

## **BTO Highly Pathogenic Avian Influenza (HPAI) Ringing Framework**

### **Summary of current permissions by country and taxonomic group**

The table below reflects the current situation regarding ringing permissions, as reviewed by fortnightly by all Statutory Nature Conservation Bodies (SNCBs) in liaison with BTO and the Animal and Plant Health Agency (APHA). **Note that permission for any ringing activity is only granted on condition that the taxon-specific guidance outlined in Section 3 below is adhered to.**

	England	Isle of Man	Northern Ireland	Republic of Ireland	Scotland	Wales
<b>Seabirds</b>	Permitted	Permitted	Permitted	Permitted	Partially suspended <sup>1</sup>	Permitted
<b>Wildfowl</b>	Permitted	Permitted	Permitted	Permitted	Permitted	Permitted
<b>Waders</b>	Permitted	Permitted	Permitted	Permitted	Permitted	Permitted
<b>Gamebirds</b>	Permitted	Permitted	Permitted	Permitted	Permitted	Permitted
<b>Herons &amp; egrets</b>	Permitted	Permitted	Permitted	Permitted	Permitted	Permitted
<b>Raptors &amp; owls</b>	Permitted	Permitted	Permitted	Permitted	Permitted	Permitted
<b>Corvids</b>	Permitted	Permitted	Permitted	Permitted	Permitted	Permitted
<b>Other passerines &amp; near passerines</b>	Permitted	Permitted	Permitted	Permitted	Permitted	Permitted

### **Partial suspension details**

1: Suspension of all ringing of **Great Skua** in Scotland. NatureScot will consider requests for site specific exemptions and these should be made via [HPAI@nature.scot](mailto:HPAI@nature.scot)

### **Taxonomic group details**

*Seabirds* - divers, shearwaters, petrels, gannets, cormorants, skuas, gulls, terns, auks

*Wildfowl* - grebes, swans, geese, ducks, sawbills, rails, crakes

*Waders* - waders

*Gamebirds* - grouse, Grey Partridge

*Herons & egrets* - bitterns, egrets, herons, storks, ibises, spoonbills, cranes

*Raptors & owls* - eagles, kites, harriers, buzzards, hawks, falcons, owls

*Corvids* - corvids

*Other passerines & near-passerines* - pigeons, cuckoos, nightjars, swifts, kingfishers, parakeets, woodpeckers, passerines other than corvids

## 1. Aims

This guidance aims to:

- a) reduce the potential for ringers to come into contact with birds infected with HPAI, noting that the prevalence of HPAI in asymptomatic birds is currently unknown, and
- b) minimise the risk of transmission between birds should diseased birds be encountered, to ensure that ringing activities continue to convey a net benefit in terms of the HPAI response.

## 2. Risks and responsibilities

### A) Potential risks

Discussions with expert virologists at the Animal & Plant Health Agency (APHA) have identified that ringing activities have the potential to significantly increase the impact of the current Highly Pathogenic Avian Influenza (HPAI) outbreak through two main mechanisms: i) by facilitating onward transmission between locations via clothing and equipment, and ii) by exacerbating symptoms, and therefore possibly viral shedding, through any stress associated with handling. As with shooting (Section 18.4 <https://www.gov.uk/government/publications/mitigation-strategy-for-avian-influenza-in-wild-birds-in-england-and-wales/mitigation-strategy-for-avian-influenza-in-wild-birds-in-england-and-wales>), the additive impact of displacement related with disturbance is not considered to significantly increase the risk for dispersal beyond that of routine movement of infected wild birds.

### B) Responsibility for decisions and review timetable

The guidance is dependent on decisions taken by the Statutory Nature Conservation Bodies (SNCBs; Isle of Man government, the National Parks & Wildlife Service (NPWS), Natural England (NE), Natural Resources Wales (NRW), NatureScot and Northern Ireland Environment Agency (NIEA)). Ringing of each taxonomic group, as defined in the table rows in Section 1 above, is either '**Permitted**', '**Partially suspended**' or '**Suspended**', as determined by the latest evidence and current expert opinion around potential risk. Details of the taxonomic coverage of partial suspensions are given immediately below the table.

**Permission for any ringing activity is only granted on condition that the taxon-specific guidance outlined in Section 3 below is adhered to.** All decisions are reviewed on a fortnightly basis at meetings convened by BTO that include staff from all SNCBs, APHA, Defra, Isle of Man government, the Joint Nature Conservation Committee (JNCC) and several NGOs; any changes arising will be communicated by BTO to ringers via email promptly once decisions have been made.

In the majority of circumstances (the potential exception being pullus ringing on Open Access land in Scotland - <https://www.bto.org/our-science/projects/ringing/about-ringing/ringing-permits-explained/access-and-permission-ring>), permission to access land must also be sought from the land owner/manager prior to commencing ringing activities, as detailed in the taxon-specific guidance below, **The land owner/manager is under no obligation to permit access for ringing if they have concerns about HPAI.**

In addition, ringers must proactively inform land owners/managers regarding observations of unusually high numbers of dead birds, or live birds exhibiting symptoms, encountered during reces or ringing sessions, as this may influence subsequent access permissions.

**As previously, ringers operating on Protected Areas, including Sites of Special Scientific Interest (SSSIs, ASSIs in Northern Ireland, NRAs in Republic of Ireland), Special Protection Areas (SPAs), Special Areas of Conservation (SACs) and SNCB-managed National Nature Reserves (NNRs), must direct the landowner/manager to secure advance permission from the relevant SNCB.** The duration of the consent is agreed on issue and there is no additional HPAI-related requirement to seek renewal prior to expiry, but any changes to existing protocols, e.g. the use of sanitising chemicals on mist nets, should be discussed in advance with the relevant SNCB staff; consent must be sought for all new activities in the standard manner. The SNCB is at liberty to suspend access or stipulate additional conditions dependent on the local situation.

### **C) Management of exemptions**

Should ringing of any species or taxonomic group be suspended, SNCBs may still consider requests for exemptions on a case-by-case basis, with approvals potentially dependent on implementation of additional mitigation measures. **The relevant SNCB contact details for exemption requests are dependent on the taxonomic group and will be circulated by BTO when ringers are informed of any partial or full suspensions imposed.**

## **3. Ringing guidance by taxonomic group**

One of the risks incurred by ringing activity is the potential to facilitate transmission of disease between individual birds through exposure to the secretions/faecal matter of others. These risks must be balanced against those posed by reduced operational speed resulting from the mitigation measures themselves. Taxon-specific guidance below therefore takes account of the numbers of birds likely to be encountered simultaneously, and the degree to which those birds are likely to aggregate naturally.

**The guidance provided in this section is mandatory** and is aimed at minimising this risk while still enabling collection of the valuable monitoring data that bird ringing provides. Bird welfare must remain paramount; any transgressions will be taken seriously and may result in disciplinary action.

### **A) General guidance applicable to all taxonomic groups**

#### *Access permissions and land owner/manager liaison*

- Land owner/manager permission must be confirmed before any activity is undertaken for the first time at each site in a given calendar year (with the potential exception of some activities on publicly-accessible land in Scotland, as per pre-existing Ringing Scheme policy - <https://www.bto.org/our-science/projects/ringing/about-ringing/ringing-permits-explained/access-and-permission-ring>).

- Ringers must continue to liaise regularly with land owners/managers throughout the duration of their activities to ensure that all parties are aware of the current situation on the ground.
- Ringers must proactively inform land owners/managers of any observation of unusually high numbers of dead birds, or live birds exhibiting symptoms, encountered during reces or ringing sessions, as this may influence subsequent access permissions.
- Observations of dead birds where HPAI is the suspected cause should also be reported to the appropriate helpline. For England Scotland and Wales, this is the Defra helpline (03459 33 55 77 and select option 7, open Mon-Fri 8am-6pm or online reporting <https://www.gov.uk/guidance/report-dead-wild-birds>); in the Republic of Ireland, this is the Avian Influenza Hotline (01 6072512 during office hours or 01 4928026 outside office hours). In Northern Ireland, reports should be made via the DAERA online reporting tool: <https://www.daera-ni.gov.uk/services/daera-dead-wild-bird-online-reporting-tool>

#### *Mitigating disease transmission*

- Ringers do not have to suspend ringing activities for 48 hours following contact with their poultry or captive wildfowl, provided that sanitisation guidance is applied in the same manner as it would be after interacting with wild birds. Avoid using vehicles for ringing that are also used during visits to poultry farms.

#### *On encountering visibly sick or dead birds*

- Avoid touching visibly sick or dead birds; if sick birds must be touched (e.g. to extract them from a net), the ringers hands, or nitrile/vinyl gloves if worn, should be appropriately sanitised (see Section 4) before touching any other bird.
- If any visibly sick bird is caught in a mist net, sanitise the area of the net in question as soon as possible.
- A session must be ended if a bird displaying HPAI symptoms is encountered and a reconnaissance visit (recce) for further signs of disease (e.g. unusually high numbers of dead birds, live individuals displaying symptoms) must take place before activity resumes at a future date; activity must not resume if these signs of current infection are observed during that recce.

#### *Use of social media*

- Consider social media messaging around ringing very carefully, e.g. refrain from posting or outline the purpose of activity and mitigation measures taken clearly

**In addition to these actions, it is vital that ringers also adhere to the taxon-specific guidance given in sections 3B-3F below, dependent on the species that they are targeting.**

## **B) Seabird ringing**

- If ringing at a breeding colony or winter aggregation, undertake a recce before ringing activity commences to look for evidence of diseased birds (either on the day, or within a few days previously). Activities should not take place if the recce identified the presence of unusually high numbers of dead birds or symptomatic live birds.
- Wear an outer layer of clothing that can be easily sanitised (e.g. waterproofs). Disinfect the outer layer of clothing and boots, and sanitise hands, or nitrile/vinyl gloves if worn, if they become soiled and on departure from the field site. This is particularly important when visiting multiple field sites on the same day, which should be avoided if possible. While it is impossible to objectively define a 'site', a good rule of thumb would be that locations travelled between by vehicle would constitute separate sites.
- Sanitise hands, or nitrile/vinyl gloves if worn, frequently during a session. For burrow-nesting species less likely to congregate as adults (i.e. Manx Shearwater and petrels), sanitise hands, or nitrile/vinyl gloves if worn, and equipment (e.g. pliers) between handling of broods and any adults removed from burrows.
- Sanitise catching, handling and ringing equipment (other than mist nets) that has potential to come into contact with faeces (e.g. hand nets, nooses, pliers, rulers) frequently during a session, if it becomes soiled, and, regardless of soiling, at the end of each session, even where equipment is only used at one site and is stored at that site between sessions. Sanitisation is particularly important if visiting multiple sites on the same day is unavoidable.
- Where a mist net has become soiled with faeces during operation, remove any physical contamination and sanitise the area of the net in question as soon as possible. All mist nets must then be sanitised at the end of a session, even if they are to be furled or left on site.
- Once a bird bag has been used to hold a bird (e.g. for petrel ringing), do not re-use it for another individual until it has been washed.

## **C) Wildfowl, wader and gamebird ringing**

- Undertake a recce before ringing activity commences to look for evidence of diseased birds. Activities should not take place if the recce identified the presence of unusually high numbers of dead birds or symptomatic live birds.
- Wear an outer layer of clothing that can be easily sanitised (e.g. waterproofs). Disinfect the outer layer of clothing and boots, and sanitise hands, or nitrile/vinyl gloves if worn, if they become soiled and on departure from the field site. This is particularly important when visiting multiple field sites on the same day, which should be avoided if possible. While it is impossible to objectively define a 'site', a good rule of thumb would be that locations travelled between by vehicle would constitute separate sites.

- Sanitise hands, or nitrile/vinyl gloves if worn, frequently during a session; in situations where a suite of species are ringed and processed sequentially, sanitisation should occur between handling of each new species.
- Sanitise catching, handling and ringing equipment (other than mist nets) that has potential to come into contact with faeces (e.g. pliers, rulers, weighing pots) frequently during a session, if it becomes soiled, and, regardless of soiling, at the end of each session, even where equipment is only used at one site and is stored at that site between sessions. Sanitisation is particularly important if visiting multiple sites on the same day is unavoidable.
- In situations where a suite of species are ringed and processed sequentially, sanitise equipment between handling of each new species.
- Where a mist net has become soiled with faeces during operation, remove any physical contamination and sanitise the area of the net in question as soon as possible. All mist nets must then be sanitised at the end of a session, even if they are to be furled or left on site.
- Once a bird bag or sack has been used to hold a bird (e.g. for duck ringing), do not re-use it for another individual until it has been washed. If keeping cages or corrals are being used, minimise the number of birds held together in each and sanitise between uses; if possible group individuals held in cages according to their relative position in the net.

#### **D) Heron and egret ringing**

- Wear an outer layer of clothing that can be easily sanitised (e.g. waterproofs). Disinfect the outer layer of clothing and boots, and sanitise hands, or nitrile/vinyl gloves if worn, if they become soiled and on departure from the field site. This is particularly important when visiting multiple field sites on the same day, which should be avoided if possible. While it is impossible to objectively define a 'site', a good rule of thumb would be that locations travelled between by vehicle would constitute separate sites.
- Sanitise hands, or nitrile/vinyl gloves if worn, and all catching, handling and ringing equipment between broods. Sanitisation is particularly important if visiting multiple sites on the same day is unavoidable.
- Once a sack has been used to hold a brood, do not re-use it for another brood until it has been washed. If using a buckets, this should be sanitised between broods.

## **E) Raptor and owl ringing**

- Wear an outer layer of clothing that can be easily sanitised (e.g. waterproofs). Disinfect the outer layer of clothing and boots, and sanitise hands, or nitrile/vinyl gloves if worn, if they become soiled and on departure from the field site. This is particularly important when visiting multiple field sites on the same day, which should be avoided if possible. While it is impossible to objectively define a 'site', a good rule of thumb would be that locations travelled between by vehicle would constitute separate sites.
- Sanitise hands, or nitrile/vinyl gloves if worn, and equipment (e.g. hand nets, pliers etc) between handling of broods, or individual free-flying birds.
- Once a bird bag has been used to hold a bird, do not re-use it for another individual until it has been washed.

## **F) Passerine, including corvids, and near passerine ringing**

- Wear an outer layer of clothing that can be easily sanitised if needed (e.g. waterproofs). Disinfect the outer layer of clothing and boots if they become soiled with faeces during the session and preferably also on departure from the field site.
- Sanitise hands, or nitrile/vinyl gloves if worn, frequently during a session.
- Sanitise catching, handling and ringing equipment (e.g. pliers, rulers, weighing pots) if it becomes soiled, and, regardless of soiling, at the end of each session if it is to be used between sites.
- Where a mist net becomes soiled with faeces during operation, remove any physical contamination and sanitise the area of the net in question as soon as possible.
- If mist nets are to remain furled on site, or taken down to be later used at the same site, there is no requirement to sanitise them at the end of a session. Mist nets that are to be moved between sites must still be sanitised at the end of a session, but can be sprayed once taken down and before being bagged.
- Once a bird bag has been used to hold a bird, do not re-use it for another individual until it has been washed. Use should be limited to one bird per bag unless this will cause significant welfare impacts, e.g. chilling during roosting or on early morning net rounds in winter, in which case multiple individuals may be placed in the same bag but that bag may not be re-used again prior to washing.

## 4. Sanitisation

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### Summary

Detailed guidance on best practice for sanitisation protocols is given below; the basic principles are:

- Most disinfectants act in direct application to kill a pathogen; they will not kill any pathogens they come into contact with subsequently.
- Maintain good hygiene during a session by using alcohol-based products on hands and equipment regularly, particularly if they become soiled with faeces.
- Ensure all equipment is sanitised at the end of a session, or when moving between sites, preferably through use of virucides.

For most ringing situations, the key products that are likely to be needed are:

- Disinfectant liquid virucides (e.g. Safe4) for larger surfaces, including porous surfaces and nets.
- >70% alcohol-based gel for hands and wipes for frequently used equipment.

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### Disinfectants

For a list of disinfectants which are effective in killing HPAI viruses, please see the DEFRA website [here](#). The list of effective products is extensive and so it is not possible for the BTO to advise which disinfectant should be used. When selecting a product, please ensure that it is suitable for the exact purpose for which you require it and that you are aware of any safety specifications.

Be aware that disinfectants containing organic solvents may damage plastics, so always read the product datasheet prior to use.

### Disinfection best practice principles

- Remove any surface contaminant (i.e. mud or faeces) before disinfecting. If necessary, use a brush or wash in soapy water, particularly with regards footwear. Mud and other organic material will shorten the active life of the disinfectant, which is most effective at killing disease when applied to a clean surface.
- Always read and follow the directions on the product label to ensure it is handled safely.
- If necessary, designate 'clean' and 'dirty' areas when disinfecting equipment, including e.g. footwear, to prevent clean items from being exposed to hands, boots, and other items that are dirty. Cleaning should ideally be done outside in a location that has not been visited by wild birds or rodents, but could also be indoors in an area with proper ventilation.
- If required (e.g. in seabird colonies), cover the boot/sole with disinfectant solution until it runs off. Alternatively, dip boots in disinfectant. Work the solution in using a hand-held brush, brushing away from the face and eyes.



- The use of a spray bottle will create aerosols and may result in whole body exposure, particularly indoors, or outside in windy conditions. For some products this may necessitate the use of further PPE and it may be better to dip or wipe equipment instead.
- Disinfectants must remain on a surface and in contact with the virus for a certain amount of time to work as intended (the contact time). Follow label directions for the appropriate amount of contact time needed to effectively control the virus.
- If the disinfectant is one which requires dilution prior to use, please adhere to the product instructions relating to HPAI. The efficacy of the product can be greatly reduced if not mixed correctly.

#### **i) Sanitising hands**

Hands should be sanitised as regularly as possible using any >70% alcohol-based hand gel, as all viruses will be inactivated on the skin surface within 15 seconds of application, although be mindful that this provides no ongoing protection.

#### **ii) Sanitising equipment**

In a field situation, it will be most sensible to choose a disinfectant that requires no additional PPE when using and has minimal impact on the environment. One such range of products is produced by Safe4 ([safe4disinfectant.com](https://safe4disinfectant.com)), which are a safe and effective option for porous and non-porous materials and equipment, and available as a spray or wipes. This product has a number of advantages:

- It is safe to use on all porous and non-porous materials, including metals and plastics (such as nets).
- There is no need to rinse after application, as animals can come into contact safely with the disinfectant whilst still wet.
- It is non-toxic, non-staining and a non-irritant at all working dilutions.
- It is environmentally friendly, as it is water-based and biodegradable.
- Contact time of five minutes (i.e. a five-minute period is needed between application and continued use of equipment). Note that the previous contact time of 30 minutes was recently updated by Safe4 after consultation with Defra.

Alcohol-based wipes can also be used to disinfect hard, non-porous surfaces. These may damage some porous materials (such as wood), but most hard, non-porous surfaces, such as glass, plastic, rubber, stainless steel and vinyl can be cleaned without issues. Choose wipes that show 'disinfectant' as a property, but always check the product details for further information. As for all disinfection products, these will also only be effective at the time of use and provide no ongoing protection.

Many people will already use Virkon S, which is a widespread general purpose agricultural disinfectant recommended for use against HPAI. It comes in 5g tablets that can make 500 ml of solution, suitable for a sprayer, and is also effective on porous surfaces.

However, much stricter precautions should be taken when using Virkon, particularly as a spray disinfectant:

- Follow the instructions on the product label.
- Wear protective gloves and eye-protection.
- Mix and use in a well-ventilated space.
- Carry out the disinfection process on a flat area, well away from any watercourses.
- Observe specific contact times and, if necessary, rinse off the disinfectant afterwards with clean water. Virkon is corrosive to metals and should be rinsed off equipment after a period of 10 minutes.
- Once made up, the solution is only stable for 1-2 weeks.

### **iii) Sanitising bird bags**

Once used, bird bags should be stored safe from any contact with other birds or equipment before washing. Bags should then be washed using the hottest appropriate water setting; most viruses, including HPAI, are destroyed above 70°C.

### **iv) Sanitising traps and cages**

For equipment that can't be laundered, such as keeping cages, use soap and water or a water-based upholstery cleaner (e.g. Woolite). With a wet sponge, wipe over the surfaces, but don't drench areas. Leave the solution on the surface for at least 15 to 20 minutes or until dry. Alternatively, spray with a suitable disinfectant once any excessive surface contaminant has been removed.

### **v) Sanitising general ringing equipment**

General ringing equipment, such as weighing pots, pliers, wing rules, scales and ringing tables, can be wiped with a damp cloth which has been soaked in disinfectant (but note contact time) or with alcohol-based disinfectant wipes.

### **vi) Sanitising nets**

Assuming a net has been sanitised (if required) at the end of a previous session, there is no need to further sanitise it at the start of a subsequent session.

If a mist net needs to be sanitised between sessions/sites (for all taxonomic groups except passerines/near-passerines), it should be sprayed with a suitable disinfectant (e.g. Safe4) in situ, before being taken down and bagged, or furled. If a net, or part of a net, becomes heavily soiled, any physical contamination should be removed where possible and sprayed with a suitable disinfectant and left to dry completely before being rebagged. The same advice also applies to hand-nets, cannon-nets and whoosh-nets.

## vii) Sanitising between sites

For those involved in monitoring multiple nest sites across a wide geographical area (e.g. owl nestboxes), sanitisation of hands and equipment will need to be carried out between sites. While it is impossible to objectively define a 'site', a useful rule of thumb is that, where volunteers are using a mode of transport other than walking to move between two locations, these should be treated as separate sites. Equipment sanitised should include hand nets used for catching at nest boxes. If, for example, pillow cases are used for bird bags at each site, it is suggested that these are also used as a covering when ringing adults/chicks so they can then be securely stored to be washed later. Where possible, birds should be kept in bags during ringing to reduce the risk of any wider contamination of e.g. clothing.

## 5. Volunteer Health & Safety and Personal Protective Equipment (PPE)

Guidance on mitigating risks to volunteers associated with HPAI and associated mitigation measures can be found on the BTO Fieldwork Hazard Checklist (<https://www.bto.org/how-you-can-help/take-part-project/health-safety>).

Volunteers taking part in BTO surveys and schemes are under no obligation to participate, nor to visit a particular site through participation in that survey or scheme, even if local survey organisers or BTO staff have suggested or requested that they do so. Volunteers are responsible for their own health and safety and should not put themselves in a position that could place them, or others, in danger; they should never undertake any work if they have concerns about their or others' health and safety, and should stop fieldwork immediately if they do.

Volunteers may want to consider managing risk through the use of Personal Protection Equipment (PPE). PPE items that potentially reduce the risk of contracting HPAI through ringing operations include:

- i) **Disposable coverall with head coverage** – a CE Type 5 or 6 coverall can be worn to reduce the possibility of dusts, splashes and sprays making contact with skin.
- ii) **Gloves** – nitrile or vinyl gloves that fit tight to the hand provide a good barrier and should allow birds to be handled without compromising their welfare.
- iii) **Face masks** – use of any face mask is likely to reduce the risk of breathing in droplets and particulate matter (e.g. feather scale, dried faeces) that could transmit HPAI. Some NGOs advising staff recommend an FFP3 mask with an exhalation valve, which can also act as a barrier to airborne virus particles; the efficacy of such masks is increased further by visiting an establishment that undertakes formal fit testing. Ringers may want to consider avoiding any activity that necessitates removing their mask to blow on the plumage, e.g. fat/muscle/brood patch scoring.
- iv) **Eye protection** – close-fitting goggles reduce the chance of the virus entering the body through the eyes, but it is important that any equipment used does not generate other risks by impairing vision, e.g. through steaming up.