British Free Range Egg Producers Association

BFREPA

THE AVIAN INFLUENZA AND SALMONELLA CONTINGENCY PLANNING WORKBOOK 2022

BFREPA BIOSECURITY HELPLINE: 01525 623 125

Avian Influenza and Salmonella Contingency Planning Workbook

CLEANING & DISINFECTION AFTER AI OR SALMONELLA DEPOPULATION

How to use this section

This section contains the key information that you and any investigating APHA officer will need if your farm needs cleaning and disinfecting after depopulation due to Avian Influenza. It also contains information to guide you with cleaning and disinfecting after a Salmonella depopulation.

It is important that you assemble the various maps and plans required together. These will assist you with some or all of the following:

- ***Effective planning for either eventuality on your farm***
- ***Being readily available for any APHA investigation; complying with legislation***
- ***Acting as guidance for you and your staff to get the farm restocked as quickly as possible***
- ***Getting imposed A.I. restrictions lifted within an area***
- ***Regaining UK A.I. – free status for trade***
- ***Helping to re-establish your Lion Code membership after a Salmonella outbreak***

Various checklists and actions need completing within this section. Records, e.g. shed dimensions, disinfectant quantities, additional products needed, are easily identified in preparation for cleaning and disinfecting to comply with current legislation. Complete all the actions and tick them off as you go.

Completion of Section 9 will help streamline the overall process reducing stress on you and your staff.

CONTENTS

What is the Elanco Food Safety Program?

FSP brings another dimension to the traceability of the egg, from pullet to plate.

Bespoke, innovative, and offering a level of targeted recommendations and individual solutions make the FSP unique in supporting businesses to be *Salmonella*-free for the long-term.

A systematic process

- Benchmark farms
- Establish a monitoring program
- Analysing data
- Evaluate and reduce risks

The three pillars of FSP

- General infection prophylaxis
  - Biosecurity
  - Cleaning and disinfection
  - Health management
  - Education and awareness
  - Reduce infection pressure
  - Interrupt infection chains
- Vaccination
  - Vaccination against *S.* Enteritidis and *S.* Typhimurium
- Comprehensive management
  - External biosecurity measures - farm protection, general tidiness of the farm, other livestock, carcass storage and disposal
  - Internal biosecurity measures - barriers and entering the poultry houses, tidiness, cleaning and disinfection, pest control, climate control
  - Egg management
  - Health and production parameters

Four steps to achieving integrated *Salmonella* prevention

- **Measure** — A field visit to identify possible risk areas to calculate a Food Safety Index (FSI) score
- **Understand** — Recognise and document points of control with the FSI
- **Improve** — Identify the areas where appropriate improvement measures can be recommended
- **Monitor** — Establish and maintain a monitoring program including benchmarking between farms

FSP is a systematic process that:

- Benchmarks farms to provide a FSI to monitor progress
- Highlights areas to improve performance and profitability
- Supports farms to remain *Salmonella*-free for the long term

MyElanco.co.uk

FSP FOOD SAFETY PROGRAM

Elanco UK AH Limited, Form 2, Bartley Way, Bartley Wood Business Park, Hook RG27 9XA. Telephone: 01256 353131 Email: elancouk@elanco.com.

SECTION 08 Completion and Restocking

SECTION 09 General Farm Information

SECTION 10 Response Action Following a Positive Salmonella Test

SECTION 11 Appendix

SECTION 01

Background & Official Controls

UNDERSTANDING THE REGULATIONS

What is AI

Highly pathogenic avian influenza (HPAI) is the more serious type. It is often fatal in birds.

The main clinical signs of HPAI in birds are:

- swollen head
- blue discolouration of neck and throat
- loss of appetite
- respiratory distress such as gaping beak, coughing, sneezing, gurgling, rattling diarrhoea
- fewer eggs laid
- increased mortality

Clinical signs can vary between species of bird and some species (for example ducks and geese) may show minimal clinical signs.

Low pathogenic avian influenza (LPAI) is usually less serious. It can cause mild breathing problems, but affected birds will not always show clear signs of infection

Legislation

The Government's planned response to AI is detailed in the "Notifiable Avian Disease Control Strategy for Great Britain"[1] (last updates 26th September 2019). There are several pieces of domestic legislation that work in combination to enforce EU and international requirements. These may change in the coming years following our exit from the European Union in January 2020.

The Control Strategy not only sets out the rules that APHA will follow to control the outbreak but also outlines the basic steps you must take to carry out final cleansing and disinfection. It is important that you remain compliant with legislative requirements throughout the disease control operation to avoid any enforcement action.

1 https://www.gov.uk/government/publications/notifiable-avian-disease-control-strategy

Which Avian Influenza types are notifiable?

There are many strains of Avian Influenza and not all of them must be controlled by the Government.

Notifiable - Government controlled

Highly Pathogenic

H5
H7
Newcastle Disease

Recent Examples

H5N8 - Nov '20-Mar '21
H5N1 - Nov '20-Mar '21
H5N8 - Dec '18 - Jun '19
H7N7 - Jul '15
H5N8 - Nov '14

Low Pathogenic

H5
H7

Recent Examples

H5N3 - Mar '21
H5N2 - Mar '20
H5N3 - Dec '19
H5N1 - Jan '16

Non-Notifiable

Low Pathogenic

H1, H2, H3, H4, H6 H8, H9, H10, H11, H12, H13, H14, H15

Recent Examples

H6N1 - Dec '19 - Feb '20

A non-notifiable type of AI is the responsibility of the producer to control. Although you have no legal requirement to cull the birds, some low pathogenic strains could recombine and become highly pathogenic. In any case you may still see high mortality and low egg production and the disease may spread to other sheds on your farm.

Background & Official Controls

UNDERSTANDING THE REGULATIONS

Timeline

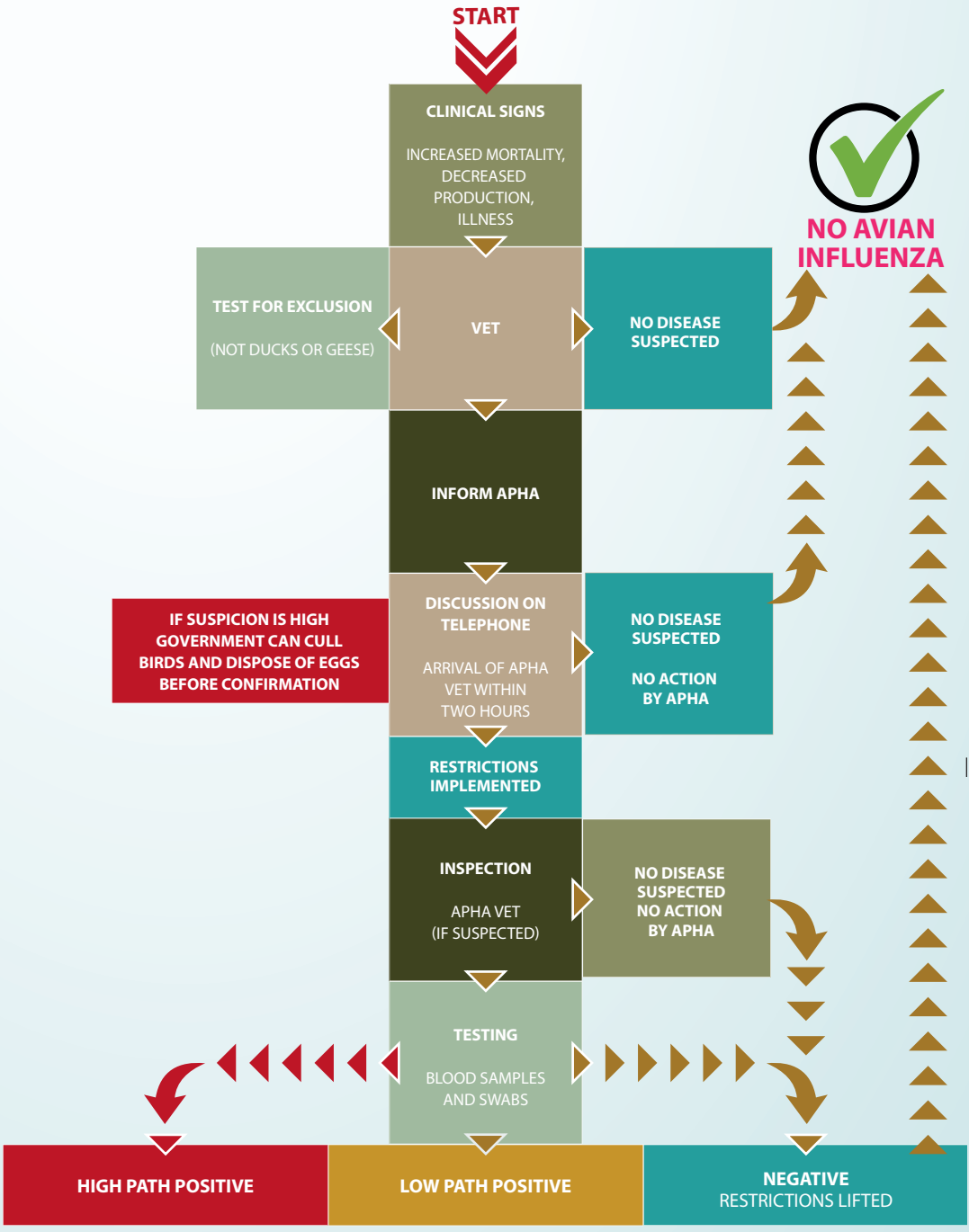
Once all poultry on site have been culled and transported from the site APHA will carry out preliminary cleansing and disinfection. Any external areas contaminated during depopulation will be cleansed of organic matter. The sheds will then be closed and an approved disinfectant[2], will be sprayed inside the sheds and over external areas that may have been contaminated. The whole site will then be closed for 24 hours with no-one allowed to enter it. During this time APHA may start demobilising any plant and equipment from the site such as telehandlers and temporary welfare units and offices.

[2] http://disinfectants.defra.gov.uk/Default.aspx?Module=ApprovalsList_SI

Avian Influenza

SECTION 01

WHAT HAPPENS WHEN?



Background & Official Controls

UNDERSTANDING THE REGULATIONS

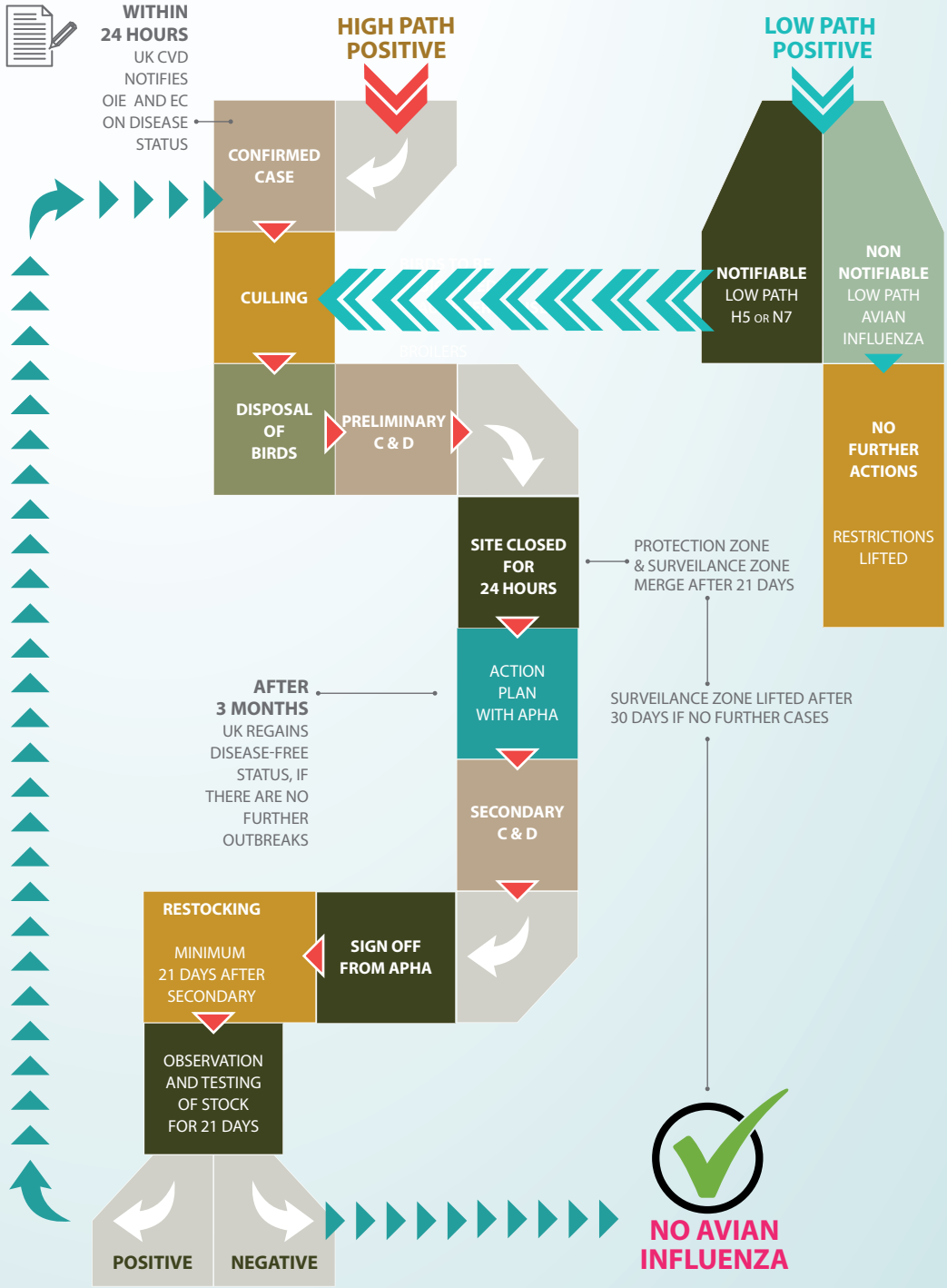
Notice to carry out C&D

After Preliminary C&D has been completed APHA will serve a notice (EXD23(AI) requiring the owner/keeper of the premises to carry out a secondary cleansing and disinfection. This is an important step towards gaining country freedom from disease and must be performed before the process of lifting restrictions and restocking can begin.

Avian Influenza

SECTION 01

THE PROCEDURE EXPLAINED



Background & Official Controls

WORKING WITH APHA AND OTHER AGENCIES

APHA may run their operations from a local APHA office or a Forward Operating Base (FOB) which may be an office belonging to a partner agency. This is where (at least initially) the staff that you will be dealing with will be based. With the reduction in the number of APHA offices around the country this may be an hour or two from your farm.

Who's who

Technical Veterinary Lead - the overall co-ordinator of local operations, based at the local APHA office or FOB – generally doesn't come to site as they may have to co-ordinate more than one incident.

Case Officer - The lead member of APHA staff on site co-ordinating all operations on the farm during veterinary investigations and depopulation, could change every 4 or 5 days.

C&D Technical Officer – This is the daily contact for C&D operations. They will take applications for licences to bring people or equipment on and off site. Usually a single person assigned for the period, but weekend cover may be different. If you expect to need something on the weekend make sure APHA know in advance.

C&D Veterinary Officer – every form must be signed by a vet even if it is completed, agreed and reviewed with the C&D Technical Officer. Again make sure you have contacts for the duty vet at weekends to sign off on deliveries, changes in procedure, or other verification.

The relevant environmental agency [Environment Agency (England) / Cyforth Naturiol (Cymru) / – Scottish Environmental Protection Agency (Scotland)] – will provide a local representative to be present at opening C&D meeting. Make sure you get a named contact with phone and email. They will most likely have to be consulted for approval of sites for storage of litter and disposal of washwater. They can also advise on disposal sites for residual waste, hazard classification of waste, and provide information on local drainage, water catchment areas and boreholes etc, this can be collected in advance.

Public Health [England/Wales/Scotland] – depending on pathogenicity of AI there may be a need to issue preventative antiviral tablets, try to establish a clear contact early on, advice can be difficult to get, and slow in coming. It will be your responsibility (or your contractor) to obtain prescriptions for antivirals (unless local NHS have issued instructions for specific pharmacies to issue without prescription. These instructions may not filter down very quickly, especially if you are waiting to get workers on site.

Local Authority – The local authority will have a role in advising on operations and may send an officer out to the farm if required, they will often be represented by the Trading Standards Department or equivalent in Wales and Scotland, unless the issue is directly related to another department eg planning or transport.

Use the chart opposite to record names and contact details

Background & Official Controls

SECTION 01

KEY PEOPLE - RECORD CONTACTS

Role	Name	Contact Details
Case Officer		
Gate Officer		
Technical Veterinary Lead		
C&D Technical Officer		
C&D Veterinary Officer		
Environment Agency (England) / Cyforth Naturiol (Cymru) / Scottish Environmental Protection Agency (Scotland)		
Public Health (England / Wales / Scotland)		
Local Authority representative (Trading Standards)		

SECTION 02

Cleaning and Disinfecting

WHAT ARE YOUR C & D OPTIONS?

Full secondary cleansing and disinfection are not only a requirement for farmers who wish to re-stock with birds, but it also triggers the clock on allowing the country to resume international trade in poultry and poultry products.

There are three options available to a farmer:

1. Cleanse and disinfect the farm to the standard based on the EU Directive[3].
2. Cleanse and disinfect to the standard based on OIE[4] rules
3. Do not undertake cleaning and disinfection then keep the farm closed and under restrictions for 12 months.

There are crucial implications for each of the options.

- Successful completion of Option 1 will allow you to go straight on to the process of restocking.
- Option 2 will prevent you from restocking with poultry or any other susceptible species (for example pigs) for 12 months.
- Option 3 will prevent you restocking with livestock for 12 months

ONE	TWO	THREE
Cleanse and disinfect the farm to the standard based on the EU Directive	**Cleanse and disinfect to the standard based on OIE rules**	**Do not undertake cleaning and disinfection then keep the farm closed and under restrictions for 12 months**
Successful completion of Option 1 will allow you to go straight on to the process of restocking, 21 days after completion.	Option 2 will prevent you from restocking with poultry or any other susceptible species (for example pigs) for 12 months.	Option 3 will prevent you restocking with livestock for 12 months.

There are further choices to make if you go for option 2 or 3. If you chose option two then later you may decide to complete a second clean on your site to bring it up to the full secondary C&D standard, this would then allow you to progress to the re-stocking procedure. If you chose option 3 then you will have a 14-day cooling off period after which you will not be able to change your mind. Your site will be under full restrictions for 12 months with no poultry or other susceptible species and stringent rules and inspections on access and vermin control throughout the 12 months.

It is usually only after the farm has been depopulated that a meeting between local APHA and the farm owner is held to discuss final cleaning and disinfection. This document is designed to help you prepare for that process. Attending this meeting will be representatives from the other operational partners which include the relevant environment agency, public

health body and possibly local council environmental and trading standards. Following this meeting, if you have not already done it, you will be required to complete a second form, known as the Schedule of Works (EXD158). This form requires specific details of exactly how the C&D processed will be applied[5].

When planning the C&D operation, remember that every person and piece of equipment that comes onto the farm must be licensed on and off. This licence must be signed by a veterinary officer. Equally everything that is taken off the site -eg equipment, rubbish, vehicles must be receive a certificate of cleaning and disinfection before it can leave.

All these certificates and licences take time to be produced and you should allow for this in your C&D plan.

The form requires detailed procedures for:

- **Litter/manure removal and disposal route**
- **Cleaning, washing and disinfection of each shed (including equipment), other buildings and external areas**
- **Type of cleanser and disinfectant to be used**
- **Wash-water handling and disposal**
- **A DATE FOR COMPLETION**

When each of the tasks listed in the Schedule of Works is completed a written record must be made of when it was done and any changes to the operating procedure. This is then used by the C&D Veterinary Officer when undertaking the final inspection.

You must be aware that APHA reserves the right to supervise all or part of the cleansing and disinfection process. All activities must be carried out in accordance with any written or verbal instructions issued by APHA or any other regulatory body. Failing to comply with this requirement may lead to enforcement action.

3 *The Avian Influenza and Influenza of Avian Origin in Mammals (England (No.2)/Northern Ireland/Scotland/Wales (No.2)) Order 2006 (as amended)*
4 *OIE – World Organisation for Animal Health. Terrestrial Animal health Code Article 4.13.1*
5 *Notice of Required Cleansing and Disinfection – Schedule of Work (EXD158(AI))*

Cleansing and Disinfecting

WHAT NEEDS TO BE DONE?

Option ONE – Full EU C&D

The APHA guidance states:

(a) manure and used bedding must be treated in accordance with Part 3 of this Schedule; and

(b) All the buildings, surfaces and equipment that could have come into contact with infected birds or become contaminated must be treated as follows

(i) grease and dirt must be removed from them by the application of a degreasing agent

(ii) they must then be cleansed with water

(iii) they must be washed with cold water, following which further disinfectant must be applied

(iv) after seven days, they must again be treated with a degreasing agent, rinsed with water, sprayed with disinfectant and rinsed again with water.

Cleansing and Disinfecting

WHAT NEEDS TO BE DONE?

Option TWO – Cleaning and Disinfection to OIE Standard

The OIE standard is not so specific

- Washing and cleaning by careful brushing and scrubbing of the ground, floors and walls; all accessible surfaces of floors, walls and objects have to be cleaned by careful scraping or brushing or an equivalent process to ensure that the disinfectant used can be effective.
- Option 2 will prevent you from restocking with poultry or any other susceptible species (for example pigs) for 12 months.

Option THREE - Keep Farm Closed

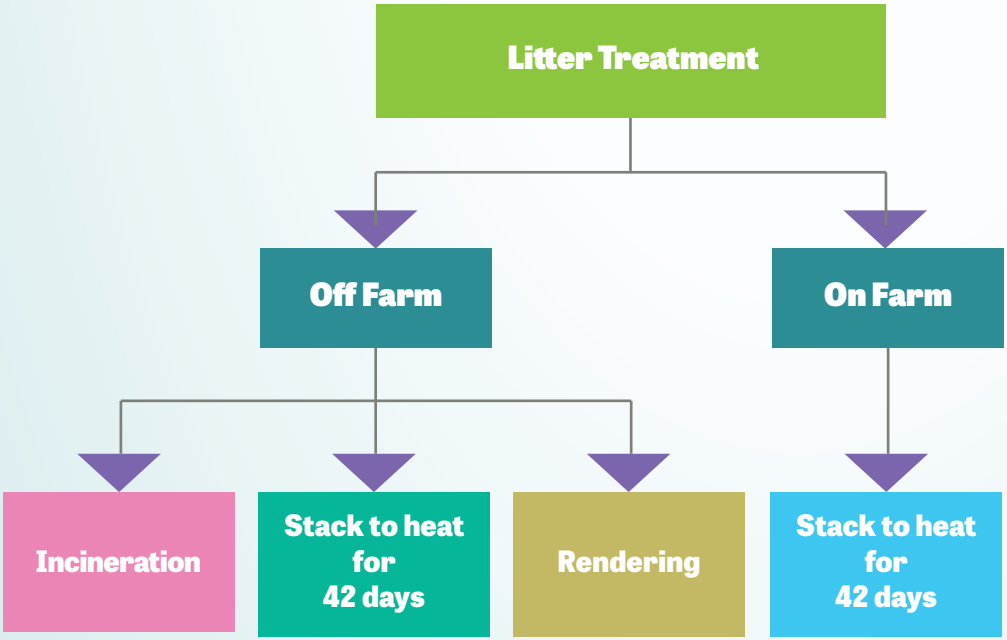
- APHA will spray disinfectant inside the sheds and surrounding areas (preliminary cleaning and disinfection)
- Sheds will be locked closed.
- Whole site - as defined by the CPH - is closed down
- All restrictions are maintained for 12 months
- No livestock can be kept in the poultry shed or on the range
- Full pest control must be put in place and records kept
- APHA Veterinary inspectors will make regularly visits to ensure compliance.
- Once you have decide on this course of action, you have a 10 day "cooling off" period but after that you cannot change you mind

- Option 3 will prevent you restocking with livestock for 12 months.

Dry Cleaning

LITTER REMOVAL

All litter must be removed and treated to kill the virus – either on or off farm



Flat Deck

As with normal turn around you will have to dismantle slats and nest boxes in order to remove the litter.

Multi-Tier

You may have more than the normal amount of litter in the system due to restrictions on the removal of litter from site.

Muck Store

The muck store could be used as a place to treat the litter, but it requires approval by the Veterinary Inspector. If the litter can a sprayed, covered and stored for 42 days it could then be removed as normal litter but would still need a licence to be removed from site. Once the litter has been removed the whole muck store will require thorough cleansing and disinfection to the same standard as the poultry buildings.

Go to page 182 to complete your litter removal details

Dry Cleaning

LITTER REMOVAL

Litter Transport

Litter can only be removed from farm in sealed vehicles or trailers under a licence from APHA. If the transport is on the Public Highway it MUST also comply with ADR Waste Transport regulations. Some derogation from ADR regulations MAY be available based on a risk assessment and application to the relevant authority by APHA which then may permit the use of sealed farm trailers to move litter to a field store or neighbouring farm. In any case an APHA officer must oversee loading on farm AND unloading at the storage site to ensure biosecurity controls are maintained.

The storage place will be placed under disease restrictions by APHA. Plan your litter transport with APHA to ensure there are sufficient APHA staff available at the times (and days) you want to move it.

- **Stack to heat for 42 days**
  - MUST be covered to protect from birds and vermin
  - MUST control leachate
  - Field sites do not necessarily have to be on concrete (it would be best) BUT you must be able to control run off to prevent environmental pollution
  - Put a protocol in place or contract a firm to control vermin.
  - At the end of the 42 days the litter can be moved, handled and spread as normal poultry litter.
- **Incineration**
- **Rendering**

Dry Cleaning

LITTER REMOVAL

Final Removal of Litter and Feed

Once the bulk of the litter has been removed all horizontal surfaces must be swept down, including roof spaces.

The floors must then be swept to remove final traces.

Consider use of industrial vacuums rather than blowers as these just tend to re-distribute dust and litter - not necessarily bringing it down to the floor.

All remaining feed must also be removed, and this could be disposed of with the litter.

Your Litter Disposal and Treatment Plan

Use the following tables to record the size of your shed and the amount of litter you normally remove at turn around

For flat deck systems:

Shed Number	Estimated Max Volume of Litter

For **multi-tier**, record your normal weekly litter quantity:

You may have been under restriction for a while so there could be more than the normal quantity of litter as you will not have been allowed to take it off site.

Normal weekly litter per shed (tonnes)	
Worst case amount after 2 weeks	

	Completed
Calculate maximum volume and weight of litter that could be on farm	
Do you have capacity to store on farm?	
Calculate how many trailers (eg 25t bulkers or 10t grain trailers) it would take to move it	
Plan a storage place on farm or close by	
Contact owners of potential sites such as old airfields, empty sheds or arable agricultural buildings	
Work out the safest route to the storage site, it may not be the shortest, avoid other livestock enterprises, busy roads, minimise the risk of accidents	
Can you get there without going on the public highway by taking down fences?	
Has the storage area sufficient hard standing to manage all the vehicle movements – consider the time of year and weather	

If you use a **muck store**, what is the maximum amount you can hold?

Maximum capacity of muck store	

CLEANING OF BUILDINGS & EQUIPMENT

APHA no longer require the full dismantling of all equipment within a shed however to demonstrate you have cleaned all contaminated surfaces you may find it is necessary to remove some parts.

Special attention should be paid to

- nest box liner and autonests
- scratching mats
- perches
- slatted areas
- enrichments
- manure belts

In particular contamination with faeces, egg and feathers.

Flat Deck Systems

All main components will have been dismantled to facilitate litter removal; the egg belt may need to be removed to allow access to the conveyor rollers. Scratch matts can be problematic to clean and a decision will have to be made as to whether to spend the time cleaning them or simply to throw them away and buy new ones.

All surfaces of all components need to be treated with a foam degreaser. Where particularly heavy soiling is present on complex materials, eg nest box matts, slats or conveyor segments, tanks would be useful to pre-soak components in a solution of degreaser.

All components should be washed using a cold water pressure washer until all visible contamination is removed.

All components should then be rinsed using a cold water pressure washer.

Multi-Tier Systems

Manure belts and egg belts should be cleaned on the outside then may have to removed to facilitate cleaning on the inside and provide access to the rollers and support mechanism.

All surfaces of all components need to be treated with a foam degreaser. Where particularly heavy soil is present on complex materials, eg Astro turf nest box matts, slats or conveyor segments, tanks would be useful to pre-soak components in a solution of degreaser.

All surfaces will need to be sprayed with a foam degreaser or equivalent detergent and left to soak for the appropriate period as specified in the manufacturer's instructions, washed using a cold water pressure washer until all visible contamination is removed, and rinsed with cold water.

Feed Bins

Internal feed bins/hoppers should have been emptied.

All internal surfaces should have been blown and external surfaces will be treated with a foam degreaser as per the manufacturers recommended application rate and contact time.

Smaller components can be collected into tubs, soaked in degreaser solution and cleaned by hand with brushes.

All components will be washed either by cold water pressure washer or in running water to remove all visible contamination, and placed in clean tubs.

All components will be rinsed with cold water; smaller elements will be collected in clean dry plastic containers.

Tube auger and pan system

External surfaces should be treated with a foam degreaser as per the manufacturers recommended application rate and contact time.

All components will be washed either by cold water pressure washer or in running water to remove all visible contamination.

At this stage any sub-assemblies with small parts will be dismantled, soaked with degreaser solution in tubs, then washed in cold running water and placed in clean containers to prevent loss.

All components will be rinsed with cold water; smaller elements will be collected in clean dry plastic containers.

Flat chain feeding system

Troughs, chain belt, hoppers, coupler and legs and motors will have been be disassembled prior to litter removal.

All elements need to be treated with a foam degreaser; chain belts and other smaller components will could be placed in tanks with a solution of degreaser.

All components should then be washed by cold water pressure washer to remove all visible contamination.

All components will be rinsed with cold water; smaller elements will be collected in clean dry plastic containers.

CLEANING OF BUILDINGS & EQUIPMENT

Drinker Lines

All exposed surfaces will be sprayed with a foam degreaser and left to soak for the appropriate period as specified in the manufacturer's instructions. Pipes should be flushed though with appropriate cleanser.

External surfaces washed using a cold water pressure washer until all visible contamination is removed.

Rinsed with cold water.

Ventilation Fans

Ventilation fan assemblies should be disconnected and covers removed from their mountings.

External surfaces treated with a foam degreaser as per the manufacturers recommended application rate and contact time.

All components should be washed with cold water to remove all visible contamination.
All components should be rinsed with cold water.

Cleansing and Disinfecting

SECTION 05

DISINFECTION

Once the cleansing procedures described have been completed on all surfaces, equipment and parts in one shed, the disinfection treatment can begin.

All areas and equipment should be allowed to dry before application of disinfectant to prevent dilution.

All surfaces and larger components should be sprayed with a disinfectant at a concentration and application rate approved by DEFRA Diseases of Poultry Order and the Avian Influenza and Influenza of Avian Origin in Mammals Order.

All components and small items and fixings that have been disassembled and stored in clean containers, can be soaked with a disinfectant solution to ensure complete coverage. Solution to be prepared at the same concentration.

The building must then be sealed to prevent access for 7 days.

The above procedure should then be repeated for each shed following cleansing.

Recording your costs at turn around

Knowing your normal chemical and equipment usage at turnaround will help you predict the quantities required following an AI outbreak.

How much cleaner do you use normally?	
How much disinfectant?	
How many people do you use?	
How many pressure washers do you use?	
How many lances?	
How many days does litter removal usually take?	
How many days does cleaning usually take?	

SECTION 06

Cleansing and Disinfecting

RANGE MANAGEMENT

APHA have always assessed treatment of poultry ranges on a case by case basis by veterinary risk assessment due to the extensive differences in the type of range found around the UK. Their requirements will also depend on the season and the weather. However in the 2020/21 season they did introduce some guidance on the treatment of earthen floors in mobile or seasonal production systems. These could also be applied to poached out areas around fixed free range buildings.

As a rule of thumb ranges must be left "fallow" for at least 56 days and a site inspection will be carried out by the APHA C&D Veterinary Officer. If your contingency is to store litter on part of the range then the 56 day period will not start until the litter has been treated and removed. Also if you have mobile field arks then the 56 day period will not start until all the litter pads under the arks have been treated. For fixed houses they may well request that certain surfaces, for example stone or gravel, within 10 m of the pop-holes be drenched in disinfectant or hydrated lime, however there may be environmental restrictions to this.

There is now guidance on the treatment of earthen floors. Once the litter has been removed, the ground must be power harrowed and spread with an alkaline solution to increase the soil pH to greater then 10. This can be done most effectively with hydrated lime (Calcium Hydroxide/Slaked Lime) but also with Agricultural lime (Calcium Carbonate) however the particle size needs to be small. Soil pH will have to be measured and recorded in multiple sampling points, in the presence of an APHA Animal Health Officer, to verify effectiveness. Once this treatment has been completed then the 56 fallow period can start for the remaining part of the range

If there are ponds, they may require filling in, again unless there is an environmental or wildlife reason why this cannot be done. In these circumstances APHA may request that physical barriers and netting are erected to prevent access by poultry and wild birds before restocking of the unit can take place.

There are a number of things that may work in your favour and others against. It is known that Avian Influenza virus can survive for extensive periods (up to 3 months) in cold wet conditions, and that sunlight, heat and dryness can destroy it within a matter of days.

Good Points	Bad Points
Sandy soil, well drained range	Wet, poorly drained range, clay soil range
Dry surface	Evidence of standing water in wet weather
Sun light	Cold weather
Warm Temperatures	Overcast/cloudy weather pattern
	Pond or drainage ditches within the range

Cleansing and Disinfecting

SECTION 07

WASH-WATER COLLECTION AND DISPOSAL

All washwater generated during cleaning and disinfection procedures must be collected and stored prior to disposal. If there is no storage capacity on farm, or the quantity collected is likely to exceed existing storage capacity then temporary storage must be provided either on or off farm. If it is to be stored off farm then a licence to move it will have to be obtained and restriction will be placed on the storage location. However this may be considered preferable as restrictions will not be lifted on the farm until the collected wash water has been treated and removed.

If there is no contained, built in drainage from the shed, then bunds must be created to prevent washwater flowing straight out of the shed. You could get an unlimited fine if you allow washwater or disinfectant to enter groundwater or surface water, e.g. ditches, or rivers. It must be contained inside then transferred to a bowser or temporary tank for storage. It can be pumped from the shed with a ground water pump, if a suitable sump can be created in the building.

Prior to disposal of washwater and to reduce the disease risk it should be treated while it is stored and APHA have provided this new guidance for 2021.

- the waste water must be stored for at least 90 days if the average temperature is >5°C, after which it can be spread on arable land
- the waste water must be stored for at least 120 days if the average temperature is <5°C, after which it can be spread on arable land
- the waste water must be stored for at least 48 hours if the pH is changed to a value below 5 or above 11 (values deemed viricidal), after which it can be spread on arable land or disposed via sewage treatment works.

However, the relevant Environment Authority may not agree on disposal/spreading on arable land of wash water treated in this way. The occupier must seek relevant consents from other regulators before exploring this option.

Wash water disposal proposals must be agreed with other regulators including (but not exclusively) the Environment Agency (EA) in England, Scottish Environmental Protection Agency (SEPA) in Scotland and Cyfoeth Naturiol Cymru (CNC)/Natural Resources Wales (NRW) in Wales. It should be for the occupier to seek this agreement but APHA will check it has been done.

SECTION 07

Cleansing and Disinfecting

WASH-WATER COLLECTION AND DISPOSAL

The Environment Agency in England have the following recommended options for disposal:

- **Drain to a foul sewer**
  - You must get approval from your waste water service supplier before you add disinfectant washwater to a foul sewer.
- **Use a registered waste carrier**
  - This could be to a heat treatment plant (rendering) or a commercial waste water treatment plant.
  - You mustn't allow waste carriers to dispose of your waste illegally.
  - You must meet the waste duty of care requirements.
- **Dispose on land**

  If you carry out land spreading, you must dispose of washwater at least:
  - **10 metres** from rivers, streams and field ditches
  - **30 metres** from streams with nature conservation status
  - **50 metres** from boreholes, wells and springs used for drinking water or food production
  - **250 metres** from solution features, eg sinkholes, swallow holes, swallets

You must have an environmental permit to carry out land spreading, unless the Environment Agency actually says you don't need one.

Permit applications take at least 3 weeks to process, and you must pay an application fee which can be in the £1000s.

There is an initial enquiry form to complete so that they can assess if you will require a full permit to dispose of washwater. It requires details of the premises and location, information about the disinfectant and degreaser you will be using, how you will store it on farm, and estimate of how much there will be, maps of where you propose to spread it, boundaries and neighbours.

Refer to Disposal of Wash Waters During Secondary Cleansing and Disinfection (EDO136) guidance for more information (England and Wales only - SEPA are developing similar guidance).

The full guidance and form can be found at:
https://www.gov.uk/guidance/animal-disease-outbreak-prevent-pollution-from-cleaning-and-disinfection

https://www.gov.uk/government/publications/animal-disease-outbreak-disinfectant-washwater-disposal-form

The information on this form will help them decide **IF** you need a permit, it is **NOT** the permit application.

PREVENTION WORKS
Shaping the future of poultry health

LAYER VACCINATION SOLUTIONS

Don't leave your *Salmonella* protection and egg production to chance

Gallimune® Se+St

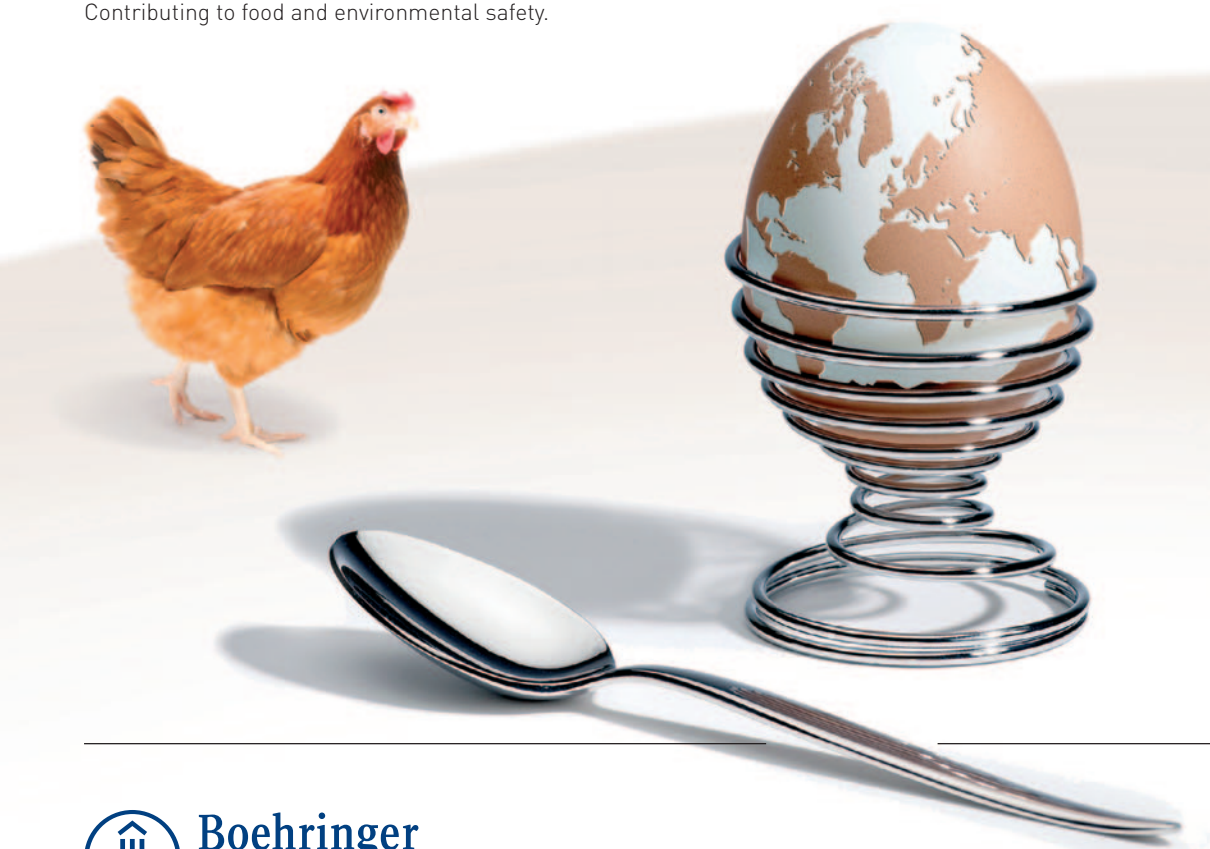
Inactivated (killed) vaccine against *Salmonella* Enteritidis (SE) & *Salmonella* Typhimurium (ST).

Reduces transovarian egg contamination (SE) and faecal excretion (SE & ST)[1].

Contributing to food and environmental safety.

Gallimune® 407 ND+IB+ EDS+ART

Inactivated (killed) vaccine against Newcastle disease, infectious bronchitis, egg drop syndrome (EDS76) and avian rhinotracheitis.



Boehringer Ingelheim

Gallimune® Se+St is compatible for concurrent use with Gallimune® 407 – protection against six diseases

Low 0.3ml dose volume and low viscosity improve injectability, reducing stress for all.

Gallimune® 407 **ND+IB+ EDS+ART**

Gallimune® 407	
Vaccine type	Inactivated
Presentation	Water-in oil emulsion for injection
Diseases	ND, IB, EDS, ART subtype B
Route of administration	Intra-muscular injection
Dose volume	0.3ml
Target animals	Chickens (breeder and layer pullets)

KEY: ND Newcastle disease virus, EDS egg drop syndrome virus, IB infectious bronchitis virus, ART avian rhinotracheitis virus

Gallimune® **Se+St**

Gallimune® Se + St	
Vaccine type	Inactivated
Presentation	Water-in oil emulsion for injection
Diseases	*Salmonella* Enteritidis, *Salmonella* Typhimurium
Route of administration	Intra-muscular injection
Dose volume	0.3ml
Target animals	Chickens (layer pullets)

1. Gallimune® Se & St SPC. https://www.vmd.defra.gov.uk/productinformationdatabase/product/A006747 Accessed 1st Nov 2021.

Gallimune® 407 ND + IB + EDS + ART contains inactivated Newcastle disease virus, Ulster 2C strain; inactivated infectious bronchitis virus, Mass 41 strain; inactivated egg drop syndrome virus (EDS76), V127 strain; inactivated avian rhinotracheitis virus (swollen head syndrome), VCO3 strain. UK: POM-V. IE: POM.
Gallimune® Se + St, Water-in Oil Emulsion for Injection contains inactivated *Salmonella* Enteritidis PT4; inactivated *Salmonella* Typhimurium DT 104. UK: POM-V. IE: POM.
Advice should be sought from the prescriber. Further information available in the SPC or from Boehringer Ingelheim Animal Health UK Ltd., RG12 8YS, UK.
Tel: 01344 746957. Email:vetenquiries@boehringer-ingelheim.com. Gallimune® 407 and GALLIMUNE® Se + St are registered trademarks of Boehringer Ingelheim Animal Health France SCS Date of preparation: Nov 2021. UI-POU-0025-2021. Use Medicines Responsibly.

SECTION 08

Completion and Restocking

GETTING RESTRICTIONS LIFTED

There are several stages to getting official restrictions completely lifted on your farm.

- You must have completed cleaning and disinfection activities and received sign off from APHA
- You must wait 21 days
- You must develop a re-stocking plan to be agreed with APHA
- Birds re-introduced to the farm must be monitored for 21 days

Only after completing all these steps will all restrictions be lifted and you are free to trade your products. So it will be at least 42 days after you complete C&D that this will happen.

Currently there is no official requirement or procedure for samples to be taken from the farm to test for the absence of AI virus, as you are required to do following a salmonella outbreak. If you chose to take such samples and submit them, at your expense, for analysis through your own vet, then APHA may take these results into consideration as additional information as part of their inspection process, but it is no guarantee.

Completion and Restocking

SECTION 08

RESTOCKING

Restocking

The process of restocking can begin 21 days after the completion of secondary cleansing and disinfection. If you had chosen not to carry out secondary C&D and even if 12 months has elapsed, you may not get permission to restock if the Chief Veterinary Officer believes there is still a risk of disease re-occurring.

The current method of testing for virus is the placing of sentinel birds and observing them for 21 days, monitoring health and mortality.

So how may birds do I need as sentinels?

APHA require birds to access every part of a building that contains poultry and also have access to the range. In practice APHA want birds to be placed at full stocking density to ensure they cover every part of the shed. They have also required them all to be placed on the same day. This has proved to be impossible in many circumstances so producers have had to provide detailed restocking plans that have to be approved by APHA. This approval has taken several weeks and is often pushed right up to the policy team to ratify. The current guidelines and approach to restocking will not work where pullet rearing and layers are on the same CPH and also multi-age laying sites.

What is the process?

- You will need to make a detailed restocking plan, especially if you have multi-age birds on the site.
- If you bring birds onto site that are older then 1 day they require pre-movement sampling by an Official Veterinarian at your expense.
- Any birds that die within the 21 day observation period will need to be sampled and tested at your expense.
- APHA will normally make a maximum of 2 visits to your sentinel birds, one when they are placed and one within 7 days of the final observation date. They may require additional observation visits to be made by an Official Veterinarian and again these additional visits will be at your expense.
- If you manage to agree with APHA to introduce sentinel birds over a longer period of time then it is only after the last placed bird has passed its 21 day observation period safely that restrictions can be fully lifted

SECTION 09

General Farm Information

LOCATION AND KEY CONTACTS

Completion this section to help streamline your C&D process:

Farm Manager	
Farm Mobile Number	
Assistant Manager	
Farm Address	
Postcode	
Telephone **Fax**	
Grid Reference	
Owner of Poultry	
Holding Number (CPH)	

Veterinary Surgeon	**APHA Regional Office Contacts**
Telephone	Telephone Nightline Fax
Other Staff	

General Farm Information

SECTION 09

MAPS AND SITE PLAN

As soon as restrictions are placed on your farm every person, vehicle, feed delivery, egg collection or piece of equipment that crosses the biosecurity boundary will need to be licensed on and off the premises. This boundary will initially be set by APHA to match the perimeter of the registered holding with reference to your CPH number, however practical considerations may allow some flexibility. It is important to assist the APHA Case Officer in establishing this boundary line as it will affect how the farm can be run for the next few months.

Base maps for your farm can be printed from www.ordnancesurvey.co.uk/osmaps/

In most cases this will show the outline of your sheds, tracks, ditches, roads and water courses. The Lion Code already requires you to hold a plan of your site, however additional maps would be useful, for instance one showing 3 km around your farm. This may highlight additional risks to the biosecurity of your farm.

Additional permanent features to highlight on your plan

- Public footpaths
- Overhead power cables
- Surface type (gravel/concrete/soil/grass)
- Permanent fences and gates

Planning site access and control

Possibly one of the single most important preparations you can do is to establish the bio-secure perimeter of your property. This will be the area that is locked down by APHA and will require licences to move ANYTHING in or out. It needs to be obvious to the first APHA official who comes on site where this boundary is, or should be established. Even for a small farm there may be at least 30 additional people working in or around the site at the height of depopulation operations and it is likely that the premises restrictions will be in place for several months. So it is vital to set up a bio-security perimeter that is easy to maintain and does not cause continual inconvenience, eg getting to your house, parking your car or going to school. If possible your house wants to be established outside of the bio-security perimeter, even if that means hiring in temporary fencing to make a separate clean pathway to your front door.

There are no hard and fast rules for setting up perimeters, the simplest thing that APHA will do is to match the bio-security perimeter to the CPH records of the farm. However, that is not necessarily the most efficient answer, but unless you can propose a reasoned alternative to the APHA Case Officer, that will be the perimeter imposed on you. As a rule of thumb the bio-security perimeter wants to be a minimum of 10 to 20 metres from any shed. Most deposition from wall exhaust fans falls within 2-3 metres of the shed, anything that blows further is really out of your control, once the birds have been depopulated then the ventilation will be off anyway.

SECTION 09

General Farm Information

LOCATION AND KEY CONTACTS

You may wish to consider the following when marking up your proposed bio-security perimeter:

- If you run a mixed farm, try to establish a dedicated route to the poultry sheds that bypasses other livestock units, arable machinery sheds or dwellings. If this is impractical on a permanent basis, is there a way of doing it on a temporary basis for the duration of restrictions?
- What materials will you require to make this temporary change? For example, how many metres of temporary fencing, how many tons of hard core or length of trackway, where can you source this with 24hours?

Public footpaths: APHA can have public footpaths, bridleways, green roads and green highways temporarily closed if they run through or alongside your farm. This is usually initially for 21 days and will cover the period when APHA are carrying out depopulation. Once there are no longer live poultry on site it will be more difficult to justify continued closure if they run alongside your farm, but not through it. You may have to consider erecting fencing along any such path to prevent public access whilst restrictions remain in place or during C&D operations, even if it is just for safety reasons.

Once you have established a line make sure working areas, paths and tracks are kept cleaned and disinfected on a regular basis.

Temporary Access Arrangements

If your farm opens directly on to a public road, it would be preferable to establish a temporary pull in off the public highway for vehicles, up to 15 x 6 metres, it needs to be hard standing, preferably concrete, as vehicles will need to be cleaned and disinfected in this area, if they are going to enter or leave the bio-security perimeter. An example could be re-hanging boundary gates further up the drive on a temporary basis.

Mark proposed area on map	

Parking

You will need space outside the perimeter for parking cars or at the very least a drop off point for APHA staff, contractors and delivery vehicles.

Mark proposed area on map	

Enabling deliveries & temporary storage

It is also best to provide a covered storage area outside of the biosecurity perimeter, as deliveries will need licensing into the site and that may not happen immediately. Equally there is no point in taking anything onto site until you actually need it. This could be a shed, small (secure) trailer or existing building provided it can be accessed without entering the biosecurity perimeter.

Storage shed/bunker available - Mark location on map	

General Farm Information

SECTION 09

LOCATION MAP - EXTENDING 3KM FROM THE FARM

1:50 000 or 1:25 000

SECTION 09

General Farm Information

FARM MAP - OS "BASE" LAYER

Show farm entrance, buildings, ranges and dwellings.
Include a copy of your drainage plan and your range map.

General Farm Information

SECTION 09

ENTRY & EXIT BIOSECURITY C&D STATION

There needs to be adequate space on the biosecurity boundary to wash and disinfect vehicles both coming in and out. Review the entrance to the farm to see if it will be adequate to establish a full wash down and disinfection area.

Existing Facilities (mark on site plan)

Direct from road	Yes/No	
With Pull in	Yes/No	Size
Holding area (outside)	Yes/No	Size
Holding area (inside)	Yes/No	Size
Gateway material (eg concrete, gravel, earth)		
Drainage run (eg into farm/into road		

SECTION 09

General Farm Information

ENTRY & EXIT BIOSECURITY C&D STATION

C&D Station Layout

Area needed 4.5 m x 14 m minimum, preferably 6 m x 15m to give you adequate working space.

Control or catch run off with temporary bund

Equipment needed

Pressure washer	
Water Bowser	
Cleanser	
Disinfectant	
Bund Materials	

Care needs to be taken when planning the facility to prevent environmental contamination.

- DON'T allow the run-off from roads, farmyards and hard standings to discharge directly to a watercourse.
- You must maintain a suitable distance from any ditch (10m) or drinking water supplies or boreholes (50m), or running watercourses (250 m)

Vehicle Access

How big is the largest trailer that can access your site?	
Is there access close to sheds?	
Is manoeuvring large vehicles easy?	
What is the biggest turning circle inside the farm?	
Are there restrictions (weight or width) on the approach roads?	
Are there other Local Authority restrictions, eg time of access	

General Farm Information

BIOSECURITY POINT AND ACCESS CHECKLIST

	Item to Check	Description	Checked
Entrance	Vehicle washing equipment	◯ Pressure washer ◯ Water tank ◯ Hose pipe	
	Disinfectant Spray	◯ Hosepipe ◯ Knapsack	
	DEFRA Approved Disinfectant	Check against DEFRA list (See appendix for website)	
	Cleanser		
	Foot Dip		
	Disposable overalls, FP3 Face masks, Boots, Goggles		
	Log Book		
	Barrier tape		
	Barrier stakes or posts		
Temporary Changes	Fencing Supplier		
	Metres of fencing required		
	Hard Core supplier		
	Tonnes Hardcore		
	Trackway		
	Trackway Supplier		

SECTION 09

General Farm Information

PERSONNEL

All people working inside the bio-security perimeter will need to change overalls, masks, gloves and boots several times a day and preferably take a shower and/or change all their clothes before leaving site after work. It is important to provide facilities to make this easy for the staff and visitors so that there is no temptation to cut corners.

Good practice would be to for workers to have a full set of site only clothing which is left behind at the end of the day.

Existing Staff facilities

	Number
Toilets	
Showers	
Changing Rooms	
Office	
Staff room	
Store	

Additional temporary Staff facilities required

	Number	Supplier name and number
Toilets		
Showers		
Changing Rooms		
Office		
Staff room		
Store		

General Farm Information

SECTION 09

CLEANING OF BUILDINGS AND EQUIPMENT

Walls / floors and ceilings / Store room / egg grading room / egg packing room

Shed Number	Length (m)	Width (m)	Floor Area (m2)	Wall height (m)	Wall Area (m2)	Apex height (m)	Total Surface Area

SECTION 10

Response Action Following a Positive Salmonella Test

Following a positive Salmonella result, a confirmatory test must be completed and the serovar determined. This test can take 3-5 days to come through and throughout that period you may not be able to sell eggs though the usual channel. You must consider having additional storage available. See appendix 4 for the full description of the confirmatory test procedure.

Under changes to the Lion Code of Practice in February 2020 the Packing centre MUST NOT market any eggs as Class A without a negative result for the flock within the 15-week period.

Flocks with a positive test for a regulated serovar MUST be removed from the site and a thorough C & D of the house completed.

Nothing can happen until a positive result is known for a regulated serovar for A.I., or a negative result for a regulated serovar for Salmonella so use the time to plan.

With the possibility of losing Class A Lion Code status – eggs need separate storage and potential hen processors need contacting to plan shed depopulation. Stored eggs may need destroying, confirmed by egg inspector.

If hens cannot be accepted at a slaughterhouse, as they cannot enter the food chain, then culling poultry on farm is the only option, so explore costs with on farm culling providers. e.g. Livetec Systems Ltd.

Thorough Cleansing & Disinfecting is needed for all or the affected part of the poultry enterprise -explore options.

Cleaning following a Salmonella outbreak is similar to a thorough clean after Avian Influenza but there is no need to complete the cycle twice. However, some sites have undertaken a second clean to be sure.

In principle you can follow the same cleaning procedure as has been described following an avian influenza outbreak, however there are some specific differences that are required either by APHA, BEIC or recommended veterinary practice.

It is also essential to ensure areas around the shed are cleared and cleaned of over growth, rubbish and any old equipment or machinery as they may be providing refuge or homes for rodents or other wildlife that are implicated in the transmission of salmonella

The following tables highlight some of the key points.

Response Action Following a Positive Salmonella Test

SECTION 10

COMPARISON OF AI AND SALMONELLA CONTROLS

	Salmonella	Avian Influenza
Vector	Bacteria	Virus
Survivability	Survive in intestines of animals, dust (19 yrs), surface soil, range (8 mths), disused breeder house (9yrs)	Survives up to 28 days depending on temperature, moisture, growing medium e.g. feather / manure
Strains	Over 3,000 strains of serotypes/serovars ST has hundreds of serotypes and persists in chickens	HPAI LPAI
Testing Groups	Highly Contagious Groups B & D Less Problematic Groups C, E, G (C & G Associated with feed raw ingredients)	Notifiable H5 & H7 High Path AI- readily spread in poultry Low Path H5 & H7 can exist with few clinical sign but are notifiable esp in water fowl
Government / NCP Regulated Control	Salmonella Enteritis Group D – often mice, pheasant, horses, usually F.R. birds Salmonella Typhimurium Group B – associated with pig herds/vermin/grain/wild birds/horses Salmonella Typhimurium Monophasic (strain) (Other strains in group B associated with badger / fox / wild mammals) Salmonella Infantis Salmonella Virchow	Survives & replicate in feathers, survives in cold water and faeces

SECTION 10

Response Action Following a Positive Salmonella Test

COMPARISON OF AI AND SALMONELLA CONTROLS

	Salmonella	Avian Influenza
Government / NCP Regulated Control Cont.	Salmonella Hadar All of these are tested for on Breeder Rearer and Breeder Laying Farms The first three are tested for on Pullet Rearer and Laying Farms	Survives & replicate in feathers, survives in cold water and faeces
Effect On Poultry	High Mortality S.E. likely to affect eggshell S.T. Long-term infection of reproductive organs - can be in egg albumen before shell formed so chick infected Monophasic S.T. can be linked to horses, pets, pigs, grain so is readily spread	High Mortality
Zoonoses	S.T. Food Poisoning In Humans (so many species carry Salmonella T so more of a threat to poultry/egg producers)	Type A only type that affects Animals & Humans Rare – Influenza can occur with close poultry contact Even Rarer - Death

Response Action Following a Positive Salmonella Test

SECTION 10

COMPARISON OF AI AND SALMONELLA CONTROLS

	Salmonella	Avian Influenza
Positive Test	No compensation from Government whichever strain / serovar but under Lion Code culling / egg destruction Must occur with Salmonella typhimurium, Salmonella enteritis or Salmonella typhimurium monophasic strain Positive confirmatory test takes 2-4 days to receive – Eggs now Class B & Lion Code ceases till a negative test received	Compensation for live birds culled No compensation for non notifiable low pathogen but culling/egg destruction advised Zone and Licensing immediate – vet on farm within 2hours - after receiving positive test (takes up to 48hours for High Path strains) with immediate APHA controls
Negative Test	Up to 7 days for Negative result so egg storage and separation required whilst waiting	Result takes up to 10 days for any serovars

SECTION 10

Response Action Following a Positive Salmonella Test

DISPOSAL OF USED LITTER & MANURE

Method	Salmonella	Avian Influenza
Incineration	Preferred option but must advise waste category to incinerator	Moved under licence & incinerator needs correct licence to incinerate – unlikely at present
Rendering		Heat treated but costly for transport, processing fees, clean down costs of facility. Licensing of transport and facility needed & APHA supervision
Stack to Heat	Stack for at least 28+ days	Stack to heat – is usual option chosen on adjacent farmland. If using Public Highway each load is licensed off site and onto storage site – signed off / on Stack is sprayed with chemical then covered for duration
Location	Must not become a hazard to environment Control leachate	Not over Field Drains, Nor Within 10m of Water Course or 50m of a Borehole Control leachate
Livestock	Do not stack on land accessed by any livestock	Can be stored on Range 42 days or more 56 days before livestock readmitted
Wildlife	Must not become a hazard	Stack is covered
Vermin	Control of rodents/wild birds/ flies required	A Written plan for control of vermin is required and records must be kept
Vehicle / Equipment	Clean & Disinfect and do not use for new litter / feedstuffs. MUST clean & disinfect thoroughly and be totally dry before re-use so Salmonella not still present in water	All vehicles and equipment cleansed & disinfected and licensed for use on / off site
Stack Disposal	Dispose of on land that does not have livestock	After 42 days – Dispose of in usual manner but may not suit incinerator

Response Action Following a Positive Salmonella Test

SECTION 10

CALCULATE THE BEST OPTION

How and / or Where can you dispose of contaminated litter / manure in line with Regulations?

Area / System	Item to Check	Description
Flat Deck	How much is there?	Bulker (c. 25 tonnes) 14t grain trailer (c. 19m3 per load)
	How much space is needed?	
	Will it affect other operations e.g. seasonal grazing?	
Multi-Tier	How much is there?	Bulker (c. 25 tonnes) 14t grain trailer (c. 19m3 per load)
	How much space is needed?	
	Will it affect other operations e.g. seasonal grazing?	
Muck Store	How much is there?	Bulker (c. 25 tonnes) 14t grain trailer (c. 19m3 per load)
	How much space is needed?	
	Will it affect other operations e.g. seasonal grazing?	

SECTION 10

Response Action Following a Positive Salmonella Test

STEPS TO REMOVE LITTER & MANURE

SALMONELLA C & D:

- Removal of Organic Matter
- Removal of Dust
- Removal / Cleaning of Equipment – Perches, Flooring, Nest Boxes, Multi-Tier / Waterlines / Boots / Overalls - CLEAN OUTSIDE
- Cleaning of House

DRY CLEAN - REMOVAL OF ORGANIC MATTER / DUST:

- Litter from in and around feeders and equipment removed
- Feed from feeders removed
- Dust from ledges/fans/ceilings Removed
- Inspect for contamination by rodent faeces or arthropods using a powerful torch

WET CLEAN: Easier to clean house when all of above removed

- Disconnect electrical equipment
- Flush through all water lines
- Soak & apply foam detergent
- Soak – ALLOW time to work
- Soak slats in a tote bins or temporary pool
- Wash down all surfaces
- Remove detergent & loosened debris
- Rinse at low pressure

- Check Carefully - Use wet wipes to show up dirt under/behind/above all surfaces
- Check for cracks in floors and wall bases and repair
- Re-inspect for re-contamination by rodents/arthropods
- If unsatisfactory – Do maintenance! DO MORE CLEANING!
- ONLY apply disinfectant when SURE everything is CLEAN and DRY
- Ensure feeders/troughs/chains are dry – If wet they will further dilute the disinfectant!
- Allow a MINIMUM 24 hours drying time = bacteria die

Tips

- Do any additional maintenance required between flocks
- Check and fix ventilation covers, louvre and mesh
- If debris is dislodged – clean again PRIOR to disinfecting
- Use BEIC / DEFRA - approved disinfectant according to temperature/water type etc

BEFORE RESTOCKING

- Replace rodent bait as early as possible after disinfection
- Check no areas overlooked and equipment is functioning
- Ensure there is no potential for contamination of bedding, feed or replacement stock on entry to the farm
- Check on farm biosecurity procedures to avoid spreading infection from older flocks to new birds

SECTION 10

Response Action Following a Positive Salmonella Test

RANGE MANAGEMENT

- Regular C & D Biosecurity is necessary at ALL times
- Biosecurity should be increased in High Risk Periods and Records Kept/Available
- A Covered Foot Dip Should Be Present At The Pedestrian Entry Control Point Of Each Range
- Dedicated Boots & Overalls For Each Range Should Be Worn
- Hand Sanitisers Should be Used At Entry/Exit
- Livestock Should Not Graze The Range With Poultry,
- A Period Free Of Grazing Stock Should Occur Before Stocking With Poultry especially to prevent Salmonella cross contamination. A.I. will die in hot, dry weather.

C & D on The Range	
Salmonella	**Avian Influenza**
	Can survive up to 3 months in cold, wet conditions BUT sunlight, heat and dryness can destroy it in a few days
Remove poached areas likely to have high contamination by pop holes	Leave fallow for 56 days
Spray with 5% formalin & use lime-based powder on the range	Spray surfaces eg stone/gravel within 10m pop holes with disinfectant
Do not share range with livestock	Fill in any ponds or use physical barriers e.g. netting to prevent access by poultry prior to restocking

C & D Mobile Houses	
Salmonella	**Avian Influenza**
Move Mobile Houses to a Clean Area to C & D – Consider Drainage	
Remove Slats, Scratch Pads, Equipment To Clean	
Soak detergent/water	Brush – remove dry debris
Wash & Rinse	Foam
Check – wet wipes	Wash – High Pressure
Do Any Maintenance / Vermin Checks	Rinse – Low Pressure
Clean Again If Dislodge Muck / Debris	Disinfect
Disinfect - Only when certain CLEAN	
24hrs Drying Kills Bacteria	
Use Defra and BEIC -approved disinfectants	
Clean ALL Access Routes To Office / Anteroom / Concrete Aprons / Surrounds	
Carry out BEIC Salmonella/Bacteria tests – Repeat Cleaning If Necessary	Seal To Prevent Access 7 Days & Then Repeat Cleaning Process
Avoid Re-Contamination Of Cleaned Areas	
DO NOT INTRODUCE ANY NON-DISINFECTED ITEMS	
Negative Result = Restocking Possible Regain Lion Code Status	Restocking 21 days after secondary C & D signed off

Appendix 1

NOTICE OF REQUIRED C&D - SCHEDULE OF WORK (EXD158(AI))

This form will be completed in conjunction with the APHA C&D Veterinary Officer. The actual form is subject to revisions and not reproduced here but the current form requires the following information.

The C&D Veterinary Officer should determine the work required in column 2 (below) and you should complete the detailed methods in column 3 table where you must list how you are going to cleanse and disinfect each building and other areas of the farm.

External Areas		
Area (indicated on MAP)	**Required works (method of C&D)**	**Detailed requirements of the works**
A	Shed 1 - External Remove visible contamination around fan outlets, cleanse and disinfect	1. Shed Exterior a. Light block covers will be removed from the fan enclosures and a temporary bund will be made under each fan cowl to catch waste water runoff. b. Dust present around the fan cowl will be removed before washing by brushing off. c. All surfaces will be sprayed with a foam degreaser (Product) and left to soak for the appropriate period as specified in the manufacturer's instructions. d. Washed using a cold water pressure washer until all visible contamination is removed. e. Rinsed with cold water. f. Waste water collected in the bund will be pumped to the storage tank.
B	Eg Around feed silo	
C	Eg Paths and working areas	

Internal Areas		
Area (indicated on MAP)	**Required works (method of C&D)**	**Detailed requirements of the works**
D	Refering to Shed 1 1. Application of foam degreaser to all surfaces and equipment. 2. Cold water wash of all surfaces and equipment 3. Cold water rinse of all surfaces and equipment 4. Application of approved disinfectant, to remain for 24 hours. Reapeat Process	The CLEANSING procedure in Shed 1 (Building G) will be as follows: 1. Walls, floors and ceilings a. All surfaces will be sprayed with a foam degreaser (Product) and left to soak for the appropriate period as specified in the manufacturer's instructions. b. Washed using a cold water pressure washer until all visible contamination is removed. c. Rinsed with cold water. 2. Nest boxes, Slats, mats, support structure and egg conveyor. Etc etc
E		
etc		

You must also list the disinfectant to be used and the concentration to be applied – Refer the list of DEFRA Approved disinfectants.

Disposal Arrangements – you are required to identify how you will dispose of any of the following:

Manure / Litter - see page 244
Wash Water / Effluent - see page 255

SECTION 11

Appendix 2

LINKS TO AI RESOURCES

All the following resource material is available in the download section of the BFREPA site at https://www.bfrepa.co.uk/downloads-category/bfrepa-yearbook-2020-link-to-resources/

DEFRA - Notifiable avian disease control strategy 2019
How we manage outbreaks of notifiable avian disease (NAD) in Great Britain.
https://www.gov.uk/government/publications/notifiable-avian-disease-control-strategy

Welsh Government - Animal health and welfare
http://gov.wales/topics/environmentcountryside/ahw/?lang=en

Scottish Government: - Disease Contingency Plan
http://www.gov.scot/Topics/farmingrural/Agriculture/animal-welfare/Contingencies

Ds approved disinfectant: when and how to use it
https://www.gov.uk/guidance/defra-approved-disinfectant-when-and-how-to-use-it

GB Environmental Bodies

England – Environment Agency
https://www.gov.uk/government/organisations/environment-agency

Scottish Environmental Protection Agency
www.sepa.org.uk

Natural Resources Wales
www.naturalresources.wales

Classify different types of waste
https://www.gov.uk/how-to-classify-different-types-of-waste

Farm Inspections
https://www.gov.uk/government/publications/farming-inspections/disease-inspections

GB Health Bodies

Health Protection Scotland
http://www.hps.scot.nhs.uk/

Public Health England
https://www.gov.uk/government/organisations/public-health-england

Iechyd Cyhoeddus Cymru – Public Health Wales
http://www.publichealthwales.wales.nhs.uk/

The legislation covering avian influenza includes:

The Avian Influenza and Influenza of Avian Origin in Mammals (England) (No.2) Order 2006

The Avian Influenza (H5N1 in Poultry) (England) Order 2006

The Avian Influenza (H5N1 in Wild Birds) (England) Order 2006

The Avian Influenza (Preventive Measures) (England) Regulations 2006

SECTION 11

Appendix 2

LINKS TO SALMONELLA RESOURCES

The Control of Salmonella in Poultry Order 2007

The Control of Salmonella in Poultry (Amendment) Order 2019

Defra Chicken Breeders: Poultry testing for Salmonella
https://www.gov.uk/guidance/salmonella-get-your-breeding-chickens-tested

Gov.UK Laying Hens and Flocks: Poultry Testing for Salmonella
https://www.gov.uk/guidance/salmonella-get-your-egg-laying-hens-tested

Defra Code of Practice for the Control of Salmonella during the Production, Storage and Transport of Compound Feeds, Premixtures, Feed Materials and Feed Additives

The Control of Salmonella in Poultry (Breeding, Laying and Broiler Flocks) (Scotland) Order 2009

The Control of Salmonella in Poultry Scheme Order (Northern Ireland) 2008

Regulation (EC) No 2160/2003 Of The European Parliament And Of The Council of 17 November 2003 on the control of salmonella and other specified food-borne zoonotic agent
https://www.gov.uk/government/publications/salmonella-in-poultry-testing-laboratories-in-the-uk

Defra: A Code of Practice for the Prevention and Control of Salmonella in Commercial Egg Laying Flocks
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/342849/egg_laying_flocks_cop.pdf

Code of practice for the prevention and control of Salmonella in breeding flocks and hatcheries (Defra publications PB 1564)
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/342847/breeding_flocks_cop.pdf

Defra Codes of practice for the control of Salmonella in the production of final feed for livestock (Defra publications PB 2200 and PB 2201)

Defra Code of practice for the control of Salmonella during the storage, handling and transport of raw materials intended for incorporation into, or direct use as, animal feeding stuffs (Defra publication PB2202)

Appendix 2

LINKS TO GENERAL RESOURCES

SECTION 11

Code of practice for the prevention of rodent infestation in poultry flocks (Defra publication PB 2630)

Code of Good Agricultural Practice: The Air Code (Defra publication PB 0618)

Code of Good Agricultural Practice: The Water Code (Defra publication PB 0587)

Guidelines for farmers in NVZs (Defra publication PB 5505)

Codes of Recommendations for the welfare of livestock – Domestic Fowls (Defra publication PB 0076)

General Control of Substances Hazardous to Health (COSHH) Approved Code of Practice (ISBN 0717616703)

The Transport of Animals (Cleansing and Disinfection) (England) (No3) Order 2005

Guidance note to the Transport of Animals (Cleansing and Disinfection) (England) (No3) Order 2005 (available from Defra)

List of Defra approved disinfectants (available from Defra)

SECTION 11

Appendix 3

SALMONELLA TESTING

A key aspect of the Lion Code and Salmonella National Control Programme is regular sampling, sample submission, reporting and recording of all Salmonella testing activities.

Senior Management of the site are responsible for this and keeping records for the expected life of the flock. Valid test results must be received, and action taken to replace missing results to comply with Lion Code practice. There is a legal obligation is to have results every 15 weeks, so refer to the Lion Code amendments to version 7. Amendments have been made for:

- Breeder Rearing
- Breeder Laying
- Pullet Rearing
- Laying Farm

Essentially, the new procedure involves testing every 13 weeks (91 days) so that provided the result is known by week 14 the eggs are still classed as Class A. If the sampling is done in the 15-week period, eggs are still Class A but a non-conformance will result.

If the 15 week period is missed (result unknown from test), a critical non-conformance will result and eggs laid after the deadline will be Class B – sent for processing – and this will continue until a negative result (for a regulated serovar) is received from the laboratory.

The Packing centre Must Not market any eggs as Class A without a negative result for the flock within the 15-week period.

Flocks with a positive test for a regulated serovar MUST be removed from the site and a thorough C & D of the house completed.

All birds sent to slaughter from laying flocks Must have a valid Salmonella result before entering the Food Chain i.e. date of sampling and most recent NCP result.

	Salmonella	Avian Influenza
Testing	Every 13 weeks	Symptoms of possible A.I.
Positive Test Result	2-4 days	Prelim Test 24-48 hours
		Inoculation test 48 hours
Negative Test Result	Up to 7 days	Up to 10 days

Consequences:
Nothing can happen until a positive result is known for a regulated serovar for A.I., or a negative result for a regulated serovar for Salmonella so use the time to plan.

Possibility of losing Class A lion Code status – eggs need separate storage and potential processors need contacting. Stored eggs may need destroying, confirmed by egg inspector.

Possibility of Culling poultry and birds not entering Food Chain so explore costs e.g. Livetec Systems Ltd.

Thorough Cleansing & Disinfecting needed for All or Part of the poultry enterprise - explore options e.g. Livetec Systems Ltd.

Appendix 4

SENDING SALMONELLA SAMPLES DURING AN AI OUTBREAK

EXD 314 General Licence for the movement of samples for salmonella testing from premises in the Protection Zone or Surveillance Zone.

Q **What do I do if I suspect Salmonella whilst being in a protection or surveillance zone?**

A Contact your APHA helpline to apply for a licence to get samples tested at your nearest approved laboratory.

Q **I want to get a test, where is my nearest approved laboratory?**

A Find your nearest approved laboratory via this DEFRA link: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/694269/cspo-approved-labs.pdf

Q **Can I just send off the sample(s)?**

A No. The licence tells you how to do this.

The laboratory must be contacted before sending any samples and you must explain that you are currently in a Protection or Surveillance Zone for Avian Influenza.

You must be sure they will accept any samples sent which must comply with the licence.

The packaging of samples must be done to meet the Carriage of Dangerous Goods Regs & ADR, 2009. The laboratory can advise you.

Image: Biopackaging Ltd

Packaging

- Leakproof container +
- Leakproof inner packaging +
- Outer rigid packaging
- Add a list of the contents between the outer packaging layers
- Add your name and telephone number. It must be on the consignment note OR packaging.

Minimise the risk of spreading disease by using appropriate packaging.

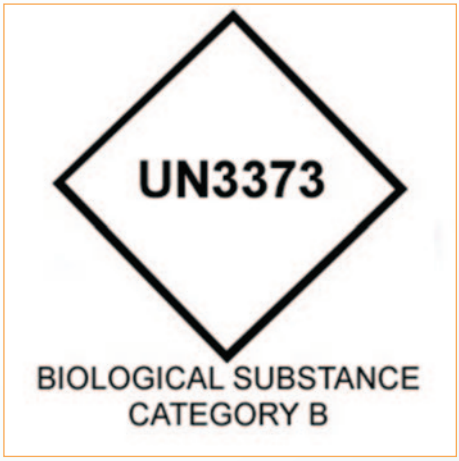


Image: DGI Training

Labelling

- Label must be 100mm x 100mm (minimum)
- Diamond displaying UN3373 must be 50mm (min) with wording

  "BIOLOGICAL SUBSTANCE CATEGORY B"
- You must indicate that you are in an A.I. Protection / Surveillance Zone

Send the sample by Recorded Delivery, courier or take it directly to the laboratory.

REMEMBER:

If you are under licence –

- Do not enter or leave the farm wearing dirty clothing and/or footwear
- Clean and disinfect your footwear before leaving the farm
- Clean your vehicle so no contamination occurs, including footwell
- If you suspect vehicle contamination, clean & disinfect it straightaway
- Take steps to reduce any risks of contamination between sites
- Always use the approved disinfectants at the correct dilution in accordance with manufacturer's instructions
- A record of ALL vehicle movements must be kept for 6 weeks