry outbreak in France was detected on 15 May 2022 in Lot-et-Garonne and no new IPs have been reported since (Plateforme ESA, 2022).

The WOAH has also reported four non-commercial backyard HPAI IPs with H5N1 and two cases in wild birds since our last assessment. One of the backyard outbreaks started in March, the other three started in early May and all four premises had fewer than 20 birds. The cases in wild birds involved nine European herring gulls (*Larus argentatus*) and five common gulls (*Larus canus*).

Germany

There have been no further poultry premises with HPAI H5N1 reported by the WOAH for Germany since our last assessment, but there have been a further five cases reported in wild birds, including unspecified Accipitridae (2), Laridae (2) and Ciconiidae (1) birds. The latest Plateforme ESA report published on 31 May 2022 ,states that amongst 11 new cases of HPAI H5N1 detected on 12 May in Mecklenburg-Western Pomerania, six birds were passerines, the species was not specified (Plateforme ESA, 2022).

Hungary

Between 23 May and 6 June 2022, detections of HPAI H5N1 in Hungary have continued, however the rate? of detections has decreased since our last assessment. The WOAH has reported a further 38 IPs in Hungary. Of these 38 IPs, 17 had geese, 10 had layer hens, five had ducks, four had turkeys and there were single IPs with ostriches and pheasants, respectively. The rolling incidence of HPAI outbreaks for 23 to 29 May has decreased to 80, from 114 the previous week (Plateforme ESA, 2022).

Kosovo

The Plateforme ESA update for 23 to 29 May has reported a new outbreak of HPAI in poultry which was detected on 16 May 2022 (Plateforme ESA, 2022). According to IZSVe, there have been a total of three outbreaks of HPAI in Kosovo during this epizootic season (IZSVe, 2022). These are yet to be reported by WOAH.

Netherlands

There have been no further commercial poultry HPAI H5N1 IPs reported by the WOAH since 23 May 2022. A further 10 HPAI H5N1 events in wild birds have been reported, involving a total of 23 greylag geese (*Anser anser*), four Egyptian geese (*Alopochen aegyptiaca*), four white storks (*Ciconia ciconia*) and one mallard duck (*Anas platyrhynchos*).

Norway

There have been no further reports of HPAI H5N1 in poultry since 23 May, but there have been three further cases of HPAI H5N1 in wild birds reported. These cases involved a single white-tailed eagle (*Haliaeetus albicilla*), one lesser black-backed gull (*Larus fuscus*) and an unspecified Accipitridae bird.

Slovakia

Since 23 May 2022, the WOAH has reported one further poultry IP with HPAI H5N1 which was located in the southwest of Slovakia in the village of Vičany. There were 35 birds kept at the premises, however no further information on the species of birds kept was available.

Southern Europe (WOAH data only, by report date)

Spain

Since 23 May 2022, the WOAH has not reported any further HPAI IPs with domestic poultry but has reported one case of HPAI H5N1 in a wild griffon vulture (*Gyps fulvus*).

According to OIE, there have been no further reports of HPAI H5 outbreaks in domestic poultry or cases in wild birds between 23 May and 6 June in; Albania, Austria, Belgium, Bosnia and Herzegovina, Bulgaria, Croatia, Czech Republic, Denmark, Estonia, the Faroe Islands, Greece, Iceland, Italy, Latvia, Lithuania, Luxembourg, Moldova, North Macedonia, Poland, Portugal, the Republic of Ireland, Romania, Russia, Serbia and Montenegro, Slovenia, Sweden, Switzerland or Ukraine.

Table 4: Number of HPAI H5 infected poultry premises (P) and findings in non-poultry (NP), including wild birds reported in the United Kingdom and Europe each month during the 2021 to 2022 epizootic, according to WOAH report date as of 06 June 2022

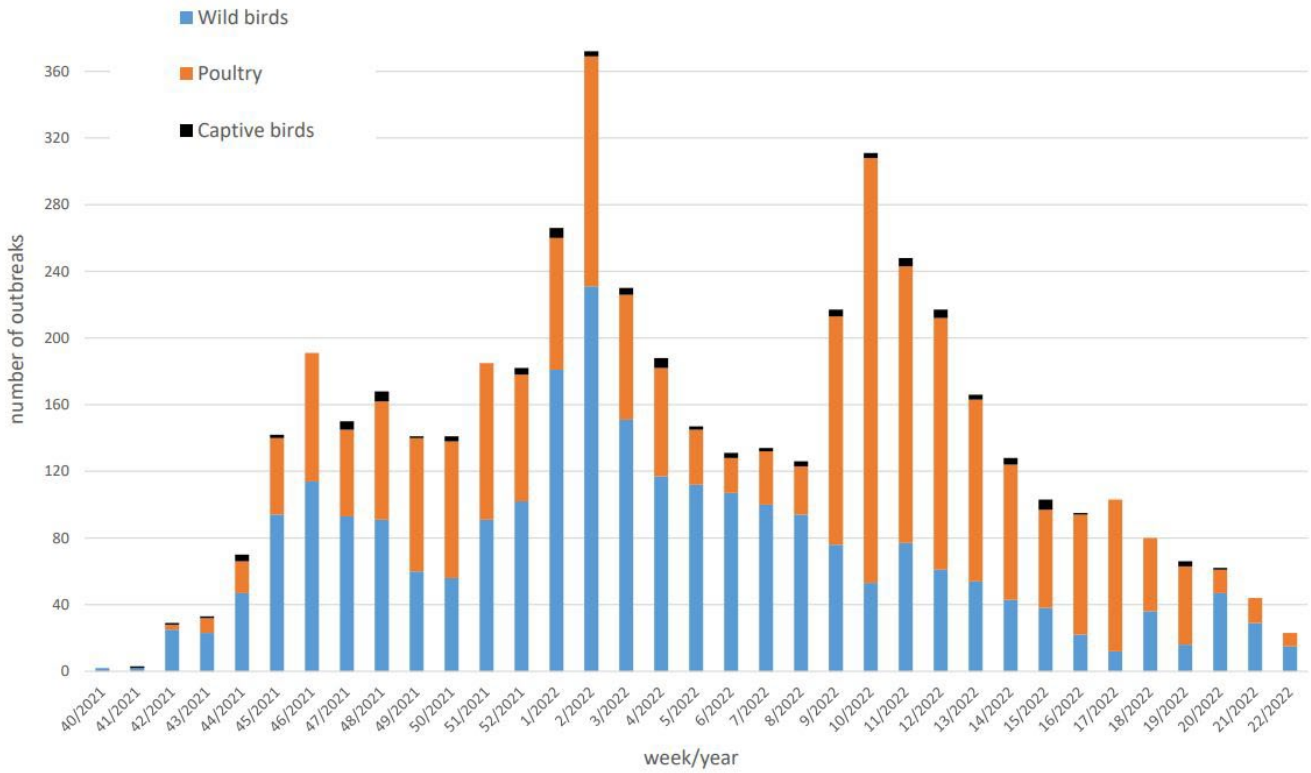
Country	Oct 21-P	Oct 21-NP	Nov 21-P	Nov 21-NP	Dec 21-P	Dec 21-NP	Jan 22-P	Jan 22-NP	Feb 22-P	Feb 22-NP	Mar 22-P	Mar 22-NP	Apr 22-P	Apr 22-NP	May 22-P	May 22-NP	Jun 22-P	Jun 22-NP
Albania	0	0	0	0	0	0	0	0	0	0	4	1	0	0	0	0	0	0
Austria	0	0	0	1	0	7	0	13	0	6	0	1	0	2	0	1	0	0
Belgium	0	0	0	11	2	5	1	20	0	25	1	9	0	3	0	0	0	0
Bosnia and Herzegovina	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bulgaria	0	0	0	0	7	0	2	0	1	0	1	0	9	1	12	0	0	0
Croatia	0	0	1	2	0	4	1	5	0	2	0	0	0	0	0	0	0	0
Czech Republic	0	0	2	5	2	4	0	0	1	9	0	1	1	0	1	3	0	0
Denmark	0	2	1	19	1	14	3	39	2	23	0	12	0	6	0	0	0	0
Estonia	1	3	0	1	0	5	0	0	0	2	0	0	0	1	0	0	0	0

Country	Oct 21-P	Oct 21-NP	Nov 21-P	Nov 21-NP	Dec 21-P	Dec 21-NP	Jan 22-P	Jan 22-NP	Feb 22-P	Feb 22-NP	Mar 22-P	Mar 22-NP	Apr 22-P	Apr 22-NP	May 22-P	May 22-NP	Jun 22-P	Jun 22-NP
Faroe Islands	0	0	0	0	0	2	0	0	0	1	0	0	0	0	0	0	0	0
Finland	0	7	0	4	0	0	0	2	0	1	0	2	0	1	0	4	0	1
France	0	0	1	4	29	14	171	13	161	16	602	13	77	9	178	15	0	0
Germany	1	5	17	30	17	116	19	187	9	301	3	74	4	101	1	13	0	5
Greece	0	0	0	0	0	1	0	0	0	0	0	10	0	2	0	1	0	0
Hungary	0	0	20	2	52	5	41	11	0	9	0	3	29	1	143	0	19	0
Iceland	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0
Ireland	0	0	2	17	4	12	0	5	0	4	0	8	0	0	0	0	0	0
Italy	4	0	113	4	168	10	23	4	4	5	5	0	1	0	0	0	0	0
Latvia	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0
Lithuania	0	0	0	0	0	0	0	0	0	2	0	0	0	1	0	2	0	0

Country	Oct 21-P	Oct 21-NP	Nov 21-P	Nov 21-NP	Dec 21-P	Dec 21-NP	Jan 22-P	Jan 22-NP	Feb 22-P	Feb 22-NP	Mar 22-P	Mar 22-NP	Apr 22-P	Apr 22-NP	May 22-P	May 22-NP	Jun 22-P	Jun 22-NP
Luxembourg	0	0	0	2	0	1	0	1	0	1	0	0	0	0	0	0	0	0
Moldova	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Netherlands	1	0	7	40	2	64	6	102	11	93	7	40	9	59	2	10	0	0
Norway	0	0	2	2	0	2	0	3	0	1	0	0	0	4	0	4	0	3
Poland	0	0	23	3	40	5	16	18	5	6	9	0	4	1	0	0	0	0
Portugal	0	0	0	0	2	1	0	6	5	1	0	5	0	0	0	0	0	0
Republic of North Macedonia	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0
Romania	0	0	0	1	0	2	0	2	1	7	2	4	0	0	2	0	0	0
Russia	3	28	5	9	2	2	0	1	4	0	0	1	0	1	0	0	0	0
Serbia and Montenegro	0	5	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Country	Oct 21-P	Oct 21-NP	Nov 21-P	Nov 21-NP	Dec 21-P	Dec 21-NP	Jan 22-P	Jan 22-NP	Feb 22-P	Feb 22-NP	Mar 22-P	Mar 22-NP	Apr 22-P	Apr 22-NP	May 22-P	May 22-NP	Jun 22-P	Jun 22-NP
Slovakia	0	0	1	1	0	2	1	2	1	3	0	5	0	0	1	0	0	0
Slovenia	0	0	0	0	1	2	0	35	0	0	0	0	0	0	0	0	0	0
Spain	0	0	0	0	0	0	1	4	17	15	23	12	0	6	0	2	0	0
Sweden	0	1	0	9	3	6	0	13	0	7	0	3	0	1	0	3	0	0
Switzerland	0	0	0	1	0	0	0	0	0	1	0	2	0	0	0	0	0	0
Ukraine	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
United Kingdom	0	1	12	53	38	96	8	64	7	45	6	49	4	14	3	46	1	2

Figure 3: Number of HPAI positive events reported in poultry, captive and wild birds each week in Europe from October 2021 to 6 June 2022 (IZSVe, 2022)



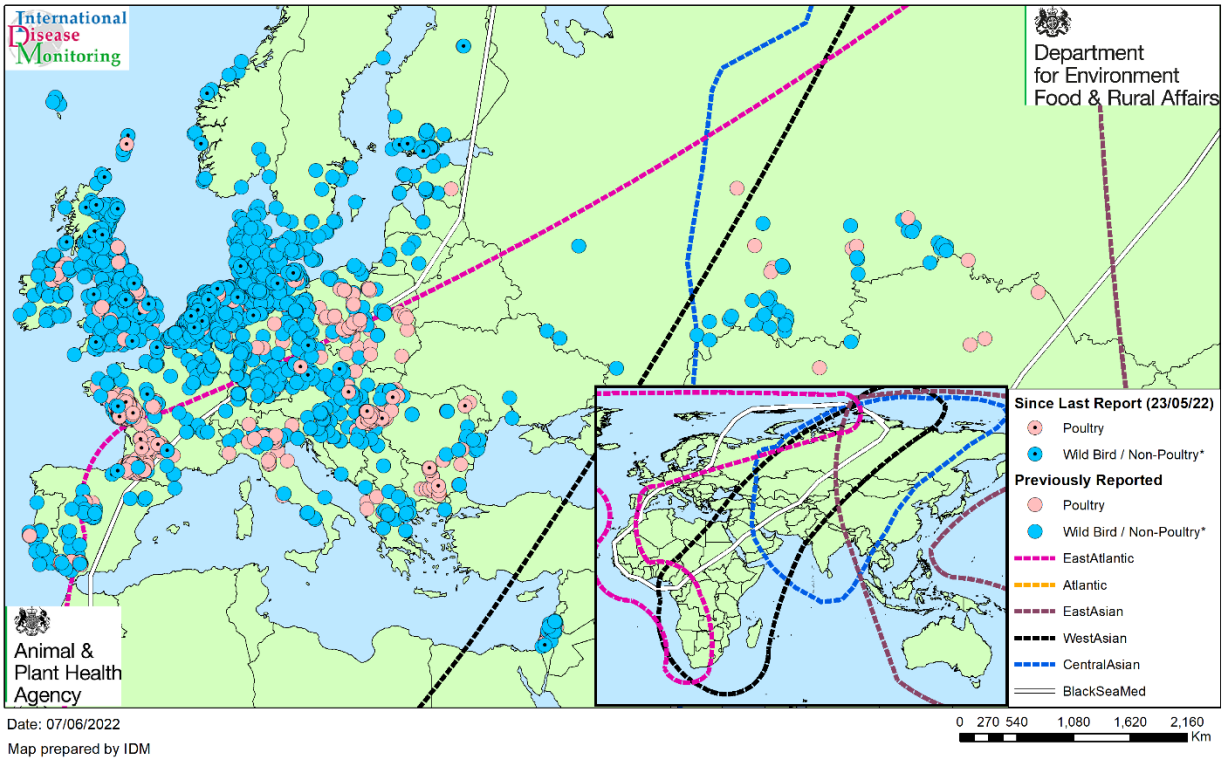
Across Europe, the number of poultry IPs reported weekly continues to decrease, with around 15 and five outbreaks reported in weeks 21 and 22, respectively (Figure 3). Cases of HPAI infection in wild birds have fluctuated over the past eight weeks which may reflect migration of waterfowl up to northern Europe from their overwintering sites. The weekly number of HPAI cases in wild birds has decreased steadily from week 20 to 22 decreasing (Figure 3). With the exception of the recent spike in poultry outbreaks in Hungary, the general decreasing trend in the number of poultry IPs with HPAI H5 reported per month by the WOAH for European countries continues (Table 4).

Data generated at APHA Weybridge indicates that this H5N1 virus will retain infectivity in the environment at low temperatures, for up to 45 days at 4^{o}C (Ian Brown, APHA Weybridge, Pers. Comm.). As higher temperatures, sunlight intensity and day length reduce virus survival, environmental decay will be occurring at a faster rate. The survival at 20^{o}C drops to 18 days supporting declining virus infectivity in the

environment as temperatures averaging 14ºC or higher have been occurring in the UK throughout May.

Map 3 shows the distribution of HPAI H5 outbreaks in poultry and captive birds, together with cases in wild birds, in Europe reported by WOAH between September 2021 and 6 June 2022. Those events reported since our last outbreak assessment on 23 May are identified with black central dots.

Map 3: HPAI outbreaks (from WOAH) in poultry, captive, and wild birds across Europe, September 2021 to 6 June 2022.



Highly Pathogenic Avian Influenza in Poultry and Non-Poultry*
September 2021 - June 2022
Overlay: Migratory Bird Flyways

WOAH Data Only
*WOAH Defined

Implications for the GB

Though the detections of HPAI in wild birds in Great Britain are greatly decreased from what was observed earlier on in the season, the new IPs reported herein confirm a significant infection pressure on the domestic poultry and captive bird populations in GB. This wild bird infection pressure results in continued poultry exposure where biosecurity is sub-optimal. Even where biosecurity is good, the wild bird infection pressure is likely to expose any weaknesses that exist. While the infection pressure from wild birds continues to decrease at this time of year, 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.

There has been an unprecedented number of HPAI H5N1 IPs with domestic poultry and captive birds, as well as wild bird cases, reported in this 2021 to 2022 season not only for the UK, but also across Europe. 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, although the downward trend in wild bird cases (Figure 3) may also be reflected in UK wild bird cases as the environmental contamination reduces with the higher summer temperatures.

Those birds from Ireland using stopover sites in GB or from England using stopover sites in western Scotland or the northern Isles will have moved on to their breeding sites in Siberia, Greenland or Iceland.

The departure of migratory wildfowl from GB is now complete with all overwintering waterbirds now gone until the autumn. It should be noted that the departure of migrant waterfowl does not mark the end of the risks for HPAI through wild birds. The virus is likely to continue to circulate in resident GB wild birds (species which breed in GB albeit with varying degrees of movement within GB) over the next month, with sporadic detections, although the rate is predicted to continue falling throughout summer in line with previous epizootics, although detection in sentinel species (e.g., raptors) may continue for some time. Resident birds may continue to circulate HPAI H5 virus and consequently act as a future source of infection to poultry. However, this risk will have been reduced as the birds have made regional or neighbourhood scale movements away from winter aggregations on larger waters into smaller groups or even single pairs at their breeding sites (often smaller waterbodies). This change in population structure and contact behaviour should reduce HPAI virus contamination levels close to poultry production and the circulation of virus within the wild bird population (as was experienced in 2016/17 and 2020/21).

Higher temperatures and sunlight intensities will reduce the level of environmental contamination by promoting inactivation of the virus. As the day length increases towards maximum in the next two weeks, the current warm weather is also expected to continue with faster environmental decay of the virus. The long-range forecast from the Met Office predicts that temperatures are likely to remain near normal (forecast until 20 June). With the average maximum temperature for June at 17.2°C, (according to a 20-year average based on the West Yorkshire weather station as the centre of GB Bingley SAMOS (West Yorkshire) UK climate averages - Met Office).

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 low levels compared to earlier this year.

There have been 1,085 confirmed cases of HPAI H5 in wild birds in Great Britain to 6 June 2022 across a range of species, with multiple detections in wild birds each week, though numbers are declining (Figure 1). The wild bird species 'order shift' observed between November 2021 and May 2022 (Figure 2) likely reflects the spread of HPAI infection from migratory water birds at incursion to more native, sedentary wild bird species, likely via environmental exposure together with the recent departure of migratory waterfowl to their breeding grounds. The overall number of detections in wild birds, and wild bird infection pressure, is decreasing (Figure 1).

At this time of year (early June 2022), waterfowl would not be expected to enter the UK from Continental Europe, even if the weather there were to deteriorate significantly in the coming weeks. Indeed, most if not all migratory waterfowl have departed north-east from wintering grounds in Europe. Even though the migratory waterbirds have now departed the UK, there are still immunologically naïve, susceptible, resident bird species in the UK which could become infected from residual environmental contamination. However, most of these birds will now have dispersed to their breeding grounds within the UK, reducing bird-to-bird contacts, hence decreasing environmental levels of virus and with it the wild bird risk. With the departure of the migratory waterbirds from the UK, only those resident wild bird species will play any role in subsequent spread of virus. These could include bridging species to poultry. Higher environmental temperatures, together with increasing sunlight intensities will greatly reduce environmental levels of HPAI H5N1 and the associated risks in the summer months. It remains to be seen to what level the wild bird risk will fall over the summer.

Due to the decreasing weekly number of cases of HPAI H5N1 in wild birds on mainland GB, together with the departure of all the migratory waterbirds and the reduced environmental contamination/virus survivability due to warmer temperatures and extended periods of high intensity sunlight as we progress into summer, 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 at **medium** (with low uncertainty) where biosecurity is suboptimal. 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, 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 now 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 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, as of 1 June 2022 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, waders and raptors
- five or more birds of any species

It is advisable that you do not touch these birds.

In Scotland and Wales, findings of any number of dead wild birds of any species, 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). It is advisable that you do not touch these birds.

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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)

- Plateforme ESA (2022) Weekly bulletin of International Animal Health Watch of 23/05/2022 to 29/05/2022

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