



What **happens** in an
AI outbreak and how
it can be **prevented**

Livetec
systems

Building the future
of **livestock** protection

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AVIAN INFLUENZA IN THE UK

Bird flu has been an unfortunate reality for the UK's poultry farmers since 2006¹, but the virus has evolved significantly over the course of the last 24 months.

That's because throughout that period, the UK – and the rest of the world – has been battling the worst ever outbreak of avian influenza (AI) on record.

The numbers of reported avian influenza cases are increasing and seasonal patterns of its occurrence are changing. In the years prior to 2022, cases would be expected to spike during the winter months, dropping off in the spring with a few cases reported during the summer period. This expected pattern followed that of migratory birds infecting poultry and other wild birds, either by close proximity or other means such as via their droppings.



Recent **bird flu** seasons **haven't** followed that expected **pattern**.

¹ <http://news.bbc.co.uk/1/hi/uk/4882824.stm>

However, reported cases in 2022 did not follow this pattern. For the first time there was no respite from autumn, with cases in spring, summer and into the following winter being reported. It has been described as the 'worst ever outbreak' and continues to confound scientists and government officials trying to determine why the scale of the virus escalated so dramatically.

It is estimated that across Europe, around 50 million birds lost their lives between October 2021 and October 2022².

The 2022-23 season has followed a similar pattern. Between 1st October 2022 and April 2023, a record 179 cases of avian influenza were confirmed, making this the worst outbreak since records began.

In addition to confirmed cases on poultry farms and amongst backyard flocks, there have also been high numbers of cases in wild birds with over 70 UK species testing positive³. It is thought that hundreds of thousands of wild birds have died as a result of avian influenza since 2021, with some wild bird colonies being reduced by up to 80 per cent⁴. Sea birds have been especially affected.

What does the increase in cases mean?

Scientists in the USA⁵ have warned that the current strain of avian influenza is significantly more deadly than in previous years.

The research warns that avian influenza is likely to become endemic rather than seasonal. This could have a negative impact on food security and present worrying economic consequences, posing a substantial threat to animal welfare and farm businesses.

It's important to note that although cases are increasing, scientists investigating the outbreak are not clear why this strain of avian influenza has been able to spread so rapidly or why it remains so persistent. The most likely scenarios⁶ is that the virus' has mutated enabling it to replicate and spread much faster than previous strains. Or, mutations in the virus have infected a wider range of species, causing the outbreak to spread more rapidly.

² <https://www.bbc.co.uk/news/science-environment-6309711>

³ <https://www.rspb.org.uk/birds-and-wildlife/advice/how-you-can-help-birds/disease-and-garden-wildlife/avian-influenza-updates/>

⁴ <https://www.countryfile.com/news/bird-flu-what-is-it-which-populations-are-affected-and-what-are-the-long-term-impacts/>

⁵ <https://www.theguardian.com/world/2023/apr/19/avian-flu-strain-deadly-endemic-study> <https://commonslibrary.parliament.uk/research-briefings/cdp-2022-0213/>

⁶ <https://commonslibrary.parliament.uk/research-briefings/cdp-2022-0213/>

TYPES OF AVIAN INFLUENZA

Avian influenza is a notifiable disease. Some variants can be highly pathogenic.

It affects the respiratory, gastro-intestinal, reproductive and nervous system of infected birds. With a mortality rate of up to 99%, there is no vaccination currently available in the UK and no cure.

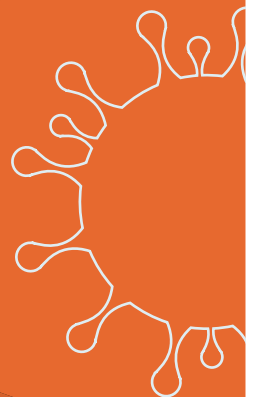
There are many subtypes of influenza. Each subtype is named according to the two types of proteins that make up that subtype. These are Haemagglutinin with 18 H types and Neuraminidase with 11 N types. Not all subtypes have the same ability to cause disease and as such, they are classified as being either Highly Pathogenic Avian Influenza (HPAI) or Low Pathogenic Avian Influenza (LPAI).

LPAI

LPAI is the less severe form of bird flu. While it can still cause breathing problems, birds infected with LPAI may not show any clinical signs of infection. It's important to note that if left untreated, infection can mutate into the more deadly HPAI, which spreads rapidly and can infect entire flocks.

HPAI

HPAI strains of bird flu are classed as a notifiable disease. This means you are legally obliged to immediately report it to the Animal and Plant Health Agency (APHA) if you suspect an outbreak.



SIGNS OF AVIAN INFLUENZA

Guidance from the UK Department for Environment, Food and Rural Affairs (Defra) identifies 19 possible indicators of avian influenza.

The key symptoms in individual birds that indicate an avian influenza infection are:

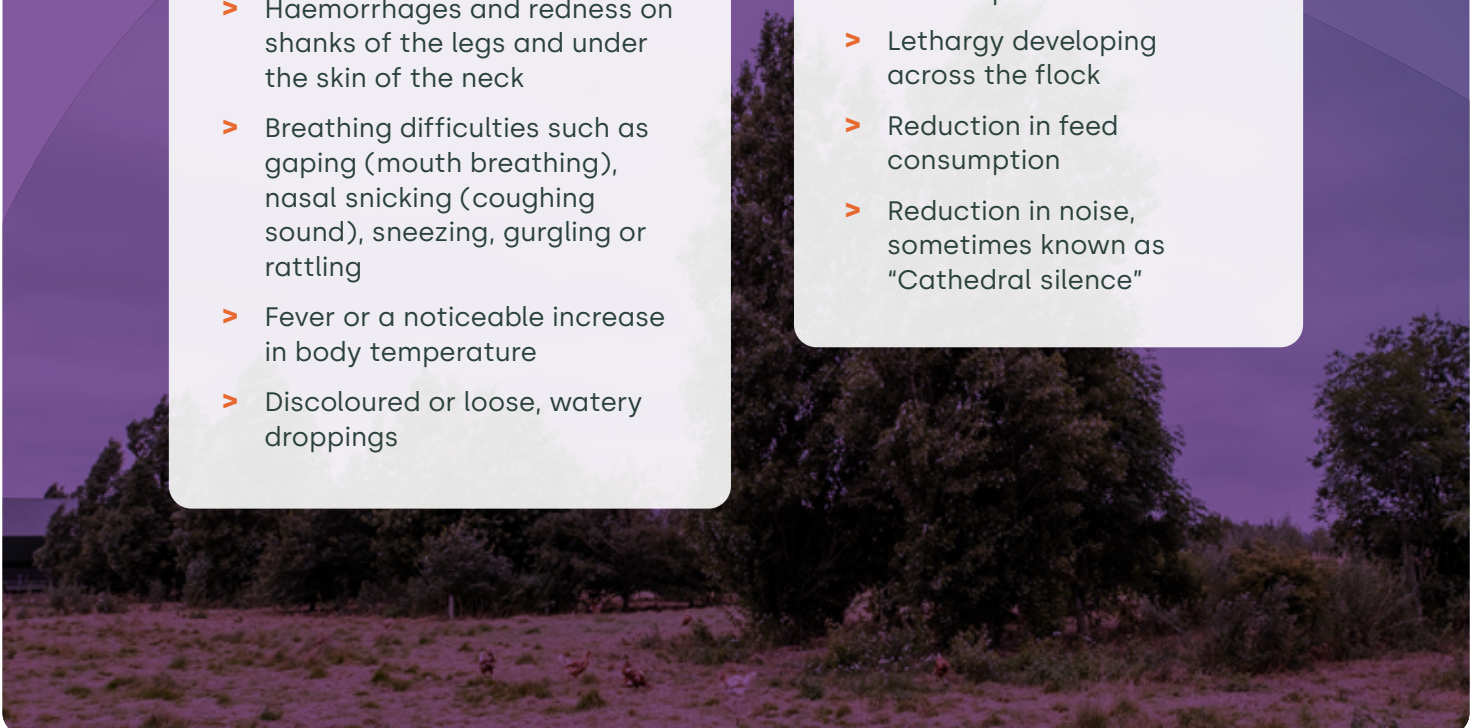
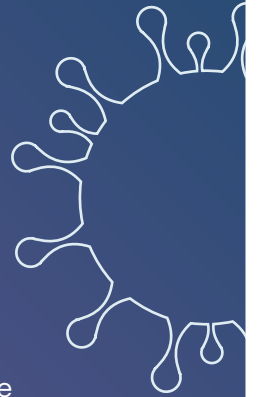
- > Swollen head
- > Closed and runny eyes
- > Lethargy and depression
- > Lying down and unresponsiveness
- > Lack of coordination
- > Head and body shaking
- > Drooping of the wings
- > Dragging of legs
- > Twisting of the head and neck
- > Swelling and blue discolouration of comb and wattles
- > Haemorrhages and redness on shanks of the legs and under the skin of the neck
- > Breathing difficulties such as gaping (mouth breathing), nasal snicking (coughing sound), sneezing, gurgling or rattling
- > Fever or a noticeable increase in body temperature
- > Discoloured or loose, watery droppings

These include: a sudden increase in mortality rates within a flock, a swollen head, breathing difficulties, diarrhoea and a loss of appetite. There may also be a reduced number of eggs being laid and a blue discolouration of the neck and throat. Younger birds may show more acute signs of infection than older birds.

Some species of birds are more susceptible to bird flu and poultry species are amongst those most at risk.

When looking for signs of the disease within a flock, be vigilant of:

- > A slight increase then decrease in water consumption
- > Lethargy developing across the flock
- > Reduction in feed consumption
- > Reduction in noise, sometimes known as "Cathedral silence"



HOW TO DECLARE A **DISEASE OUTBREAK IN THE UK**

Any suspected outbreak must be reported immediately to the Animal and Plant Health Agency (APHA). Failure to do so is a criminal offence.

Reports should be made via telephone:

In England, call 03000 200 301

In Wales, call 03003 038 268

In Scotland, you should contact your local [Field Services Office](#)



During the phone call, you will be required to speak with an APHA duty vet. The vet will ask you a series of questions about your flock.

It's likely that the vet won't be able to confirm the case over the phone. They will arrange for an inspector to visit your premises in order to carry out further tests. The duty vet will explain what restrictions are in place while you await the inspector's visit. This will usually include a requirement that no birds be moved on or off farm. In addition, you will be required not to move anything including vehicles that could spread disease – this will cover items such as tractors and farm equipment.

Upon arrival, the inspector will take samples from your flock to confirm the presence of disease. These samples will be sent off for processing and restrictions, including a temporary control zone, may be placed on your farm in the meantime. Test results can take 24- 48 hours to be returned.

If the presence of avian influenza is confirmed, you will be required to abide by other measures, such as depopulation to stop the further spread of the disease. If no disease is detected, or if the disease detected is non-notifiable LPAI, restrictions will be lifted and normal operations will be allowed to resume.



THE PROCESS AFTER AN OUTBREAK IS CONFIRMED

If an outbreak of HPAI is confirmed, restrictions will be imposed. APHA will conduct further investigations on your premises to determine how long the disease has been present, how it was introduced to your flock and how it has spread.

In addition to the restrictions imposed on your own farm, neighbouring premises may also be affected. This is because APHA will also declare control zones within a certain radius to prevent the further spread of AI. They will also cease normal operations on the farm and take control as measures to stem the spread of disease are enacted.

Bird flu can survive for a substantial period of time – as much as two to three months in the right conditions – so immediate action will be required following the confirmation of an outbreak.

The first course of action is for depopulation to take place.

After depopulation, preliminary cleaning and disinfection will occur, and the premises will be closed for 24 hours.

After the initial cleaning and disinfection, a secondary cleaning and disinfection plan must be agreed with APHA.

APHA must sign off the secondary deep clean when completed. It must meet APHA standards for thoroughness.

Farms dealing with an outbreak won't be able to resume normal operations right away.

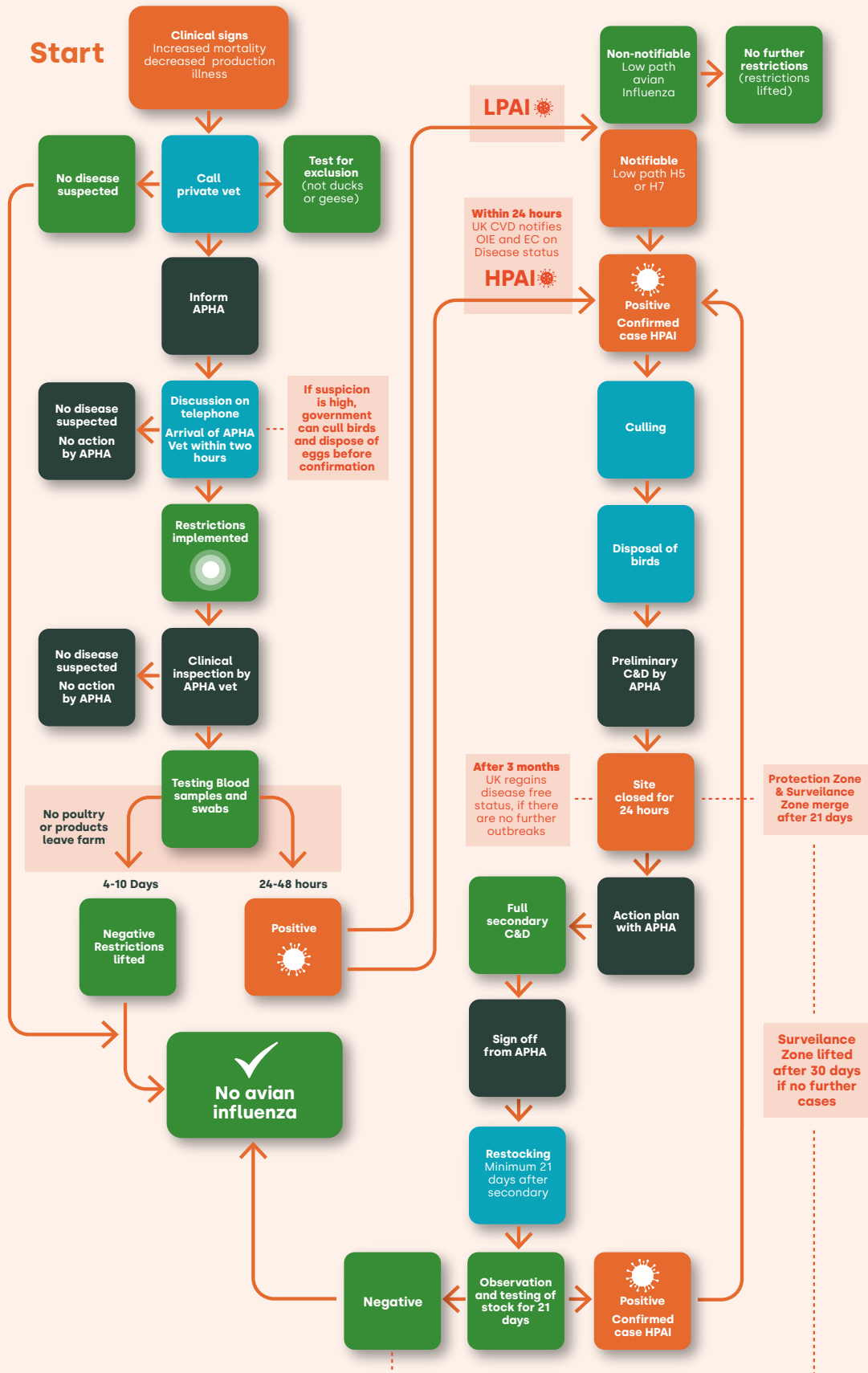
Strict rules on restocking must be adhered to. Farm businesses will only be permitted to begin restocking after a minimum period of 21 days following the completion of secondary cleaning.

An observation period must be observed, with flocks tested again after 21 days.

Should a positive indicator of bird flu be returned, the whole process must be repeated. A negative test means normal operations can then resume.

Avian influenza: What happens when?

Avian influenza: The procedure explained



WHAT ARE **CONTROL ZONES**?

Control zones will be imposed by the government both in suspected and confirmed cases of bird flu to prevent the further spread of disease:

- > If bird flu is suspected, 3km and 10km temporary control zones may be put in place.
- > If bird flu is confirmed, disease zones are put in place around the infected farm to stop it spreading.

In all zones, farmers are required to take additional steps to stop bird flu spreading to neighbouring premises. Measures include a legal requirement to:

- > Practice high standards of biosecurity.
- > Keep transportation records for both poultry and eggs.
- > Obtain a movement licence before moving meat and fresh meat products onto or off farm.
- > Avoid events such as bird fair and shows.



3km protection zones and 3km temporary control zones

If your farm is located within a **3km** protection zone of a **3km** temporary control zone, you will be required to:

- > Adhere to all requirements set out for 10km surveillance zones and 10km temporary control zones.
- > House all poultry and captive birds to prevent contact with infected wild birds.
- > Follow APHA inspector requirements for carcass disposal.
- > Not spread nor remove poultry manure, litter, or slurry.
- > Obtain a licence for the movement of poultry on or off farm.
- > Obtain a licence to remove eggs, unless they are table eggs moved directly to wholesale or retail premises for direct to consumer sales.
- > Follow case declaration rules for movement of meat on or off premises.

10km surveillance zones, 10km temporary control zones and 10km restricted zones

If your farm is located within a **10km** surveillance zone, temporary control zone or restricted zone, you are legally required to:

- > Maintain records of any poultry or eggs moved on or off premises, except in the event of table eggs going directly to wholesale or retail outlets for direct to consumer sales.
- > Not move birds or mammals on or off farm without first obtaining a license.
- > Not spread nor remove poultry manure, litter, or slurry.

HOW TO PREVENT AN OUTBREAK

The best way to protect your flock is through the application of adequate disease prevention and containment measures.

1

High standards of biosecurity

With bird flu spreading at an alarming rate, you simply can't afford for biosecurity to be an afterthought. The UK's Chief Veterinary Officer has stated that only by having the highest standards of biosecurity in place will slow and stop the spread of this deadly disease.

Ensuring your farm maintains the highest standards of cleaning and disinfection can help to prevent disease incursion. a disease incursion. Using high quality feed and clean bedding is also very important and you must control and prevent vermin entering the farm premises. Poultry housing should be maintained to a high standard, with no gaps in walls, floors or ceiling that could allow contact with wild birds or vermin.

2

Maintain clear and accurate records

Accurate, up-to-date record keeping is essential. You should record the movement of all animals, people, equipment and vehicles on or off farm. Visitor information should also be recorded to aid fast contact tracing should bird flu be confirmed.

3

Restrict farm access

Restricting farm access can prevent disease incursion. Only essential personnel should be permitted access to your farm premises. Equally, limiting movement around and on and off farm can help to prevent the spread of disease.

4

Regular cleansing and disinfection

A high standard of hygiene is imperative. Cleaning and disinfection measures should be in place around the farm, including at the entrance and exit to poultry housing. All staff should follow the strictest hygiene standards on site.

How **Livetec** can help

Livetec are the industry leaders in biosecurity. We provide the most up to date advice to help you make informed decisions for your biosecurity plans.

This advice will reduce the risk of harmful pathogens entering your farm and causing a disease outbreak.

We're here to help put stringent, appropriate biosecurity policies and practices in place to protect the welfare of your flock, your farm business, and your reputation.

We can provide comprehensive training for all employees and staff, including relief workers, so everyone on your premises is fully aware of exactly what they need to do to prevent an outbreak, and actions to take should an outbreak occur to stem its spread.

Our plans encompass best practices, are based on evidence and the latest legislation.

Visit www.livetecsystems.co.uk

Livetec
are the
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Biosecurity Advisory Service

Our Biosecurity Advisory Service provides you with an on-farm visit with a biosecurity expert. Our on-farm discovery sessions make us a supportive partner, helping you to minimise risks and imparting knowledge so that you can better protect your farm from disease incursion.

Contingency Plan

Our Contingency Plans encompass every aspect of farming businesses, risks and emergencies that could arise in the future. We help you to design strategies to manage the impact of these concerns. A comprehensive package, this helps make you compliant and insurable.



Biosecurity Plan

Without a Biosecurity Plan in place, you are leaving your business and animals highly susceptible to disease incursion. We document your biosecurity plans to encompass and outline all of the measures that must be followed by every single person on/off-farm to prevent the introduction of deadly pathogens.

Emergency Response Plan

An Infected Premises Response plan or, as we call them, an Emergency Response Plan, significantly enhances your preparedness and is designed to cover everything that APHA and insurance brokers require if and when they visit your farm business. This plan holds all the necessary critical information, in one place, putting your mind at rest during a time of crisis.



National Outbreak Plan

Our National Outbreak Plan has been designed to comply with the regulations and requirements set by the UK government, providing bird owners with everything you need to know should you be impacted by a disease outbreak or fall within a restriction zone.

Cleaning and Disinfection Plan

Our Cleaning and Disinfection plan is designed to give you the framework for all of the measures you need to take, with clear instructions that comply with APHA requirements.



Farm Health Guardian

Farm Health Guardian (FHG) distributed by Livetec Systems is a biosecurity management system that records the movement of trucks and people on/off-farm properties for rapid contact tracing in the event of a disease outbreak. An invaluable tool for enhancing biosecurity on-farm.

To find out more about how our plans can help your farming business, please visit www.livetecsystems.co.uk/plans or email us for more information sales@livetecsystems.co.uk