Department
for Environment
Food & Rural Affairs

Risk assessment on the likelihood of spread of highly pathogenic avian influenza H5Nx associated with bird fairs, shows, markets, sales and other gatherings

Qualitative risk assessment

12 April 2026

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Executive summary

The hazard is high pathogenicity avian influenza (HPAI) virus H5Nx. Here, a rapid risk assessment (RRA) is undertaken to reassess the risk of HPAI H5Nx introduction from poultry and captive birds taken to bird fairs, shows, markets, sales and other gatherings (henceforth referred to as “gatherings”). The subsequent risk of spread of HPAI H5Nx to other birds at the gathering and then spreading to different establishments has been assessed this 2025/26 season in previous RRAs as medium or high (depending on the bird species) and this risk assessment uses the same methodology as previous iterations. Critical to this RRA therefore is the likelihood that captive birds are infected prior to their transport to a gathering, together with the likelihood that any infected birds are not detected (and hence movement restrictions not applied to the flock) before reaching the gathering.

The main route of exposure of captive birds prior to transport is through contact with wild birds (either direct or indirect contact). At the present time (10 April 2026) the wild bird risk for HPAI H5Nx is at **medium** in Great Britain (HPAI Europe 10 April 2026). Since the beginning of the 2025 to 2026 season (1 October 2025) wild bird cases have been reported across all of England and most of Wales and Scotland with many cases inland. Resident waterbird species, namely mute swans, Canada and greylag geese were particularly badly affected this season although cases have been falling markedly through March and into April. Since the increase in IPs (infected premises) reported in early November 2025 across England and Wales, the number of IPs each week has fallen through January to an average of less than 1 IP per month by early April such that the risk level for poultry with suboptimal biosecurity has now been reduced from medium to **low** with medium uncertainty (HPAI Europe 10 April 2026).

In terms of the bird species considered in this RRA, those poultry and bird species that are most likely to be taken to gatherings include 7 bird orders, namely Psittaciformes (parrots), Columbiformes (doves and fancy pigeons including racing pigeons if taken to a gathering), birds of prey (Accipitriformes and Falconiformes), Passeriformes (finches), Galliformes (poultry and game birds), Anseriformes (ducks and geese) and Ratites (ostriches, emus and rheas). The baseline risk of those birds being infected prior to the gathering for this RRA is based on that of poultry in Great Britain taking into account whether the biosecurity is more in line with sub-optimal biosecurity (Galliformes, Anseriformes and Ratites) or stringent biosecurity (Psittaciformes, Columbiformes, birds of prey, and Passeriformes). As with the previous gathering’s RRA, the risk for each of the 7 bird orders is then refined based on specific differences in access to the environment where residual infectivity from wild birds may be present.

Captive ducks and geese (Anseriformes) kept outside or in un-netted ponds are highly likely to have contact with wild ducks, geese and swan species particularly if kept at premises near to where wild waterfowl gather. In previous iterations of this RRA in

February and March 2026 (Avian influenza (bird flu) in Europe, Russia and the UK - GOV.UK), the risk of infection of captive Anseriformes prior to attending the gathering or show was therefore considered as high due to the ongoing detections in wild waterfowl which could visit water bodies utilised by or frequented by captive Anseriformes. The risk level for captive Anseriformes prior to being taken to gatherings is therefore assessed to be **medium** (albeit with high uncertainty) across Great Britain reflecting the current (10 April 2026) medium risk level for wild birds. The uncertainty is high because the risk level for infection of captive Anseriformes prior to the gathering may actually be low. The main differences between the risk to captive Anseriformes in February/March compared to now (April 2026) are that firstly there are now relatively few cases in wild resident waterfowl (see Table 1) and secondly that the winter aggregations of resident waterfowl have dispersed as birds pair up at their breeding sites. Thirdly, the migratory waterfowl species which accounted for 26.5% of the wild bird cases in March (Table 1) have mostly all departed by mid-April. Thus there may be fewer contacts of captive Anseriformes with infected wild waterbirds.

The risk of infection for captive Galliformes across Great Britain prior to attending the gathering is now assessed to be **low** (but with high uncertainty) in line with the risk level for poultry with suboptimal biosecurity. The risk of infection prior to the gathering is assumed to be the same as that for poultry with stringent biosecurity (Psittaciformes, Columbiformes, birds of prey, Passeriformes) or suboptimal biosecurity (Ratites), namely **low**.

The results of the risk assessment are set out in the table below.

Summary table: Qualitative risk assessment for entry and subsequent spread of HPAI H5Nx at bird gatherings according to bird group (for 10 April 2026)

Captive bird group taken to gathering	Risk of entry and subsequent spread	Uncertainty
Psittaciformes	Low	Low
Columbiformes	Low	Low
Birds of Prey	Low	Low
Passerines	Low	Medium
Anseriformes	Medium	High
Galliformes	Low	High
Ratites	Low	Low

The overall risks of entry and subsequent spread is **medium** for captive Anseriformes reflecting the medium risk level for wild birds across Great Britain. However, the uncertainty is high because the risk is at the low end of the medium risk level range. The overall risks of entry and subsequent spread are **low** for the other 6 captive bird groups reflecting the low risk level for poultry across Great Britain. The uncertainties in the low overall risks are low for Psittaciformes, birds of prey (not used for hunting), and ratites because both the likelihood of infection prior to the gathering and the likelihood of not

detecting infection are low. The uncertainty in the low risk for birds of prey used for hunting is medium. The respective uncertainties in the overall risks for Columbiformes and Passerines reflect the respective uncertainties in the low probabilities that the captive birds are infected prior to the gathering. Despite the medium uncertainty in the low risk level for poultry with suboptimal biosecurity, the uncertainties in the overall low risks for captive Galliformes is high reflecting the more likely contact of this captive bird group with wild birds (particularly waterfowl) for which the risk level in Great Britain is medium.

The uncertainty in the overall risk of entry and spread at gatherings is now less dependent across most bird groups on the likelihood of infected birds not being detected in each group prior to the gathering. This is because of the low risks of most captive birds actually being infected prior to the gathering. However, **any suspicion of infection being reported by the owner prior to the gathering is a critical protective barrier for gatherings**.

Background

Here, a rapid risk assessment (RRA) is undertaken to reassess the risk of high pathogenicity avian influenza (HPAI) H5N1 introduction and spread from poultry and captive birds taken to bird fairs, shows, markets, sales and other gatherings (henceforth referred to as “gatherings”). Gatherings of birds involve the coming together and subsequent dispersal of live kept birds (as well as people, vehicles and equipment) and for this reason can facilitate the introduction and spread of avian notifiable disease including HPAI to different locations across Great Britain. The magnitude of this risk is influenced by the number and types of different groups of birds brought together and the likelihood of their being already infected at their point of origin. Movements of birds out of an SZ or PZ around a confirmed IP (infected premises) are not permitted but other than this, traceability of poultry is lightly regulated so most moves outside a restriction zone are of uncertain origin and status.

Previous Defra risk assessments (Defra, 2016) were used as a basis for the general licence allowing bird gatherings to take place while minimising the risk of introduction of avian notifiable diseases to these events and mitigating the likelihood and impact of any subsequent spread. Here the risk assessment is updated to accommodate the risk levels for HPAI H5N1 in wild birds and poultry in April 2026.

Trends and risk levels in the current epizootic

Please see our updated outbreak assessment for April 2026 at Avian influenza (bird flu) in Europe, Russia and the UK - GOV.UK for details. On 7 April 2026 the risk level for poultry with suboptimal biosecurity was reduced from medium (with high uncertainty) to low (with medium uncertainty). This followed a 5 week period (to 10 April 2026) with no IPs. The last IP was detected on 3 March 2026 with an outbreak on a pheasant farm in Yorkshire.

Previously (HPAI in Europe #5 February 2026) the risk level for poultry with stringent biosecurity was lowered from medium to low (medium uncertainty). On 7 April 2026 the uncertainty in that low risk level for poultry with stringent biosecurity was reduced from medium to low.

The number of wild bird cases has halved each month since January as shown in Table 1. It is interesting to note (Table 1) from the point of view of gatherings that resident Anseriformes (mallard ducks, Canada and greylag geese) together with the resident (mainly mute) swans in March only account for less than 20% of the wild bird cases in terms of wild bird group while in January they accounted for two-thirds of wild bird cases. The number of resident waterfowl positive cases has fallen from 80 collected in January to just 6 collected (and tested by 07 April 2026) in March (although it should be noted that some of these mute swan and geese cases were mass die-off events not indicated in the numbers). Seabirds, raptors and gulls account for over 50% of the wild bird HPAI-positive cases collected in March. While over a quarter of wild bird cases in March were migratory geese and ducks, these will have departed from Great Britain by mid-April.

Table 1: Numbers (and percentages) of wild bird cases of HPAI H5N1 and H5Nx according to bird group in Great Britain collected from 1 January 2026 to 07 April 2026.

Wild Bird Group	January	February	March
Gull	4 (3.1%)	7 (10.8%)	2 (5.9%)
Migrant goose/ducks	11 (8.6%)	9 (13.8%)	9 (26.5%)
Migrant swan	1 (0.8%)	0	0
Owl	3 (2.3%)	1 (1.5%)	0
Pigeon	3 (2.3%)	1 (1.5%)	1 (2.9%)
Raptor	26 (20.3%)	16 (24.6%)	11 (32.9%)
Resident goose/duck	34 (26.6%)	8 (12.3%)	4 (11.8%)
Resident swan	46 (35.9%)	16 (24.6%)	2 (5.9%)
Seabird	0	7 (10.8%)	5 (14.7%)
Total	128	65	34

Captive bird orders glossary

The bird orders of captive birds considered are set out in Table 2:22.

Table 2:2 Glossary of captive bird orders considered here with examples.

Order	Examples
Psittaciformes	Parrots
Columbiformes	Pigeons and doves
Birds of prey (Accipitriformes and Falconiformes)	Hawks and falcons
Passeriformes	Perching birds (finches and canaries)
Galliformes	Turkeys, pheasants, chickens, guineafowl.
Anseriformes	Ducks and geese
Ratites	Ostriches, emus and rheas

Hazard identification

The hazard identified is highly pathogenic avian influenza virus, (HPAI) H5Nx.

Risk question

1) *What is the risk of the introduction of highly pathogenic avian influenza H5Nx into bird fairs, shows, markets, sales and other gatherings?*

2) *What, if any, management options are available to reduce the likelihood and the impact of introduction and subsequent spread of avian notifiable disease through the abovementioned gatherings?*

Scope

This qualitative risk assessment covers the risk of introduction and subsequent spread of avian notifiable disease to and from bird gatherings organised in Great Britain that were legally moved to the event from within the UK.

This risk assessment does not assess the risk related to illegal movements, failure to report clinical disease, false certification, breaches in biosecurity etc. Any risks potentially presented by (or to) wild birds are also not assessed here.

Terminology related to the assessed level of risk

For the purpose of the risk assessment, the following terminology will apply (OIE, 2004):

- **Negligible**: So rare that it does not merit to be considered
- **Very low**: Very rare but cannot be excluded
- **Low**: Rare but does occur
- **Medium**: Occurs regularly
- **High**: Occurs very often
- **Very high**: Event occurs almost certainly

It should be noted, however, that the risk terminologies here do not represent how often an event will occur but more indicate the probability of the event occurring.

Entry assessment

The Defra (2016) assessments concluded that the overall risk of the introduction of avian notifiable diseases including HPAI to a bird gathering is related to the ongoing disease situation in Great Britain, both in domestic poultry and in wild birds.

It is important to note that the wild bird surveillance figures for Great Britain are based on passive surveillance of found dead birds reported to Defra by the general public and as such, may be affected by several factors including frequency of visitors accessing areas with bird populations, the potential for immunity in the wild bird population (which may result in fewer birds developing clinical disease and or dying with HPAI), variable surveillance system sensitivity, as well as the size, location and accessibility of carcasses. Thus, this wild bird surveillance does not necessarily capture all the cases that occur, although the current number of cases reported fully supports the current (12 April 2026) medium-risk level for wild birds.

As adopted in previous RRAs for gatherings, the risk of those birds which may attend gatherings being infected with HPAIV H5Nx is based on the official risk levels for poultry in Great Britain being infected through background environmental contamination from infected wild birds. This risk is currently (12 April 2026) **low (with medium uncertainty)** for poultry where biosecurity is sub-optimal and **low (with low uncertainty)** for poultry where biosecurity is stringent**.** The Avian Influenza Prevention Zone (AIPZ) is still in place (12 April 2026) across Great Britain. The mandatory housing order put in place across the whole of England on 6 November 2025 and Wales on the 13 November 2025 and was lifted at 00.01 on 9 April (National Housing Order declared to protect poultry from Avian Influenza - GOV.UK).

It is assumed that keepers of any birds participating at a gathering are doing so in full compliance with the legal requirements for movements of live birds, and that birds are not coming from areas under disease control restrictions.

Likelihood of captive bird being infected prior to being taken to gathering

Captive birds, such as those held in collections, zoos or approved bodies are already semi-housed and should be kept separate from wild waterfowl. For some, it will be difficult to prevent access to their water environment (ducks, geese, swans, penguins, pelicans, flamingos etc) and it is unlikely that it will be possible to house them indoors, so every effort should be made to prevent wild waterfowl access.

Due to the varying level of biosecurity (considered lower than stringent in many cases) and ability to be tracked, those birds being taken to gatherings and shows will be of a more uncertain infection status than commercial poultry with stringent biosecurity. Also monitoring and data for commercial production means that commercial birds can be tracked more easily than for those birds at gatherings and shows. Birds from non-commercial settings carry greater uncertainty. The baseline risk of those birds being infected prior to the gathering for this RRA is based on that of poultry in Great Britain taking into account whether the biosecurity is more in line with sub-optimal biosecurity (Galliformes, Anseriformes and Ratites) or stringent biosecurity (Psittaciformes, Columbiformes, birds of prey, Passeriformes).

Table 3: Likelihood of HPAI H5Nx infection in each group of captive birds prior to attending the gathering

Order	Examples	Likelihood of being infected currently (12 April 2026) prior to going to gathering	Uncertainty
Psittaciformes	Parrots	Low – reflecting that the risk for poultry with stringent biosecurity is low.	[a]Medium - Mostly kept in aviaries or indoors. Risk may be higher if keep in outdoor aviaries.
Columbiformes	Pigeons and doves	Low – based on the low risk level for infection of poultry with stringent biosecurity.	Low – low risk level is consistent with relatively low susceptibility of Columbiformes to HPAI H5Nx and the relatively few cases in wild Columbiformes (discussed in text).
Birds of prey	Hawks and falcons	[c]Low – would be medium if allowed to catch wild waterfowl at the current time (12 April 2026) when wild bird risk is medium.	High – reflecting uncertainty in how many captive birds of prey are used to catch wild birds.

Order	Examples	Likelihood of being infected currently (12 April 2026) prior to going to gathering	Uncertainty
Passerines	Finches and canaries	Low - kept in aviaries or indoors reflecting that the risk for poultry with stringent biosecurity is low.	[a]Medium - Risk may be higher if keep in outdoor aviaries where wild birds are attracted.
Galliformes	Turkeys, pheasants, chickens, guineafowl	[a]Low - based on current risk to poultry with suboptimal biosecurity. Chickens less susceptible to HPAI H5N1 infection than ducks.	[b]High - Captive Galliformes likely to be outdoors with greater opportunity of exposure to wild birds hence suboptimal biosecurity.

Order	Examples	Likelihood of being infected currently (12 April 2026) prior to going to gathering	Uncertainty
Anseriformes	Ducks and geese	Medium – reflecting the wild bird risk and that ducks are highly susceptible to HPAI H5N1 challenge. Captive ducks and geese likely to be outdoors with access to ponds where HPAI H5N1 could be introduced if present in local wild water birds including gulls. In the next few weeks, the wild bird risk may go to low and so too will the probability captive Anseriformes are infected.	[b]High - although the wild bird risk is medium it is noted that there are now (April 2026) few wild bird cases in resident waterfowl (Table 1). Furthermore, migratory waterfowl will have departed GB by April and resident waterbirds will have dispersed to their breeding sites. Thus risk level may be at the low end of medium.
Ratities	Ostriches, emus and rheas.	[a]Low – kept outdoors with access to wild birds.	[a]Medium

[a]Based on the current risk level (12 April 2026) to poultry with suboptimal biosecurity.

[b]In the case of some captive Galliformes and many Anseriformes the risk level will be the same as that currently for wild birds, namely medium, if they are allowed to mix with wild birds on ranges and ponds respectively, hence high uncertainty.

[c]Based on the current risk level (12 April 2026) to poultry with stringent biosecurity.

The risks for the 7 bird orders considered here (Table 2:22) are refined in **Error! Reference source not found.** based on specific differences in access to the environment where residual infectivity from wild birds may be present. This is now described for the 7 bird orders considered here.

Psittaciformes and Passeriformes

Passerine species infected with HPAI H5Nx globally include several species of finch, sparrow, thrush and myna (Bird & mammal species affected by H5Nx HPAI). In March 2022 there were 6 cases of HPAI H5/H5N1 in pied wagtails in Crewe. In the 2022 to 2023 season in Great Britain there were 4 cases of HPAI H5 in passerines, namely a reed warbler and 3 carrion crows. However, since the beginning of the 2023 to 2024 season, there have been no detections of HPAI H5Nx in found dead wild passerines in Great Britain. This may partly reflect the character of this citizen-science based surveillance scheme, where dead small passerines are relatively unlikely to be found by members of the public and may not remain available for collection and analysis. In Europe, according to WOAH, passerine cases that have been reported since 1 October 2025 to 08 April 2026 include 2 chaffinches in Belgium, 1 thrush in the Netherlands, 4 blackbirds (Belgium, France and Poland), 1 robin in Belgium, 1 blue tit in Belgium, 1 redwing in Belgium, a Sylvia warbler in Austria and single unidentified passerines in Germany and Poland. In addition, some 24 cases have been reported in corvid species in Europe since 1 October 2025 (to 08 April 2026).

Brown et al. (2009) demonstrated that house sparrows are highly susceptible to HPAI H5N1 with low doses required to initiate infection and cause mortality. The house sparrows excreted virus at high titres (up to 10^4 to 10^5 $TCID_{50}$s/ml) via the oropharynx and cloaca for several days prior to the onset of clinical signs. Forrest et al (2010) elucidated the role of sparrows as intermediate hosts of HPAI H5N1 concluding that, "the sparrows shed virus for several days, and their drinking water was rapidly contaminated with virus. The long-term shedding we observed in sparrows was also seen by Brown et al. (2009) in house sparrows infected with A/whooper swan/Mongolia/244/05 (H5N1) HPAI virus. These findings, in view of the widespread intermingling of land-based wild birds with wild and domestic waterfowl and poultry, suggest that passerine birds can facilitate the spread of H5N1 virus."

The key point in Forrest et al. (2010) is that they demonstrate that the sparrows are readily infected with HPAI H5N1 and that those infected sparrows shed very high titres with a mean peak titre of $>10^6$ EID_{50} per ml. Thus taking infected sparrows shedding such high doses to a gathering would be a major concern. It is also worth noting that the sparrows' mean time to death was 4.1 days with shedding starting 1 day post infection, so infected sparrows can shed a lot of virus before they die. Although in the experiment of Forrest et al. (2010) none of the n = 5 chickens were infected by the sparrows through water it is considered that not detecting infection in just n = 5 chickens is not sufficient to rule out transmission from sparrows. Forrest et al (2010) tried to infect the n = 5 chickens with 1

litre of water that the infected sparrows had used for drinking. They diluted this 1 litre with 2 litres of water and gave it to the chickens. While they did mix the water, it is not known if the n = 5 chickens actually ingested any virus particularly if the virus was in particulate lumps of oropharyngeal secretion that dropped to the bottom of the dish (spatial heterogeneity or clustering).

A paper by Nemeth et al. (2010) studied LPAI H3N8 (not H5) and did demonstrate infection and shedding particularly in the oropharyngeal route for up to 5 days. Swabs from three house sparrows on 3 to 4 dpi were 10^2 to 10^3 EID_{50}/ml with a cloacal swab on 5 dpi of 10^4 EID_{50}/ml. The authors concluded "the results from the present study do not strongly support the involvement of two common and abundant passerine species in LPAIV maintenance and transmission to captive or wild birds, although the demonstrated susceptibility to infection and subsequent oropharyngeal shedding of infectious virus cannot rule out their involvement."

Ellis et al. (2021) have studied the susceptibility, infection and transmission of low pathogenicity avian influenza (LPAI) in starlings. In the experiment, 4 naive starlings placed in a cage with 5 starlings infected by inoculation were not infected (in 4 replicate experiments) suggesting starling to starling transmission is not efficient and that starlings do not act as maintenance hosts. However, starlings were infected by drinking water used by an experimentally infected mallard duck and those infected starlings shed viral RNA for around 7 days. Starlings experimentally infected did shed viral RNA at high levels and it must be assumed could therefore infect poultry and Anseriformes. Thus, starlings could act as a bridging species to poultry in the case of LPAI at least.

Psittaciformes and collections of ornamental passerines are kept in aviaries, and some may even be kept indoors where there is less likelihood of direct wild bird contact. The risk of infection of Psittaciformes and kept passerines prior to being taken to the gathering is considered to be the same as that for the risk to poultry with stringent biosecurity, namely **low**. It is noted that those Psittaciformes and passerines kept in outside aviaries will be at higher risk and at the higher end of the low risk level range. The uncertainty is medium due to the variation in how these birds are kept, i.e., ranging from a single bird kept indoors to outdoor aviaries with larger collections. Individual species susceptibilities across these two captive bird groups are poorly defined.

Columbiformes

Racing pigeons competing within Great Britain or Europe are not considered here (they are the subject of a separate and specific risk assessment). However, racing pigeons taken to other gatherings are included here together with related Columbiformes of other species or breeds. There have been relatively few reports of cases in wild Columbiformes to WOAH over the last few years of the epizootic although the number of cases has increased this season.

Studies with HPAI H5N1 whooper swan/Mongolia strain showed that pigeons were relatively resistant to HPAI H5N1 requiring a high dose of virus to produce infection and death (Brown et al. 2009). In a study of domestic pigeons, inoculated oculo-nasally with HPAI H5N8 (Clade 2.3.4.4 sub-group icA3) of Korean origin, Kwon et al, (2017) concluded that, though pigeons have lower susceptibility than some other species, they can be infected with HPAI H5N8 when exposed to high doses and could excrete the virus in sufficiently high doses to infect other species of birds. Pigeons could also be mechanical transmitters of the virus. A study in which 18 pigeons were inoculated intranasally with HPAI H5N8 (clade 2.3.4.4 subgroup B) from South Africa reported viral shedding in medium and high-dose pigeons for up to 8 days (Abolnik et al, 2018). Infected pigeons successfully transmitted virus to contact pigeons and seroconversion was observed in 2 of the chickens in the high-dose group (Abolnik et al, 2018).

More recent experimental research with Clade 2.3.4.4b H5N1 viruses has provided further evidence for the low level of susceptibility of these birds to HPAI (Di Genova et al. 2025). Thus, following direct inoculation, pigeons did not develop clinical signs, and only those inoculated with the highest dose shed viral RNA or seroconverted to H5N1, revealing a 50% minimum infectious dose of 10^5 50% egg infectious dose (EID_{50}). Even in the high-dose group, only low-level shedding and environmental contamination were observed, and low-level viral RNAs were present in the tissues of directly inoculated pigeons, with no distinct pathological lesions. A single pigeon in the medium-dose group (10^4 EID_{50}) exhibited a single subthreshold level of viral RNA being detected in the oropharyngeal cavity. In contrast, viral RNA was shed by 7 of the 8 pigeons in the high dose group (10^6 EID_{50}) between 1 and 7 days post infection. However, despite shedding in the high dose group, pigeons did not transmit the virus to other pigeons or chickens placed in direct contact (Di Genova et al. 2025).

Columbiformes may be kept in aviaries outside where direct contact with waterbirds might occur. Since October 2025 there have been 6 cases of HPAI H5N1 in collared doves, 5 cases in unidentified Columbiformes and 18 cases of HPAI H5/H5N1 in woodpigeons in Europe according to IZSVe (2026). Similarly on WOAH from 1 October 2025 to 08 April 2026 there have been 40 cases of HPAI H5/H5N1 in pigeons, including 19 woodpigeons, 6 feral pigeons and 9 Eurasian collared doves in Europe. In Great Britain from 1 October 2025 to 12 March 2026 there have been 4 wood pigeon cases, 5 rock doves and 1 unidentified dove. These cases may reflect the very high wild bird infection pressure in Great Britain and Europe in the 2025 to 2026 season together with the abundance of pigeons as wild birds. It should be noted that just because in an experimental setting the “infectious dose” for pigeons is high (see Di Genova et al. 2025), does not mean that lower doses do not cause infection in at least one pigeon when large enough numbers of pigeons are each exposed to low doses. Comorbidities and health status are also likely to impact upon infection outcome. While infected pigeons may only shed at low levels, low levels may be sufficient to infect more susceptible species at a gathering including Anseriformes (James et al. 2023).

Given the current (April 2026) low risk level for infection of poultry together with the relatively low susceptibility of Columbiformes to HPAI H5Nx and the relatively few cases in wild Columbiformes (discussed above), the likelihood of Columbiformes being infected prior to being taken to the gathering is assumed to be **low** with medium uncertainty.

Birds of prey (Accipitriformes and Falconiformes)

There are many reports of wild raptors being infected both in Great Britain and globally with HPAI H5N1 and also with HPAI H5N5, perhaps because they are exposed to very high viral doses when scavenging infected bird carcases. Raptor cases in Great Britain accounted for 33% of wild bird cases in Great Britain in March 2026 (Table 1). Most captive birds of prey will be fed on commercial feed considered to be low risk for infection (such as day-old chicks and reared small rodents) but some are fed shot game, including wild duck, which increases risk of infection through feeding. Given the recent reduction in the risk level in wild birds (HPAI Europe 10 April 2026), including cases in ducks which captive falcons may be used to hunt, the overall risk of captive birds of prey having disease prior to being taken to a gathering is now reduced from medium (Risk assessment highly pathogenic avian influenza) to **low** (with high uncertainty). This risk is lower than the medium risk level currently for wild birds reflecting the fact that not all captive falcons are used for hunting wildfowl. The risk would be higher for those falcons contacting wild birds including waterfowl. It is not known how many captive falcons are used for catching wild birds hence the high uncertainty. It is assumed that falconers no longer feed shot wild duck to their falcons.

Ratites

Ratites are always kept outside and it may not be possible to house them given their large size. In 2025 there were 3 reported cases of HPAI H5N1 in ratites including a captive emu in Brazil, a captive ostrich in Mexico and most recently in a captive rhea species in Portugal according to WOAH. HPAI H5N1 has also been detected in a captive Greater Rhea in Great Britain (Coombes et al 2025). With wild bird infection pressure falling, the likelihood that a ratite is infected prior to a gathering is assumed to be **low** (with medium uncertainty). This reflects the current risk level and uncertainty for poultry with suboptimal biosecurity in Great Britain.

Galliformes

It is well documented that chickens are highly susceptible to HPAI H5, and whilst experimental data has suggested that higher doses of HPAI H5N1 are needed to productively infect chickens compared to ducks, once infected, chickens develop severe disease with high mortalities whilst ducks generally exhibit reduced infection outcomes (James et al. 2023). The likelihood of captive Galliformes being infected prior to being taken to the gathering is assumed to be the same as that currently (10 April 2026) for poultry with suboptimal biosecurity namely **low**. However, the uncertainty in this low risk

level is considered to high reflecting the fact that the captive Galliformes' risk level could be the same as that currently (10 April 2026) for wild birds, namely medium, if they are allowed to mix with wild birds.

Anseriformes

From October 2025 to February 2026 the number of cases of HPAI H5N1 in wild resident Anseriformes species (including mute swans, greylag geese, Canada geese and mallard ducks) remained high across Great Britain with smaller numbers of cases in migratory waterbirds (including pink-footed geese, barnacle geese and whooper swans). Through March and into April 2026 the number of wild Anseriformes cases has decreased (Table 1), contributing to the reduction in the wild bird risk level to medium, although there have been mass die-off events in mute swans.

Ducks in experimental challenges are infected by much lower titres of HPAI H5N1 clade 2.3.4.4 virus than chickens (James et al 2023) and must be considered highly susceptible to infection although infection outcome can vary significantly. Captive ducks and geese kept outside or in un-netted ponds are likely to have contact with wild duck, geese and swan species at premises near where wild waterfowl gather.

The risk level for captive Anseriformes (ducks and geese) prior to being taken to gatherings is therefore assessed to be **medium** with high uncertainty across Great Britain (**Error! Reference source not found.**) reflecting the current (10 April 2026) medium risk level for wild birds. The uncertainty in this medium risk level is high because it could be argued that the risk level is at the low end of the medium risk level range. The main differences between the risk to captive Anseriformes in February/March 2026 compared to April 2026 are that firstly there are now relatively few cases in wild resident waterfowl (see Table 1) and secondly that the winter aggregations of resident waterfowl have dispersed as birds pair up at their breeding sites. Thirdly, the migratory waterfowl which accounted for 26.5% of the wild bird cases in March (Table 1) have mostly all departed by mid-April. Thus there may be fewer contacts of captive Anseriformes with infected wild waterbirds such that the risk to some captive Anseriformes in Great Britain may be lower than medium depending on their location and the species of wild birds which they contact.

Likelihood of HPAIV H5Nx not being detected prior to gathering

The level of awareness of avian notifiable diseases in Great Britain is thought to be generally high and suspicions of clinical disease in poultry and other captive birds would be reported reasonably quickly, generally within a few days, particularly with the current awareness in the sector of HPAI H5N1 in wild birds. Movement restrictions for disease control purposes would be uniformly implemented based on domestic and retained EU Community legislation. The length of the virus incubation period as well as the possibility

of virus shedding during this time is an important factor to be considered while assessing these risks. However, no official incubation period for avian influenzas is established for bird species other than poultry and the actual length of the incubation period is affected by numerous factors including the disease, the virus load, the actual virus strain, the species, and immune status.

The probability of infected birds not being detected (and hence movements restricted) prior to the gathering is now discussed for each of the 7 captive bird groups. It is considered here that infection of captive birds is more likely to be detected in parrots and birds of prey than in passerines. This is because there are often more passerines in a cage than parrots and birds of prey, so if 1 or 2 passerines in a larger group die they may not be suspected to be avian influenza so much as if a single parrot or bird of prey on its own in a cage dies.

Psittaciformes

Cases of HPAI H5N1 infection in wild parrots have been reported on WOAH mainly in South America in recent seasons. A range of species have been reported, including blue-and-yellow macaw, budgerigar, burrowing parrot, Mealy parrot, red-and-green macaw, scarlet macaw, slender-billed parakeet, white-winged parakeet, and yellow-headed Amazon parrot. There has been a case where budgerigars were infected at a premises in Norfolk in mid-December 2024. The likelihood of HPAI infection being undetected for Psittaciformes is unknown, but given the multiple detections in wild parrots in South America and the cases in zoos, including the captive bird establishment in Great Britain, is assumed to be **low** with medium uncertainty.

Columbiformes

In the study of Abolnik et al (2018) with HPAI H5N8 there were no clinical signs observed in any of the pigeons involved despite viral shedding in medium and high-dose pigeons for up to 8 days. The study of Kwon et al. (2017) with domestic pigeons inoculated oculo-nasally with HPAI H5N8 (Clade 2.3.4.4 sub-group icA3) of Korean origin, showed no clinical signs or mortality even though relatively high levels of shedding were observed in half of the pigeons. Pigeons do not show clinical signs when infected with H5N8 (Abolnik et al, 2018, Kwon et al, 2017). Similarly, 6 of 6 pigeons given high doses of HPAI H5N1 survived infection to 14 days post infection despite shedding virus (Di Genova et al. 2025). Therefore it is assumed here that there is a **high** likelihood (medium uncertainty) of not detecting Columbiformes infected with HPAI H5.

Birds of prey

The likelihood of disease not being detected prior to the gathering is **low** for birds of prey. This is because birds of prey seem particularly susceptible to morbidity and mortality from HPAI H5Nx with many affected in the wild in both Great Britain and globally. It is known that birds of prey generally develop overt clinical signs if infected with the H5N8 HPAI virus, and HPAI H5N1 positive found-dead birds of prey have been a feature in Great

Britain in recent weeks and previous seasons (along with captive birds of prey in previous seasons). The infected birds of prey would show clinical signs within 2-3 days of feeding and are likely to be detected prior to taking to a gathering, hence the low risk. However, this may not be the case of all birds of prey, for example white-tailed eagle, and hence the uncertainty is medium.

Passerines

Passerines, including starlings (see above), canaries and finches are known to be susceptible to low pathogenicity avian influenza (LPAI) H5 and they can shed large amounts of viral RNA through the respiratory route (Marché et al 2018; Ellis et al 2021). While they do not show clinical signs or mortality with LPAI, if infected with HPAI H5 then a proportion would be expected to show mortality and there have been reports of mortality of wild passerines both globally and in Great Britain from HPAI H5N1 strains.

In experiments with house sparrows infected with HPAI H5N1 (Brown et al. 2009) the house sparrows excreted virus via the oropharynx and cloaca for several days prior to the onset of clinical signs. Thus sparrows infected with low challenge doses shed up to 10^5 $TCID_{50}$/ml at 4 days post infection with 60% of the birds still alive at 9 days post infection. Most sparrows in all three challenge doses (low, medium, high) either exhibited no clinical signs or had a brief duration of sickness prior to death. Clinical signs, when detected, included weakness, lethargy, puffed up feathers, imbalance and severe neurologic signs such as head tremors and seizures. The likelihood of infected passerines not being detected is therefore assumed to be **medium** with medium uncertainty.

The key points from the paper on LPAI transmission to starlings by Ellis et al. (2021) for assessing the risks from passerines at gatherings are that captive passerines would be infected if exposed to infected wild ducks for example if kept outside in an aviary where flooding could cause ingress of water containing virus shed by wild birds. Furthermore, those starlings infected through exposure to water from infected ducks shed sufficient quantities of viral RNA to infect poultry and Anseriformes at a gathering (although the authors have not demonstrated this and suggest this as further work). The fact that starling to starling spread did not occur efficiently means that only a small proportion of passerines in an aviary would be infected if one were to be infected, so reducing the chances of the owner realising HPAI was present in the flock. So if passerine to passerine transmission were efficient the whole aviary would become infected and the owner would notice. This further supports our conclusion here that the probability of not detecting infected passerines prior to going to a gathering is **medium**.

The studies by Forrest et al. (2010) and Brown et al. (2009) with HPAI H5N1 clearly demonstrate the potential risk of onward spread from passerines as the infected house sparrows shed so much virus over several days before mortality. It is worth noting that there is considerable uncertainty here. Within the captive passerine family there is a range of species so there could also be considerable variation in the risk depending on the

susceptibility of different passerine species. In addition, there will be variation between holdings, husbandry comorbidities and biosecurity that we cannot assess.

Galliformes

Galliformes show high mortality in the poultry outbreaks. Similarly, pheasants are susceptible to H5 HPAI infection and rapidly show clinical signs although those birds infected recently would still be in the incubation period. However, whilst pheasants are considered strong indicator species (Liang et al 2022) partridges may not show clinical signs and could be missed (Seekings et al. 2024). Furthermore, although Galliformes show high mortality it is considered that detection or reporting could be low in backyard poultry.

In the study of James et al. (2023) infection of chickens always resulted in death, and the mean death time was just 3.1 days in the high-dose chicken group which was shorter than the 4.3 days for the high-dose duck group. Three of the five chicken deaths were characterised by a rapid clinical deterioration as no obvious clinical signs were observed at earlier time points. The chickens that were infected in the challenge dose experiments shed high levels of virus (up to 10^5 relative equivalent units (REU) ml^{-1}) after 1 or 2 days post infection and well before the mean death time of 3.1 days. Given clinical signs were not often observed before death, for the purpose of this risk assessment it is assumed the likelihood of disease not being detected in Galliformes which could be taken to gatherings is **medium** with medium uncertainty. The likelihood of disease detection also depends on the size of the flock from which the birds are selected for the gathering. For very large flocks, the large numbers of clinically affected or dead birds is likely to raise suspicion of HPAI, and so facilitate detection of infection in the flock. In smaller flocks, the presence of 1 clinically affected or dead bird may not raise suspicion of HPAI and so disease could go undetected, which is again consistent with the **medium** likelihood assumed here for detection in small flocks of captive Galliformes.

Anseriformes

While there have been many dead HPAI H5-infected Anseriforme wild bird cases reported both in Great Britain (Table 1) and globally, many wild ducks and geese have survived, and given the level of exposure and virus circulation in recent years there is a possibility of immunity, though this is unknown. In the study by James et al. (2023) ducks infected by low (10^3 EID_{50}), medium (10^4 EID_{50}), or high (10^5 EID_{50}) doses of HPAI H5N1 all shed very high levels of virus (10^6 REU ml^{-1}) through the oropharyngeal route. The levels shed through the cloacal route were around 1,000-fold lower, but still high at 10^3 to 10^4 REU ml^{-1}. The higher the challenge doses, the earlier shedding peaked particularly in the oropharyngeal route. Thus shedding peaked in ducks at 6 days for the low dose group, at between 3 and 6 days for the medium dose group and at 4 days for the high dose group. Mean death times (including euthanased) in the ducks decreased with increasing dose at 7.2, 5.6 and 4.3 days for the low, medium and high challenge doses, respectively. In the low dose group 85% of the ducks were still alive at day 6 when shedding peaked at $10^{4.5}$

to $10^{6.5}$ REU ml^{-1} although all were dead by day 8. More importantly all were still alive at day 4 when shedding 10^2 to 10^4 REU ml^{-1}. In the high dose group, all ducks were dead by day 5 but 85% were still alive at day 3 when they were shedding 10^4 to 10^5 REU ml^{-1}. Therefore for both low and medium challenge doses, a high proportion of ducks were shedding high doses at least 1 day before they died. The timing of shedding relative to showing clinical signs is of key importance in whether infected birds are detected and hence the flock is not taken to a gathering where they could infect other birds. James et al. (2023) in Table S2 of the Supplementary Material list the frequency of clinical sign occurrence in infected ducks with huddling/ruffled feathers, conjunctivitis, and lethargy scoring frequently but tremors and closed eyes less frequent. This raises the question of whether the ducks show clinical signs before shedding so that infected birds can be detected prior to the being taken to the gathering. However, 3 of the 18 infected ducks displayed lower clinical signs in the study of James et al. (2023) with clade 2.3.4.4.b 2021 H5N1. It should be noted that this is one study involving a small sample of well-monitored birds and that non-neurological clinical signs are not always obvious or specific to HPAI infection. On the basis that infected ducks can shed high levels of virus at least 1 day before death and that some ducks may not show obvious clinical signs it is concluded that the likelihood of infected ducks and geese not being detected prior to the gathering event is **high**. The uncertainty is medium.

Ratites

Elsayed et al. (2022) reported mortality rates of 90% in ostrich flocks in South Africa infected with HPAI H5N8. The birds suffered loss of appetite, dropped production, and oculo-nasal discharges with bleeding from natural orifices. The probability of not being detected is therefore **low**, with medium uncertainty.

Exposure assessment

This section deals with the risk that an infected bird entering a gathering will spread disease to other birds at that gathering. If infection were to be introduced to a bird gathering, the likelihood of its spread depends on a number of factors such as the pathogenicity and transmissibility of the virus, the amount of virus being shed by the infected bird, the nature and layout of the gathering such as the housing and proximity of the participating birds, whether the birds are mixing, access to common water sources and whether they are in direct contact with visitors.

Spread of disease within the gathering

Spread through a gathering is based on the aggregated risk from multiple contacts between the infected bird introduced to the gathering and the other birds from different origins and hence going to different destinations after mixing at the gathering. From an epidemiological point of view, the probability of one or more birds actually being exposed

to infection (and hence infected) at the gathering is defined as "$1-(1-p)^n$", where p is the probability that an infected bird introduced to the gathering infects another bird given a contact, and n is the number of such contacts. There are no data on p and n at gatherings. However, even if p were low then just ten contacts with the infected bird at the gathering would be sufficient to give an aggregated probability of medium that at least one exposed bird at the gathering would be infected. If p were medium, then just one contact would be sufficient to give a medium aggregated probability that at least one bird would be exposed. Therefore, the risk of disease spread, if introduced to a gathering would be at least medium. This is increased to high in the case of Anseriformes and Galliformes because more individual birds of these 2 groups may be taken to gatherings and because infected Anseriformes and Galliformes shed relatively high titres of virus (James et al 2023).

Pigeons infected experimentally with HPAI H5N1 did not transmit the virus to n = 8 pigeons or n = 8 chickens placed in direct contact (Di Genova et al. 2025) although pigeons with HPAI H5N8 did infect contact pigeons (Abolnik et al, 2018). Although Columbiformes and Passerines may have lower susceptibilities and do not transmit HPAI readily to each other (as shown for starlings with LPAI (Ellis set al 2021)), they could transmit to more susceptible species such as Anseriformes or Galliformes at the gathering through fomite routes for example. Also the low risks from a single passerine or pigeon escalates with increasing number of birds so justifying the medium aggregated risk assigned to birds from these 2 groups spreading HPAI within a gathering.

Qualitative risk assessment

For the purpose of this RRA a simplified risk pathway is used comprising three steps each described by a qualitative risk as set out below:

1. Probability captive bird is infected prior to gathering;
2. Probability infected bird is not detected prior to entering gathering; and
3. Probability transmission occurs at gathering given infected bird introduced.

The 3 qualitative risks in the pathway for each bird order are combined using the matrix of Gale et al. (2009) to the give the overall risk of spread of HPAIV H5Nx from bird gatherings in Great Britain currently.

Incursions at gatherings from wild birds are not considered here.

The risk assessment for the current situation (10 April 2026) is set out in Table 4.

Table 4: Qualitative risk assessment for entry and subsequent spread of HPAI H5Nx at bird gathering according to bird group based on risk levels for 10 April 2026. Uncertainty in parentheses.

	Psittaciformes	Columbiformes	Birds of Prey	Passerines	Galliformes	Anseriformes	Ratites
Risk of infection prior to gathering (10 April 2026) see **Error! Reference source not found.**	Low (Medium)	Low (Low)	Low (High)	Low (Medium)	Low (High)	Medium (High)	Low (Medium)
Likelihood of infected bird not being detected prior to gathering	Low (Medium)	High (Medium)	Low (Medium)	Medium (Medium)	Medium (Medium)	High (Medium)	Low (Medium)
Risk of spread of disease at gathering	Medium	Medium	Medium	Medium	High	High	Medium
[a]Overall risk	Low ([b]Low)	Low ([c]Low)	Low ([b]Low)	Low ([c]Medium)	Low ([c]High)	Medium ([c]High)	Low ([b]Low)

[a]Overall risk of spread of HPAIV H5Nx at bird gathering calculated as lowest probability in the column according to matrix of Gale et al. (2009).

[b]The low uncertainty in the low overall risk level reflects the fact that both the likelihood of infection prior to the gathering and the likelihood of not detecting infection are low – mathematically multiplying two low risk levels together would give a very low risk, hence the low overall uncertainty that the risk is not higher than low as the two low risk levels in effect reinforce each other.

[c]The uncertainty reflects the uncertainty in the probability that the captive bird is infected prior to the gathering.

Consequence assessment

Spread of disease from the gathering

If undisclosed avian notifiable disease were to be introduced to a bird gathering by live birds, there is a possibility that unless disease is confirmed during the event, it would remain undisclosed until after the gathering – and therefore there is a potential for further spread. The likelihood of this depends on the length of the event as with longer events the possibility that birds show signs of disease becomes greater, although it may also increase the number of potential contacts between birds at the gathering.

The extent of onward geographical spread depends on the extent of contact and spread between birds at the gathering itself and also where the birds are transported to following the event. The most effective way of preventing such spread would be to detect suspicion of disease at the time of the gathering, while the birds are still together. However, if the source of infection is a (group of) birds with subclinical infection, this increases the risk of onward spread. The size of the gathering, levels of biosecurity and length of the gathering would directly affect the number of potential contacts between infected and susceptible birds.

The consequence of avian influenza being detected in birds either at or having attended a gathering during the risk period is a serious matter for not only industry but also for the competent authorities. This could lead to a multi-focal outbreak in birds which have moved to different parts of the country, which are difficult to trace.

Any outbreak of notifiable avian disease has a significant impact on the UK poultry industry, through the trade and economic impacts on the producer. This is the same for any notifiable avian influenza virus. Average costs to government may be between £2 million and £4 million per outbreak, depending on the number of birds involved and complexity of the investigation.

If disease is detected at a gathering before it concludes and before the birds are dispersed, Government would face a complex challenge relating to disease control at the gathering, including dealing with a large number of owners who may be resistant to the need to cull their birds.

Whilst spread from a gathering may not lead to widespread disease into the commercial sector and may be restricted to small producers, the case in 2007 in the UK involving a market showed that there is a potential scenario for this occurrence. While for the majority of shows and gatherings involve birds classified as not destined for the food chain (as breeders or producers) it is important to note that even one outbreak in backyard premises would still lead to implementing disease control measures, as specified in the current regulations.

The risk assessment presented here addresses the risk of transmission at gatherings and does not consider how many other establishments could be infected, which would depend on the size of the gathering and individual bird keepers who attend them. In the 2020 to 2021 epizootic of HPAIV H5Nx in Europe, there was evidence that many captive bird and poultry outbreaks could be traced to a single dealer in southern Germany emphasizing the potential consequence that gatherings could have.

A reasonable worst-case outcome for multiple outbreaks to occur would be for an infected but apparently healthy bird to be taken to a gathering where it infects some, but not all, of the other birds present, but disease is not detected. The birds at the gathering are then taken to widely distributed premises. One or more of the infected birds is then detected through passive surveillance leading to at least one outbreak being confirmed with consequent disease control zones, impacts on industry and a costly tracing exercise. There has been one comparable case in recent years but this involved LPAI so the consequences were limited and again, for certain species of birds this is less likely.

Mitigation measures

Measures to mitigate the risk of disease entering a gathering and the potential impact include disease vigilance and prompt reporting of any suspicion, high levels of biosecurity and accurate record keeping to assist in any possible tracing exercise following the event. A table has been provided in previous versions of the document (ANNEX1). The risk of further (cross) contamination and onward spread occurring at and beyond the gathering could be mitigated by maintaining high levels of biosecurity, including reducing the number of potential contacts between infected and susceptible birds and informing livestock keepers about the need for vigilance for clinical signs of avian notifiable disease. However, there is a significant infection pressure currently, with HPAI widely circulating in wild bird populations and poultry premises with varying levels of biosecurity implemented. A quarantine or standstill period on holdings prior to attendance at gatherings and also after return of birds from gatherings could also be considered, although may be impractical, particularly for backyard premises and against the backdrop of the current infection pressure and anticipated trajectory which is expected to continue until after aggregations disperse and environmental conditions are less suitable for survivability.

Conclusions

Currently (10 April 2026) the risk of entry to and subsequent spread of HPAI H5 to other birds at gatherings is assessed to be **low** for Psittaciformes, Columbiformes, Passerines, captive birds of prey, Ratites, and Galliformes but **medium** for captive Anseriformes (ducks and geese).

While captive Galliformes may have increased contact with wild birds for which the risk level in Great Britain is medium, it is considered that the risk of captive Galliformes being infected prior to the gathering is now low, in keeping with the current low risk level for poultry in Great Britain, albeit with high uncertainty. Although the decrease in HPAI H5N1 cases in resident wildfowl in March/April (Table 1) and their dispersion from their winter aggregations reduces the number of contacts of captive Anseriformes with infected wildfowl, it is considered that the probability of infection of captive Anseriformes prior to the gathering is medium as for wild birds. The risk of entry and subsequent spread by captive Anseriformes at gatherings is considered to be at the low end of the medium risk level and hence the uncertainty is high.

The uncertainty in the overall risks for entry and spread of HPAI H5N1 at gatherings now more reflects the uncertainty in the likelihood that the captive bird is infected prior to the gathering rather than the uncertainty in the likelihood of infected captive birds not being detected in each group. It should be noted that the **detection of infected birds by the owner prior to the gathering is still an important protective barrier for gatherings**. This reflects the medium wild bird infection pressure currently across Great Britain.

Given the risk of a bird of prey being infected from hunting wild birds is medium, the risk of entry and spread at a gathering from a bird of prey used for hunting is low (medium uncertainty) reflecting the low probability (with medium uncertainty) of not detecting an infected bird of prey prior to the gathering.

Therefore in response to the risk questions:

1) What is the risk of the introduction of HPAI H5Nx into bird fairs, shows, markets, sales and other gatherings?

   The risk currently (at 10 April 2026) is low for Psittaciformes, kept birds of prey, Ratites, Columbiformes and passerines, and Galliformes but medium for Anseriformes (ducks and geese).

2) What, if any, management options are available to reduce the likelihood and the impact of introduction and subsequent spread of avian notifiable disease through the above mentioned gatherings?

   Options are to ban, allow only certain species, where the risk is considered to be lower, or allow everything with stricter controls and this is in order of increasing risk. Given the disperse locations of cases in found dead wild birds and confirmed IPs, regionalisation is not recommended to be considered. When effective biosecurity measures are in place, housing is a barrier between poultry and pathogen. However, there is a continued infection pressure currently and this may be difficult to achieve. Additionally, the passive nature of the wild bird surveillance cannot inform of where background risk may be highest or lowest or indeed may be changing.

Uncertainties

The uncertainty in the low overall risk of entry and spread of HPAI H5N1 by captive Galliformes at gatherings is high. This reflects the possibility of contact with wild birds for which the risk level is medium, if they are allowed to mix with wild birds on ranges and ponds prior to being taken to the gathering.

The uncertainty in the medium overall risk of entry and spread of HPAI H5N1 by captive Anseriformes at gatherings is high. This reflects the uncertainty in the medium probability that captive Anseriformes are infected prior to the gathering which may be low because at this time of year (mid April) wild waterfowl are dispersing thus reducing the probability of contact with captive Anseriformes. Thus, it is considered that the overall risk of entry and spread of HPAI H5N1 by captive Anseriformes at gatherings is at the low end of the medium range. In the next few weeks, the wild bird risk level may fall to low or in the event of spreading to gulls over the summer may decouple from the poultry risk level such that the risk to captive Anseriformes reduces further.

The uncertainty in the low risk for birds of prey used for hunting is medium. This is because given the risk of a bird of prey being infected from hunting wild birds is medium, the risk of entry and spread from a gathering is low reflecting the low probability of not detecting an infected bird of prey for which the uncertainty is medium (Table 4).

In the previous RRA the uncertainty in the overall risk of entry and spread at gatherings was more dependent on the uncertainty in the likelihood of a keeper detecting infection in the captive birds prior to the gathering. This is complicated by considerations of the flocks' sizes and how many dead or ill birds would need to be present before raising suspicion of HPAI. The low risk levels now for poultry in Great Britain have reduced the risks at gatherings and the uncertainty in the overall risk of entry and spread at gatherings is now more dependent on the uncertainty that the captive bird is infected prior to the gathering.

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Annex 1

Table 3. Comparison of measures available to regulate poultry gatherings and those applied in the current General Licence

Measure	In force
General licence permitting gatherings	Yes
Specific licences	No
Withdraw licence (ie ban)	No
Notify APHA at least 7 days in advance including: a) date the gathering will take place b) location of the gathering c) details of the licensee (including full name, contact address and telephone number) d) anticipated numbers and type(s) of birds	Yes
No sales allowed unless additional conditions are met (see below)	No
The licensee must make a record of all people who bring poultry or other captive birds to a gathering or take such birds from a gathering and keep the record for at least 3 months following the end of the gathering. The record must include at least the following information: a) full name b) home address c) telephone number d) number and type(s) of birds exhibited, raced, bought or sold	Yes
The licensee must not allow any cage, crate, basket or other container onto a gathering which is contaminated with bird droppings, bedding or other material of bird origin other than that from, or provided for, the birds brought to the gathering and must make this requirement known to all those bringing birds to the gathering in advertising, on entry forms or by any other means.	Yes
The licensee must ensure that any cages, crates, baskets or other containers not removed from the premises by those attending the gathering are cleansed and disinfected as soon as reasonably practicable after the end of the gathering and in any case before they are used again.	Yes
i) ensure that any feed to which poultry or other captive birds had access, and all bedding, droppings, other material of bird origin and other contaminants	Yes

derived from birds at the gathering and which are left on the premises when the gathering has ended are - a) destroyed b) treated so as to remove the risk of transmission of disease c) disposed of so that birds do not have access to them; or d) disposed of as Category 2 products under the Animal By-Products Regulations 2005 ii) where practicable, cleanse and disinfect those parts of the premises contaminated by such materials	
14 days' notice to APHA	No
A named veterinary surgeon must be available on site during the whole time of the event for advice in case of suspect disease or a welfare problem. The veterinary surgeon should be responsible to ensuring that only clinically healthy birds in clean cages are entering the event.	No
Biosecurity advice must be distributed at the event.	No
Written contingencies, held by the nominated responsible person, must be available in the event of a disease incident at the event or nearby the event.	No
All cages used in the show must be cleansed and disinfected prior to and after the show.	Implicitly yes
• For sales: A record of all sales taking place at the event should be kept for at least 3 months, this should include: the name, address and telephone number of both the vendor and buyer and any identifying features or individual identification of the purchased bird(s).	No
• For sales: Buyers must isolate the purchased bird(s) from any other birds (except those purchased at the same event) for at least 1 week. • Any signs of ill health observed in the purchased bird(s) during this period must be reported to a veterinary surgeon and such birds must not be mixed with any other birds until the presence of an avian notifiable disease has been ruled out	No
• Restrict to birds of certain species – columbiformes, passerines and psittaciformes	No
• Restrict to regions only	No