

Chapter 6 Notifiable Diseases

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1. Introduction

1.1 Purpose

1.1 Purpose

1.1.1 Background

The prompt identification and notification of certain animal diseases allows the FSA, Animal and Plant Health Agency (APHA) and Defra to take action to prevent the spread of the disease. This chapter covers day to day procedures in notifiable disease monitoring and surveillance.

When an outbreak is declared, emergency instructions will be issued at the time, since different rules may apply depending on the specifics of the case.

1.1.2 Legislation

Powers to control notifiable diseases are derived from the Animal Health Act 1981 (as amended) and specific Orders made under the Act or Regulations made under the European Communities Act 1972.

1.1.3 Enforcement

The legislative powers are usually enacted by APHA staff or Local Authority (LA) inspectors. Some FSA staff are authorised under the legislation to undertake certain functions. The legislation is enforced by Local Authorities (LAs).

1.1.4 Introduction to FSA duties

FSA staff have a duty to notify the Secretary of State or APHA Duty Vet (Defra Rural Services Helpline on 0300 200 301 in England or Wales Field Services on 0300 303 8268 in Wales) of any suspect case of a notifiable disease that they

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may encounter during the course of their work. In practice, they will deal with the APHA Duty Vet.

The decision whether to take further action or not rests with the Duty Vet and it is the responsibility of the OV to report suspect cases for the decision to be made by APHA.

Also, the FSA participates in monitoring and surveillance schemes aimed at the detection of certain notifiable diseases.

Note: 'Suspect animal' includes any animal in which disease is suspected and any animal which came from the same premises of origin.

2. Action on notifiable diseases

- 2.1 Current notifiable diseases
- 2.2 FSA responsibilities and action
- 2.3 Responsibilities of APHA
- 2.4 Other responsibilities
- 2.5 Detained meat storage
- 2.6 Cleansing and disinfection

2.1 Current notifiable diseases

2.1.1 Reporting notifiable diseases

Any person who suspects a notifiable disease has a duty to report it to the Duty VO.

A table of notifiable diseases and further guidance can be found on the following websites:

OIE Listed diseases 2012: OIE - World Organisation for Animal Health

<https://www.gov.uk/government/collections/notifiable-diseases-in-animals>

2.1.2 Bluetongue

The whole GB is now part of one Lower Risk Zone for Bluetongue and no movement restrictions apply. No action is currently required by the FSA. Emergency instructions will be issued in the event that this changes.

2.2 FSA responsibilities and action

2.2.1 When to report

The OV must immediately report suspicious signs of notifiable disease in:

- live animals or birds
- carcasses and offal

If the OV is not present the MHI must consult an OV before reporting a notifiable disease, provided that such consultation will not cause undue delay.

Reports of notifiable disease are to the Duty VO at APHA and to the FVL for onward reporting to Portfolio Lead for notifiable diseases.

The OV (or MHI where applicable) MUST keep a written record in the daybook of the time when the suspect cases were reported and the name of the person making the report.

The OV (or MHI where applicable) must follow precisely the instructions given by the Duty VO. The period between when the OV (or MHI where applicable) reports suspicion of disease and arrival of the VO into the establishment may be critical in controlling the spread of disease.

2.2.2 Reporting details

Provide the following information to the Duty VO:

- the plant name, address and contact telephone number
- the animal's breed, age, sex and identification mark(s) (eartag number or slapmark)
- details of any clinical signs and history in the suspect cases and any in-contact animal from the same establishment
- details of the lesions found during meat inspection
- the name, address and the holding (CPH) number of the establishment where the suspect animal or carcase(s) came from. This will allow APHA to arrange an investigation at this establishment if needed

2.2.3 Instructions from APHA

Instructions given by the Duty VO could include:

- isolating the animal until an investigation has been completed
- restricting movement of all animals, birds, products, vehicles or people into or out of the slaughterhouse until an investigation has been completed
- stopping slaughter

2.2.4 Record keeping

The OV must keep a contemporaneous record in the daybook of all instructions received from the Duty VO and confirm that they have been followed.

2.2.5 Cleansing and disinfection

No disinfectant should be used on or near animals, birds or carcasses suspected of disease, while waiting for the VO to attend, as this may adversely affect the likelihood of correct laboratory diagnosis.

2.2.6 Consultation cases

Providing that the OV is in the establishment and remains there, APHA may decide to deal with the investigation as a 'consultation case'.

A consultation case takes place between two or more veterinary surgeons when one of them considers that a notifiable disease may be included in the differential diagnosis for a specific case, but the probability of it being that disease is very low.

The OV should discuss the report of disease with the VO on arrival at the establishment.

The VO will place restrictions only if the result of the consultation is that a notifiable disease is suspected.

2.2.7 Report case

In other cases, APHA may call the case a 'Report Case' and place specific restrictions on the establishment pending veterinary enquiry. These restrictions may affect the movement of animals, products, people and vehicles from the establishment.

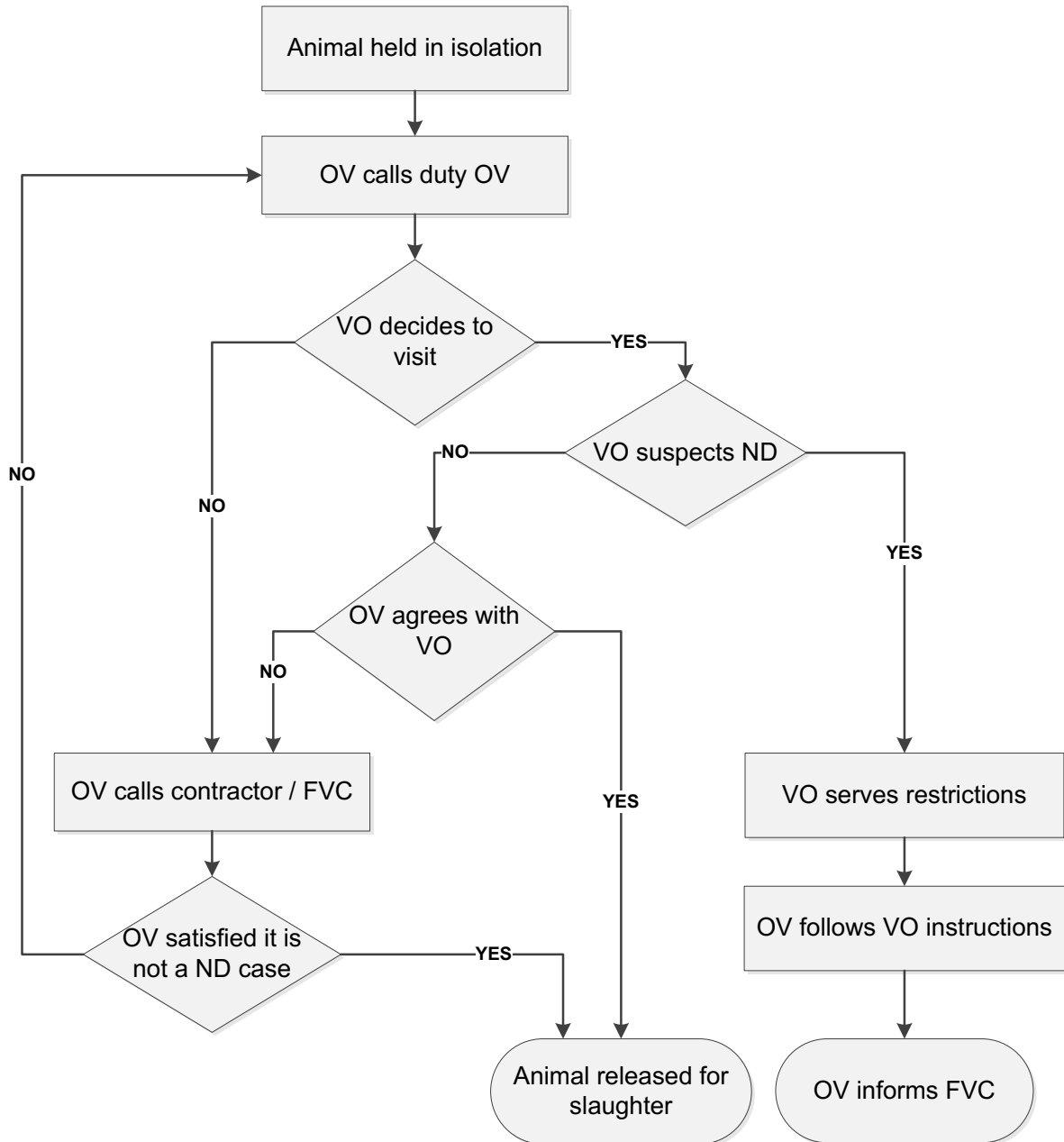
2.2.8 Legislative responsibilities

The OV remains responsible for:

- ensuring that all public health legislation is complied with while the establishment is under APHA restrictions
- monitoring hygiene and animal welfare
- following APHA instructions and informing them immediately if any of them cannot be implemented.

2.2.9 Procedure for suspect notifiable disease

The chart below outlines the procedure to follow if the OV suspects a notifiable disease.



Note: * If the Duty VO agrees the possibility of a Notifiable Disease, the premises should be treated as contaminated, until proven otherwise. The FBO should:

- not bring more susceptible animals on to the premises
- not slaughter live suspect animals (so the VO can sample them)
- isolate suspect / potentially contaminated carcasses

2.3 Responsibilities of APHA

2.3.1 Main duties

APHA has responsibility for:

- applying animal health disease control measures to minimise the spread of notifiable disease
- fully investigating the OV (or other FSA AO) report

2.3.2 VO investigation

A VO will visit the slaughterhouse to carry out an investigation. Other VOs may be sent to the farm of origin to undertake a simultaneous veterinary enquiry.

Once at the establishment, the VO will discuss the report with the OV / MHI / Food Business Operator (FBO) and examine the suspect animals / carcasses / offal. The VO may also consult with other VOs who may have gone to the farm of origin to gain a full clinical picture, and with APHA Veterinary Exotic Notifiable Diseases Unit.

2.3.3 After investigations

If the presence of notifiable disease cannot be ruled out, the VO will:

- serve a restriction notice closing establishments (or parts), or
- amend any restriction notice that has already been served, and / or
- collect whatever samples are necessary for diagnostic purposes

If the initial investigation began as a consultation case, it will now become a report case.

2.3.4 Restrictions

APHA may seek to limit the extent of the restrictions on the establishment. In many cases only one part of the establishment, such as chiller or freezer unit(s) containing the restricted meat, will remain under restrictions.

2.4 Other responsibilities

2.4.1 Compliance

All persons at the establishment, including FSA staff, must comply with any restrictions in any notices served on the establishment.

2.4.2 Local authority

The LA is responsible for taking enforcement action under disease control legislation.

2.5 Detained meat storage

2.5.1 Storage sites

Any meat detained at the slaughterhouse will be kept locked in a 'storage site' under control of the OV and APHA. Access to this storage site will be facilitated through the OV or VO. The FBO is responsible for the way the meat is stored, in compliance with (EC) 853/2004.

The storage site is likely to be kept under restrictions until the final results are known.

2.5.2 Preparation for storage

The FBO may discuss procedures for preparing the meat for storage with APHA and FSA.

2.5.3 Test results

Negative results take longer to reach completion. APHA will provide information on how long it could take before the results are known.

2.5.4 Public health

FSA are fully responsible for ensuring that public health legislation is complied with at all times the meat is at the establishment.

According to (EC) 854/2004, Annex I, Section II, Chapter V, Paragraph 1(e), meat is to be declared unfit for human consumption if it 'derives from animals affected by animal diseases for which animal health rules are laid down in the Union legislation listed in Annex I to Council Directive 2002/99/EC, except if it is obtained in conformity with the specific requirements provided for in that legislation, unless otherwise provided for in Section IV;' specifically Chapter IX - Specific Hazards

See also chapter 2.4 on 'Post-mortem inspection', section 2.

2.5.5 Clearance

Meat detained on suspicion of disease will usually be released once all the tests are negative. The OV must seek clearance from APHA and keep a written record before opening any sealed container.

2.6 Cleansing and disinfection

2.6.1 Requirement to C and D

When certain diseases cannot be ruled out, APHA may require the FBO to cleanse and disinfect (C and D) specified parts of their establishment. FBOs are responsible for doing this at their own expense. APHA may request FSA assistance in supervising the cleansing and disinfection of the establishment.

When carrying out C and D activities in the event of an outbreak (or during the investigation of a suspected outbreak) of a Notifiable Disease, FBOs are requested to use the relevant disinfectant as listed on the Defra website. See link: http://disinfectants.defra.gov.uk/DisinfectantsExternal/Default.aspx?Module=ApprovalsList_Sl

These C and D activities need to be documented by protocols where the FBO should describe how to C and D the relevant equipment, utensils and vehicles. This should at least be in line with the manufacturers' instructions for the chemical in use.

2.6.2 After C and D

The VO will be able to confirm when the operations can re-commence after the C and D - in some cases the establishment may have to be rested for a specified period. The aim will always be to allow resumption of operations as soon as possible.

3. Anthrax

- 3.1 Introduction
- 3.2 Investigation and diagnostic sampling

3.1 Introduction

3.1.1 Background

The OV (or MHI where applicable) may consider the possibility of anthrax in the course of normal duties. In reaching a decision, the OV must take into account factors such as history or clinical signs.

3.1.2 Anthrax: clinical and pathological signs

Suspicion of anthrax should be considered:

- if the cause of death is unexplained, particularly sudden death, in apparently healthy animals
- when potential signs of anthrax are observed in the dead animal (for example, dark, tarry uncoagulated bloody discharges from natural orifices, rapid bloating of the carcass, incomplete rigor mortis)
- if indications in the Food Chain Information or any other information indicate higher risk of the farm / area of origin
- if clinical signs at ante-mortem inspection indicate that the disease might be present, for example, high temperature, bloody diarrhoea or a discharge of dark tarry uncoagulated blood from the nose, mouth and anus
- if post-mortem evidence suggests that the animal might have been suffering from anthrax (for example, swollen spleen with bloodstained fluid in all body cavities).

Note: If the OV is suspicious of anthrax, the carcass should not be opened as this can result in the formation of highly resistant Anthrax spores.

3.1.3 Suspect live animals

Suspect animals and animals in direct contact must be detained, isolated and reported to the APHA Duty VO immediately.

The VO will place restrictions upon the animal, but it will not be slaughtered. It may be treated in situ, but for as long as the animal shows signs of disease the restrictions will remain in place.

3.1.4 Suspect carcasses

In some cases, suspicion of disease will not be raised until the carcass has been opened. The whole of the suspect carcass, offal, hide and blood must be detained (including any parts already removed) and people kept away from the carcass, its parts and the area where the carcass is held.

All other carcasses and offal at the establishment should be detained pending completion of enquiries. No other animals should be allowed to enter the slaughterhall until the results of the enquiry are known.

Holding pens should not be cleaned, and no other product or waste allowed to leave the site until authorised by APHA staff.

3.1.5 Details to report

The OV (or MHI where applicable) must report suspect cases to the Duty VO immediately, giving details as instructed in section 2 of this chapter. The decision whether to take further action or not rests with the VO and it is the duty of the OV to report suspect cases for the decision to be made by APHA.

3.1.6 APHA action

The VO will inform that restrictions apply and will also arrange for an immediate enquiry to be carried out by APHA's VO. OVs authorised through the Official Controls Qualification (Veterinary) – Statutory Surveillance (OCQ(V)-SS) can carry out enquiry into anthrax.

If the OV is a designated OV with a OCQ(V)-SS, APHA's VO may instruct the OV to undertake the enquiry providing suitable facilities are available for testing.

OVs cannot carry out enquiries in anticipation of authorisation from APHA.

Note: It may be appropriate for a Panel 1c designated OV to have an arrangement with a local PVS where stain and access to a microscope is available.

3.1.7 Cleansing and disinfection

Holding pens should not be cleaned and no other product or waste allowed to leave the site until authorised by APHA staff.

It is likely that APHA requires the FBO to carry out the cleansing and disinfection of any place associated with any animal notified as a suspect case pending the veterinary inquiry. If the results of the veterinary inquiry are positive or inconclusive, the FBO will be required to carry out a more thorough cleansing and disinfection procedure.

3.2 Investigation and diagnostic sampling

3.2.1 Anthrax bacilli suspected: initial investigation

Under no circumstances must the OV attempt to collect and examine samples for anthrax without having informed the VO and being authorised to do so.

If the OV is authorised under Panel 1c and facilities are available, the VO may request him or her to make the initial investigation.

3.2.2 TSE testing

If a bovine or ovine animal is found dead in the lairage or dead on arrival and the OV suspects anthrax, then the animal must be tested for anthrax before being subjected to TSE testing in eligible cattle or, in the case of adult sheep in selected slaughterhouses.

3.2.3 Suspect anthrax out of hours

If it is necessary for an examination for suspected anthrax to be carried out at a slaughterhouse outside normal OV hours of attendance, the VO will request an

APHA vet on Panel 1c to attend the establishment to conduct such an examination. If the OV is Panel 1c accredited, the VO may ask them to do this.

3.2.4 Anthrax suspected

If disease is suspected, the Veterinary Inspector will report this to the VO who will make arrangements for the submission of samples for testing.

3.2.5 Detention of suspect carcasses

Where anthrax is suspected, the carcass should be detained until the results are received.

If the FBO so wishes, they may dispose of the carcass as Category 2 ABP.

3.2.6 Anthrax ruled out

Where the Veterinary Inspector is satisfied that anthrax does not exist in the live animal, they will notify the VO and FBO by completing form AN2 (Certificate – Non-existence of Disease in a Carcass).

Reference: See annex 3 on 'AN2 – Certificate' for a sample.

If the animal has died and requires TSE testing, the procedure for testing fallen stock must be followed once the presence of anthrax has been ruled out.

If an owner requests an investigation into the cause of death, this is a private matter which must be arranged between the owner and private veterinary surgeon.

4. Bovine Brucellosis

4.1 Overview

4.2 Slaughter and sampling

4.1 Overview

4.1.1 Introduction

The UK achieved official brucellosis free status in 1985.

There are three measures in place to prevent the disease being re-introduced and subsequently spreading:

- post import testing of imported cattle
- compulsory reporting of all bovine abortions and premature calvings with investigation of all outside a specified low risk category
- quarterly testing of bulk milk samples from all dairy herds, including those of producer retailers

4.1.2 Responsibilities

APHA will inform the FSA about proposed slaughter of reactors. Collection and packaging of samples from brucellosis cases consigned for slaughter is the FSA responsibility, and will include:

- reactors and inconclusive reactors to the brucellosis tests, and
- contacts with confirmed cases

The despatch of the samples to the laboratory is the responsibility of APHA who will collect the samples from the slaughterhouse.

Note: The OV must report any abortions and premature births to APHA and follow any additional instructions. All FSA staff should be aware of the potential danger of infection primarily from the uterus and udder.

4.1.3 Movement licences

Cattle from restricted premises will be consigned directly to slaughterhouses accompanied by a BS112 (Licence authorising the movement of cattle on to or off premises under restriction or authorising the movement of specified cattle which are under restriction awaiting the completion of tests for brucellosis).

APHA will send a copy of the BS112 licence by fax, to the OV as advanced warning.

Reference: See annex 4 on 'BS112 – Licence' for a sample of the form.

In addition, where the owner has opted to slaughter the animal at their own expense (private slaughter) the animal will be accompanied by form BS15B. These are handed to the FBO on arrival.

Reference: See annex 5 on 'BS15B – Notice' for a sample of the form.

4.2 Slaughter and sampling

4.2.1 Slaughter procedure

The OV / MHI must collect the following samples from the carcass:

All animals
Paired lymph nodes <ul style="list-style-type: none">retropharyngeal (supra pharyngeal)supramammary (female) or superficial inguinal (male)internal iliac

In addition for bulls
<ul style="list-style-type: none">paired deep inguinal lymph nodespaired testicles, epididymes and seminal vesicles

4.2.2 Sampling packaging

Samples must be taken as cleanly as possible using sterilised knives, and placed in a labelled polythene bag (each pair of nodes or organs should be placed in a separate bag), which is then sealed.

All specimens from each animal sampled should then be placed together in a further single outer polythene bag and this bag then sealed and labelled.

Polythene bags should be self-sealable or tightly knotted and of sufficient strength to prevent leakage and potential cross-contamination.

4.2.3 Labelling

Label all sample bags with the ear tag number plus the details of any reactor tag.

4.2.4 Storage

All samples should be placed in a refrigerator (not freezer) until collected by APHA staff. FSA staff should inform APHA when the samples are ready for collection.

5. Enzootic Bovine Leukosis (EBL)

- 5.1 Introduction
- 5.2 Investigation of tumours in cattle carcasses or offal
- 5.3 Sampling of tumour carcasses
- 5.4 Packaging and despatch

5.1 Introduction

5.1.1 Enzootic Bovine Leukosis (EBL)

The OV must notify the APHA Duty VO of:

- any live animal affected with, or suspected of being affected with, EBL, and
- any carcase or offal showing certain tumourous changes

Detain any suspect live animal or any suspect carcase with its offal until the VO issues instructions. Retain the passport and Food Chain Information (FCI) until any investigations have been carried out.

5.1.2 Signs to report

The OV should report suspect cases in live animals or carcasses when there is evidence of tumours (other than papillomata or haemangiomata) or of swollen lymph nodes. Tumours in young animals normally arise from sporadic leukosis and not EBL; the latter being associated with tumours in animals aged three years or more.

Note: Swollen lymph glands identified in a live animal suffering from EBL will be painless.

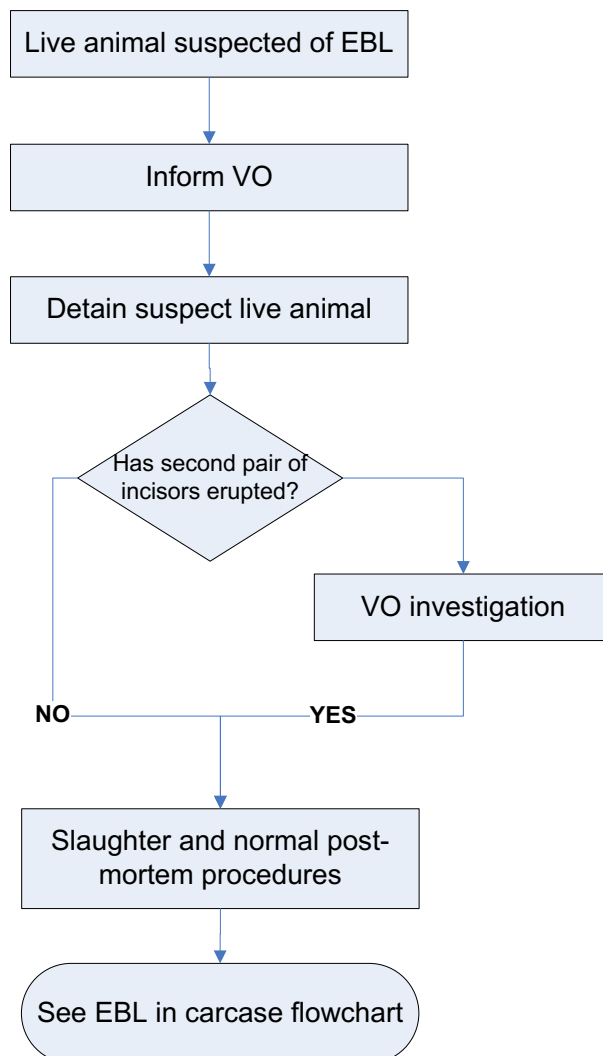
5.1.3 Documentation

Animals from establishments under movement restrictions because of EBL may be moved to slaughter under licence from APHA (Form EBL9).

Reference: See annex 6 on 'EBL9 – Licence' for a sample of the form.

Other animals licensed for slaughter from restricted establishments will not usually need to be inspected by a VO and the FSA should subject such carcasses and their offals to normal meat inspection procedures, paying particular attention for evidence of tumourous change.

Enzootic Bovine Leukosis (EBL): investigation of suspect live animal



5.1.4 Dentition check

Whenever suspect disease is reported in a live animal, the APHA Duty VO will ask whether either of the animal's second pair of permanent incisors has erupted – that is, whether there are more than two 'broad teeth'.

If the answer is no, then in most cases no further action will be required other than the provision of outline data (APHA is required to keep a record of such cases for reporting to the EU), and the animal can be slaughtered and subjected to normal post-mortem inspection procedures and judgement.

5.1.5 Three or more permanent incisors

If either of the second pair of permanent incisors has erupted (there are three or more 'broad teeth'), then APHA will instruct a VO to carry out an investigation, and the OV must ensure the animal is detained in the lairage pending this investigation.

5.1.6 After the investigation

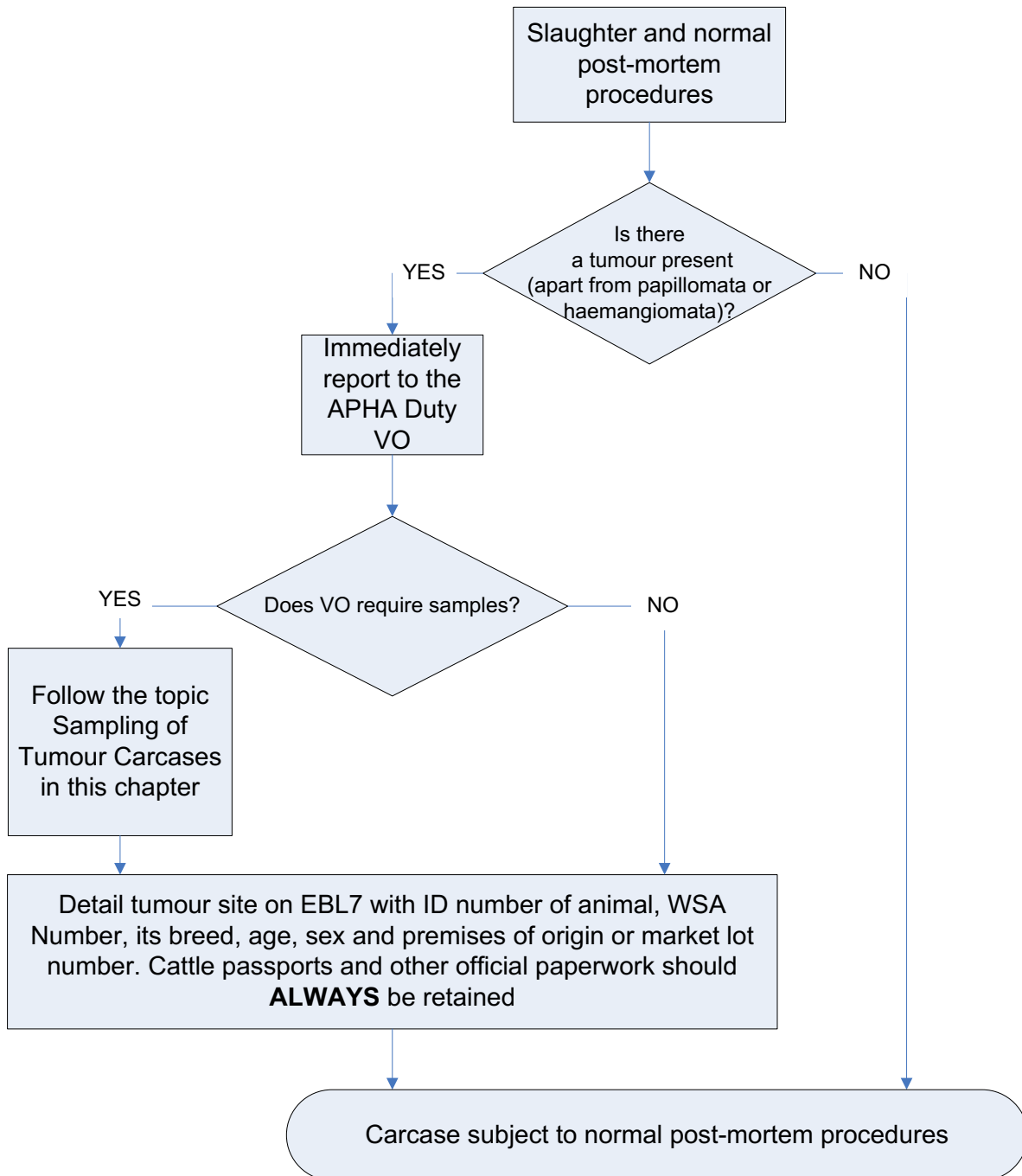
Following the completion of the VO investigation, the animal may be slaughtered and subjected to normal post-mortem inspection procedures and judgement.

Appropriate samples of tumourous swollen lymph nodes should be taken from the carcase or offals at the request of the VO, where EBL has not been ruled out.

The carcase and offal need not be detained pending the results of the tests on any collected samples.

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Enzootic Bovine Leukosis (EBL): process for sampling at post mortem inspection



5.2 Investigation of tumours in cattle carcasses or offal

5.2.1 Tumours in cattle

All cattle tumours seen at post-mortem inspection are notifiable, with the exception of papillomata or haemangiomas and should therefore be reported **IMMEDIATELY** to the APHA Duty VO, who will note the details of all cases and instruct when sampling by the FSA is to be carried out.

A large proportion of tumour notifications concern animals aged less than two years. Although collection of tumour specimens from cattle with fewer than three permanent incisors is not normally required, APHA retains discretion to require sampling or to instruct a VO to carry out an investigation.

5.2.2 Sampling of tumours

When asked to do so, the FSA is responsible for collecting the appropriate samples from carcasses and / or offal and retaining these along with details of the tumour site and the FCI. Cattle passports and FCI should always be retained by the FSA to assist APHA in the process of tracing.

The FSA will arrange for collection of the samples and complete all relevant details on the EBL7 submission form. The FSA will prepare, pack and send the samples along with the completed submission forms to the laboratory.

FSA staff must positively differentiate between lesions which are tumourous (EBL) and those which are tuberculosis (TB) as different sampling and diagnostic testing is required.

The FSA will sample a tumourous carcass and / or its offal, the following 2 sets of samples should be collected:

- tissue samples for Polymerase Chain Reaction Test (PCRT)
- tissue samples for histology

5.3 Sampling of tumour carcasses

5.3.1 Samples of PCRT

A PCRT has been developed to detect the presence of Bovine Leukosis Virus (BLV – the agent responsible for EBL infection) in cattle tissues and lymph nodes.

The PCRT requires fresh refrigerated samples.

5.3.2 Samples of histology

Samples for histological analysis are also needed as a back up should the fresh samples prove unsatisfactory for PCRT.

These samples should consist of a specimen from each of the grossly affected organs and representative enlarged lymph nodes.

5.3.3 Collection of samples

Follow the steps in the tables below to collect the samples.

Note: Remove samples within 24 hours of slaughter.

Sample for PCR test:

Step	Action
1	Use sterilised knives and gloves for each carcass
2	Take tissue sample from undisturbed part of tumour and from one accessible non-lesioned lymph node of 5-10g
3	Transfer sample to individual sterile 60 ml pot
4	Write 'PCR Test', ear tag number, WSA and organ tissue sampled on label and stick on pot
5	Store chilled until dispatch by courier

Sample for histology:

Step	Action
1	Take sample from affected organs and representative enlarged lymph nodes
2	Cut specimens about 1cm thick; a slice of organ should show both normal and diseased tissue
3	Lymph nodes should be transverse across the long axis of the node and should include the capsule
4	Transfer sample to individual sterile 60ml pot
5	Write 'Histo Test', ear tag number, case reference number and organ tissue sampled on label and stick on pot

6	Store chilled until dispatch by courier
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5.3.4 Post-mortem inspection

Once the required samples have been removed, the carcass may be subjected to normal post-mortem inspection procedures and judgement – it need not be detained pending the results of the tests for EBL.

5.3.5 Recording of post-mortem findings

Details of the tumour site should be recorded on the form EBL7, together with all available identification information. Complete only those parts of the form for which you have information; the remainder will be completed by APHA staff.

Reference: See annex 7 on 'EBL7 – Submission form' for a sample of the form.

5.3.6 Notifying FSA

The OV should notify the SLA and Contracts team by email of the following details of the sample:

- Plant number
- Plant name
- Date case found
- passport number of the sampled animal
- name of owner
- CPH number
- name of APHA office contacted
- date despatched via TopSpeed

5.4 Packaging and despatch

5.4.1 Packing

1. All samples must be submitted in a 60ml pot.

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- Outside of pot must be kept clean.
 - Remember to tighten lids. Give an extra turn before packing.
 - Avoid cross threading the lids as they will cause the pots to leak.
2. Place each individual pot in a plastic bag which is knotted tightly. Trim off excess bag.
 3. Place all bagged pots into a biobox / biobottle along with the absorbent pad / material and seal the box. The process for sending forms is as follows:
 - Signed original EBL7 forms must be placed in an envelope, this envelope should be marked 'Originals' and placed between the outer box and the biobox / biobottle. APHA laboratory staff will forward the original forms internally to the relevant APHA regional office
 - Copies of the EBL7 forms should be placed in a ziplock bag and taped to the outside of the biobottle / placed in biobox. Copies of these forms should be faxed or emailed to the relevant APHA office. The OV should retain a further copy in the plant files for future reference (retention period 12 months).
 4. Place biobottle into the outer box.
 5. Attach address label.
 6. Attach security seal
 7. Store the package in the chiller until the time of collection. Ideally place in a waterproof bag / container to avoid contamination.

5.4.2 Despatch

The current courier for the new sampling process is Topspeed Couriers. The courier process is as follows:

As soon as you receive the sampling request information from APHA, email: eb1@topspeedcouriers.co.uk with the following information:

- establishment name and approval number
- slaughter date of the samples (this information will allow Topspeed Couriers to plan the collections to include multiple pickups where possible)
- destination laboratory:

BLV – PCR Virology Department

APHA Weybridge
New Haw
Addlestone
Surrey
KT15 3NB

- name and telephone number for the FSA contact at the plant

On detection of a tumour that needs samples submitting, notify the courier that samples are required to be collected. The courier will organise a collection which meets the two working days delivery requirement (for example, a tumour found on Monday; samples are required to be with APHA by 5pm Wednesday. However, collection could take place on Monday, Tuesday or Wednesday, as the couriers are required to consolidate their delivery runs to be cost effective.)

5.4.3 Ordering consumables

The OV at each abattoir is responsible for ensuring that there are sufficient supplies of consumables for packing samples. It is important that only the specified packaging materials (such as pots and labels) are used as failure to do so may result in the sample being un-assayable at the lab.

The consumables must be ordered directly from APHA Weybridge by using the following procedure:

- Fill in the requisition form (annex 8a/b) specifying the type of materials required and the number of units.
- Make sure that you complete all the boxes (establishment name, address, FSA contact name and telephone number, and any others).
- The requisition form should be emailed to:
StoresStockOrders@apha.gsi.gov.uk or faxed to APHA Weybridge: 01932 357497.

APHA will endeavour to complete delivery of consumables orders within 7 working days of receipt. If you have any queries regarding an order that you have placed you should telephone the APHA stores in Weybridge on 01932 359451.

6. Transmissible spongiform encephalopathies (TSE)

- 6.1 TSE overview
- 6.2 Reporting suspicions
- 6.3 At visit: VO does not suspect TSE
- 6.4 At visit: VO suspects TSE

6.1 TSE overview

6.1.1 Introduction

This section outlines action to be taken when a TSE is suspected in an animal.

Instructions regarding sampling of animals when TSEs are not suspected can be found in the chapter 2.6 on 'Transmissible Spongiform Encephalopathy'.

6.1.2 Information about TSEs

Information about TSEs is carried on Defra's website:

<https://www.gov.uk/government/collections/notifiable-diseases-in-animals>

6.1.3 Reporting requirements

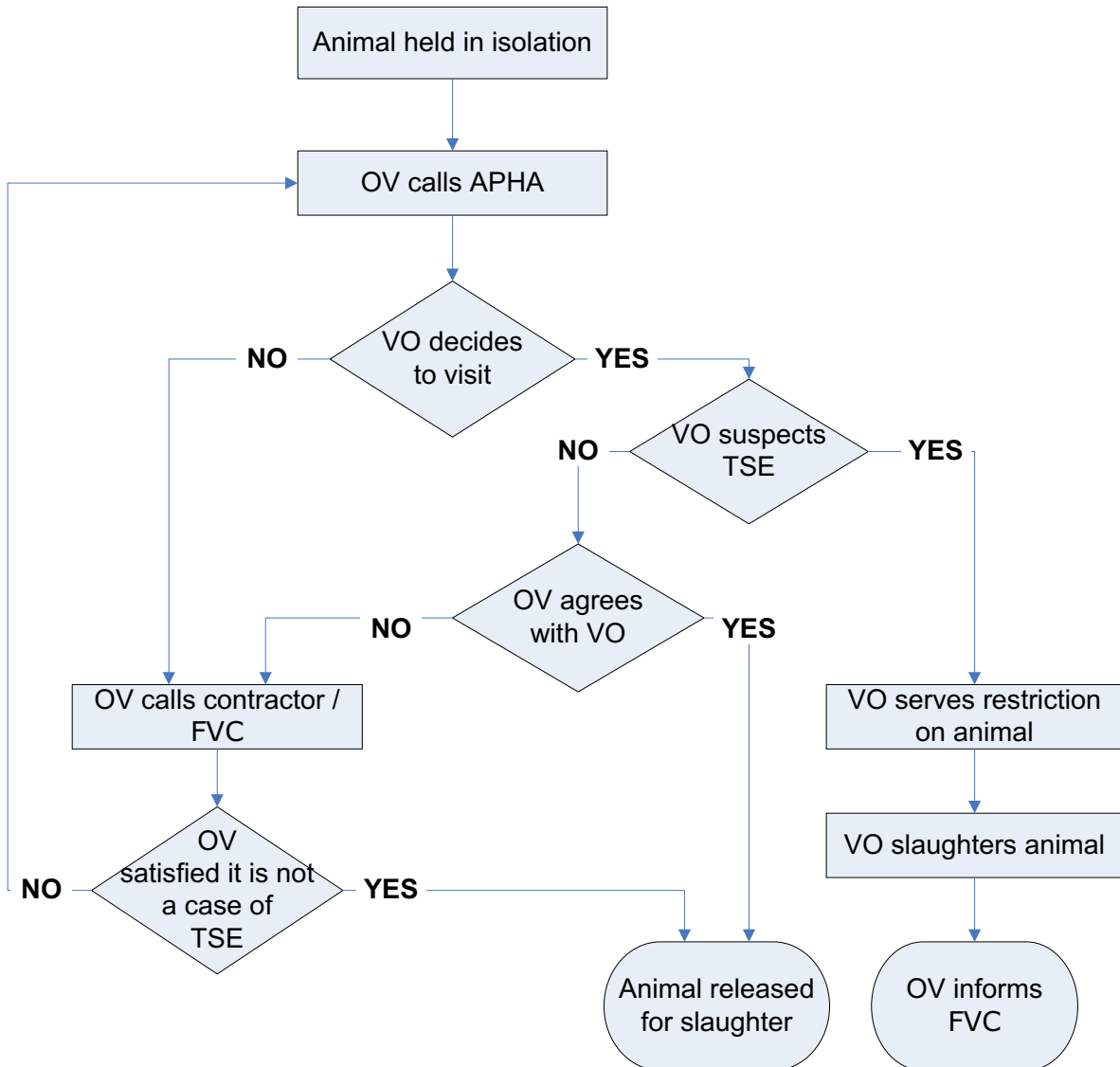
TSEs are notifiable diseases and their suspicion must be reported immediately to APHA.

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6.1.4 Records

For all reported cases, the OV should ensure accurate details are recorded in the daybook.

6.1.5 Procedure



6.2 Reporting suspicions

6.2.1 Suspect live animals

If FSA or plant staff suspect that live cattle, sheep, goats or deer are affected with BSE, Scrapie or other TSE, they must take action as detailed in this topic.

Caution: The OV, especially in the case of BSE, should be aware that an affected animal may, because of behavioural changes associated with the disease, be likely to cause injury to itself, other livestock or staff.

Step	Action
1	Suspect animal is held in isolation in the lairage. On no account should a suspect animal be allowed to enter the main slaughterhall unless and until the OV is satisfied that it should no longer be considered a suspect.
2	<p>The OV telephones the APHA Duty VO to notify the suspicion of a TSE.</p> <p>There are two possible outcomes to the telephone conversation:</p> <ol style="list-style-type: none"> 1. The VO agrees with the OV's suspicions and agrees to visit the slaughterhouse 2. The VO disagrees with the OV and does not agree to visit the slaughterhouse. <p>If 1 occurs then the OV should follow Option 1 below.</p> <p>If 2 occurs the OV should follow steps at Option 2 below.</p>

Option 1 The table below details the action to take if the VO agrees with the OV suspicions.

Step	Action
1	<p>The Duty VO makes arrangements for a VO to visit the slaughterhouse as soon as possible to carry out an investigation.</p> <p>Defra may request the following details:</p> <ul style="list-style-type: none"> • clinical description of the animal • ear tag identification of the animal • date of birth of the animal • details of origin
2	The OV obtains FCI before the VO arrives

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3	The FBO informs the owner of the animal
4	The VO examines the animal and determines whether it is clinically positive, negative or inconclusive for TSE

Option 2 The table below details the action to take if the VO does not agree with the OV's suspicions and does not agree to visit the slaughterhouse.

Step	Action
1	The OV must obtain further advice from their FVC
2	The OV should discuss the case and decide whether or not the animal is still a TSE suspect.
3	If after discussion the OV still suspects a TSE, they give formal notification to the Duty VO, and the Duty VO must then send a VO out to examine the animal.

6.3 At visit: VO does not suspect TSE

6.3.1 Suspect not confirmed by VO

There are two possible outcomes to the VOs visit and decision that the suspect is not suffering from TSE:

Outcome 1: the OV agrees with the VOs decision

Outcome 2: the OV does not agree with the VOs decision.

6.3.2 Outcome 1

If the VO considers that the suspect is not affected by BSE, Scrapie or other TSE, provided that the OV is in agreement with the VOs decision and an alternative diagnosis does not preclude it, the animal may be submitted for slaughter for human consumption.

Note: Certain bovine animals which are not considered to be BSE suspects require TSE testing.

6.3.3 Outcome 2

If the OV is not in agreement with the VOs conclusion, the OV should contact their FVC.

The OV should discuss the case and decide whether or not the animal should still be considered a TSE suspect. If after discussion the OV still suspects a TSE, they give formal notification to the VO.

6.4 At visit: VO suspects TSE

6.4.1 Restrictions on animals

If the VO considers the case to be clinically positive, they will serve restrictions on the animal. Once restricted, the FBO must not allow the animal to be slaughtered.

6.4.2 Slaughter and destruction

The VO will slaughter the animal by injection of barbiturate and arrange for the dead animal to be transported either to an incineration plant or a veterinary laboratory where the head will be sampled.

In the case of sheep or goats, if the suspect animal is considered fit to travel, the VO may make arrangements to transport it live under licence to the nearest available veterinary laboratory.

6.4.3 Restrictions on premises

No restrictions will be imposed on the slaughterhouse premises in the case of a TSE suspect, although the VO may give advice on cleaning and disinfection in clinically positive cases.

6.4.4 Informing the FVL

The OV should inform their FVL that a TSE suspect animal has been killed at or removed from an approved establishment by Defra staff.

7. Tuberculosis (TB)

- 7.1 Introduction
- 7.2 Slaughter
- 7.3 Reactor animals
- 7.4 Reactor animals: notifications and responsibilities
- 7.5 Reactor animals: inspection requirements
- 7.6 Reactor animals: actions when rejected at ante-mortem due to being dirty
- 7.7 Reactor animals: post-mortem decision
- 7.8 Reactor animals: sampling
- 7.9 Reactor tag sampling
- 7.10 The slaughterhouse case
- 7.11 The slaughterhouse case: additional detailed inspection
- 7.12 The slaughterhouse case: sampling
- 7.13 Packing and despatch of samples

7.1 Introduction

7.1.1 Introduction

Bovine tuberculosis (bTB) is an infectious and contagious disease of cattle and one of the biggest challenges for the cattle farming industry. It is caused by the bacterium *Mycobacterium bovis* (*M. bovis*), which can also infect and cause TB in many other mammals.

APHA is responsible for the control of TB in farms. The FSA, through a service level agreement, deals with sampling of tuberculin tested animals at APHA's request and suspect TB lesions identified at slaughterhouses.

If TB is suspected in the carcase of any bovine, deer or farmed mammal, APHA must be notified immediately.

Regulation: The Tuberculosis Orders in England and Wales (as amended).

Note: Health and safety procedures must be adhered to when handling suspect TB lesions. See FSA's Health and safety manual at:

<https://foodgov.sharepoint.com/hr/Pages/Health-and-Safety-Manual.aspx>

7.1.2 Definitions

TB reactor plants are red meat slaughterhouses where animals that have undergone a tuberculin test are sent for slaughter. Slaughterhouses access this status through a contract with APHA.

Depending on the result of the tuberculin test, animals can be classed as reactors (R), inconclusive reactors (IR) and direct contacts (DCs). These animals can be compulsorily (R and DC) or voluntarily (IR) slaughtered.

Restricted premises are those farms where APHA has established cattle movement restrictions.

A full list of the movement licences for these animals and the relevant TB forms is given in the Annex list.

7.1.3 Timesheet coding

All work undertaken by the FSA on behalf of APHA (such as additional inspection requirements, Reactor tag checking, collection and submission of samples and record keeping) must be coded to GNTB.

7.1.4 Scope of the instructions

This section details instructions to FSA staff for dealing with reactors and other cattle from restricted premises, including:

- forms accompanying animals from restricted premises
- inspection of R, IRs and DCs
- death of R/IRs/DCs before reaching the slaughterhouse
- collection and submission of samples
- form completion
- carcasses and offal from cattle with suspicious lesions encountered in the course of normal production, also known as 'The Slaughterhouse Case'
- carcasses and offal from other species with suspicious TB lesions

The instructions apply to:

- R and DCs compulsorily slaughtered by APHA
- IRs voluntarily slaughtered but for which APHA require samples, that is stock accompanied by a TB24 and where advance warning has been given by APHA by means of entering information on TB110 (reactor abattoirs) or via SLA and Contract team (elsewhere), whether alive or dead
- cattle and any other mammals that have been slaughtered in the course of normal production, where lesions consistent with TB are found during post-mortem inspection, also known as slaughterhouse cases.

They do not apply to other cattle from TB restricted herds.

Note: The OV must be aware that animals with clinical tuberculosis must not be slaughtered for human consumption.

Regulation: (EC) 854/2004 Annex I, Section II, Chapter III, 4.

7.2 Slaughter

7.2.1 Where or when to slaughter

Where animals have reacted positively or inconclusively to the tuberculin test, or there are other grounds for suspecting infection, they are to be slaughtered separately, taking precautions to avoid the risk of contamination of other carcasses, the slaughter line and staff present in the slaughterhouse.

This applies to:

- cattle that require a TB24 movement licence and have been entered on a TB110 by APHA
- cattle that have a TB24 marked 'Inconclusive Reactor'
- deer that require a TB24a movement licence and APHA has advised of intended slaughter by means of a TB55a form
- sheep or other mammals that were tuberculin tested

It does not apply to animals moved under any other licences, or with a TB24 where the animal is not included on a TB110.

To reduce cross-contamination, the slaughter line must be cleansed and disinfected after processing reactor cattle, IRs and DCs. All such cattle should either be slaughtered:

- last in the day, before full cleaning and disinfection of the slaughter line
- at any other time provided that the slaughter line is cleaned and disinfected before the slaughter of non-suspect animals resumes
- in a separate slaughterhall used for diseased animals or those suspected of being diseased

Reference: Regulation (EC) 854/2004, Annex I, Section IV, Chapter IX, E1.

Any species with TB suspect lesions found during the course of post mortem inspection, particularly where there are no suitable facilities for detailed inspection and sampling in the dressing line, should immediately be placed in the detained area.

7.2.2 Transfer of carcasses and offal to the detained facilities

When transferring offal / carcasses to a detained area for further inspection or sampling, care must be taken to prevent cross-contamination of other meat / equipment / fittings in the slaughterhall. In the event of suspected contamination, cleansing and disinfection of the affected area / equipment must take place before production recommences.

Note: Failure by the plant operator to co-operate with this procedure would constitute a contravention of the operator's responsibility to prevent cross-contamination and must be dealt with accordingly.

Regulation: (EC) 854/2004 Annex I, Section IV, Chapter IX, E.

7.3 Reactor animals

7.3.1 Types of animals

The table below shows the animals that may be despatched from TB-restricted premises.

Consigned to slaughter	By	Examples
Compulsorily	APHA	Test reactors, DCs
Voluntarily	Herd owner	Fat stock, surplus calves, culled cows, and reactors / IRs which the herd owner chooses to slaughter

7.3.2 Forms

In addition to the official identification documents and the Food Chain Information, animals from TB-restricted establishments may also be accompanied by one or more of the following forms:

- Emergency Slaughter Certificate
- TB24, TB24b, TB24g, TB16b, TB24a, TB55a
- electronic notification by APHA via a TB110 sent to the OV by noon the day before the kill

Reference: See annexes 9 to 14 for sample movement licences and FCI forms.

7.3.3 Food chain information

All animals sent for slaughter must be provided with Food chain information (FCI).

Since some TB restricted animals are compulsorily slaughtered, the OV should verify that withdrawal periods have been observed for veterinary medicines and other treatments administered to the animals, this includes substances used for diagnosis purposes such as tuberculin.

Keepers submitting cattle from a farm with movement restrictions due to tuberculosis must declare this as part of the FCI. APHA requires **all** cattle moving for slaughter from TB-restricted herds to be marked with an orange stripe along the back. This is irrespective of test results so applies to animals moving under general licence as well as with movement licences.

The OV must be present on site during the processing of animals from a TB restricted farm.

Reference: 854/2004, Annex I, Section III, Chapter II, 3(b)

7.3.4 TB110 electronic TB sampling and submission form

APHA will submit electronically a TB110 form providing details of the reactor and DC cattle sent for compulsory slaughter and the sampling code that applies to each herd. This code determines the level of sampling that is required.

Note: These animals will only be sent to selected slaughterhouses contracted by APHA for processing TB suspect cattle. Contact the SLA and Contract Team for the current list of those slaughterhouses and the associated APHA TB diagnostic laboratory.

A number of IRs may be voluntarily slaughtered by the owner. The owner can choose any abattoir to slaughter them, but similar arrangements to those above apply.

APHA will e-mail a TB110 to the OV and other agreed FSA officers by noon the day before the kill date.

The TB110 must be completed after post-mortem inspection, recording the findings. The process for sending the forms is as follows:

- signed hard copy TB110 must be placed in an envelope, this envelope should be marked 'Originals' and placed between the outer box and the biobox / biobottle; APHA laboratory staff will forward the signed hard copies internally to the relevant APHA regional office
- copies of the form should be placed in a ziplock bag and taped to the outside of the biobottle / placed in biobox; a copy of the forms should be faxed or emailed to the relevant APHA office; the OV should retain a further copy in the plant files for future reference (retention period 12 months)

Reference: See Annex 15 on 'Sample: TB110 Reactor Sampling and submission form' for a sample of the form.

7.3.5 TB55a movement licences

Form TB55a is the proposal to slaughter deer. It will inform the OV of the arrival of deer from a restricted TB premises.

A copy of the TB55a will be sent by fax to the OV in advance.

Reference: See Annex 19 on 'Sample: TB55a' for a sample copy of the form.

Regulation: See The Tuberculosis (Deer) Order 1989 (as amended).

Note: Reactor deer moved for slaughter under movement licence must have a broad arrow 15 cm long clipped on the left hind quarter.

7.3.6 TB24 movement licences

Form TB24 is a movement licence issued by APHA authorising transport of cattle (reactors, IRs, DCs and any cattle from TB restricted herds that have not been tested for TB) to a slaughterhouse. It must accompany animals during transport. Most animals accompanied by a TB24 need to be slaughtered separately, and if they appear on the TB110, inspected in detail.

Some cattle that are not reactors or DCs may travel to slaughter under a TB24. These cattle do not in principle have a higher risk of infection with tuberculosis than other cattle from restricted herds. These may be cattle that have not been tested for TB and animals that have had an inconclusive response to the skin test.

Since the EC regulations require that animals that have reacted inconclusively to the tuberculin are to be slaughtered separately, APHA will mark the TB24 of these animals with the words 'Inconclusive Reactor'.

When animals that should have arrived with a TB24 are found not to have one, this should be reported to APHA and the relevant Trading Standards department.

Reference: See topic 7.2.1 on 'Where or when to slaughter' onwards in section 7.

Reference: See annex 9 on 'Sample: TB24'.

7.3.7 TB24a movement licences

Form 24a is a licence issued by APHA authorising movement of deer to a slaughterhouse. It must be given to the FSA representative on arrival to the slaughterhouse.

A copy of the TB24a will be sent by fax to the OV in advance.

Note: For welfare reasons the deer should be slaughtered within 3 hours of arrival at the slaughterhouse and shall not be removed from there alive.

Reference: See annex 18 on 'Sample: TB24a' for a sample copy of the form.

7.3.8 TB24b/g movement licences

Form TB24b is a movement licence issued by APHA authorising transport of cattle, listed by ear tag, from TB restricted herds to a slaughterhouse via an approved collection centre / slaughter market.

Form TB24g is a licence authorising movement of cattle from approved finishing units under restrictions to a licensed slaughterhouse.

Animals eligible for a TB24b/g are not considered reactors, IRs or DCs. They need only be subject to normal inspection procedures.

Reference: See annex 12 on 'TB24b' for a sample copy of the form and annex 13 on 'Sample TB24g' for a sample copy of the form.

7.3.9 TB24c movement licences

Most clear testing cattle and calves under 8 weeks of age travelling direct to slaughter from holdings under TB restrictions, no longer require a specific TB24/TB24b licence. These animals can be consigned to slaughter by their

owners under the terms of a general movement licence (TB24c), issued by the APHA at the time the herd is placed under restrictions.

Herd owners who are granted a general TB24c licence will not be required to forward a copy to the slaughterhouse, nor will it be necessary for a copy of the general TB24c licence to travel with the animals.

These animals, as with all cattle from a TB restricted herd, should be identified by means of an orange stripe along the back and FCI should indicate the herd is under restriction, but they will be subject to the normal inspection procedures.

General TB24c licences will automatically expire on lifting of TB restrictions. APHA retains the power to rescind a general movement licence at any time.

Reference: See annex 10 on 'Sample: TB24c' for a sample copy of the form.

7.3.10 Exclusions from general licence (TB24c)

Reactors, IRs, DCs and any untested cattle aged 8 weeks or more are explicitly excluded from the general licence and will continue to be licensed to slaughter by APHA, under a specific TB24 travelling with the animal.

Animals may arrive at the slaughterhouse accompanied by TB24s prior to the OV receiving notification from APHA. In these circumstances, FSA staff should inform APHA of the arrival of such animals and wait for instructions.

7.3.11 TB16b movement licence

TB16b movement licences are issued to authorise movement of ear tag listed cattle from restricted premises to Approved Finishing Units, Approved Quarantine Unit or to a slaughterhouse through a Dedicated Sale for TB Restricted Cattle. These animals have passed a tuberculin test in the 90 days before movement and are not reactors, IR or DC. The licences should accompany the animals to the abattoir but, as with animals moved under a TB24b/g, they need only be subject to normal post-mortem inspection procedures.

Reference: see annex 11 on 'Sample: TB16b' for a sample copy of the form.

7.3.12 FSA copy of licences

The person transporting the animals, on arrival at the slaughterhouse, must give a copy of the TB24, TB24b, the TB24g, TB16b, TB24a or the TB55a licences to the FSA representative.

The table below shows which forms, licences and certificates accompany which animals to the slaughterhouse.

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Form / licence	Reactors	DCs	IRs	Cattle not tested for TB	Clear-testing cattle and calves under 8 weeks	On-farm slaughter
FCI	✓	✓	✓	✓	✓	✓
TB110	✓	✓	✓			✓
TB24	✓	✓	✓	✓	may happen	
TB24b					✓	
TB24c					✓	
TB24g				✓	✓	
TB16b					✓	
TB24a (deer)	✓	✓	✓			
TB55a (deer only)	✓					

7.3.13 Irregularities

APHA will contact the OV if, after submission of the TB110, there is any change to the number of cattle sent for slaughter or to the sampling code.

Note: in some cases fewer cattle may be delivered than expected, but never more than pre-arranged.

If the OV believes that animals from a TB restricted establishment have been presented for slaughter without all the necessary documentation, they should inform APHA and the LA.

APHA should also be contacted if, due to missing paperwork, conflicting information, or any other circumstances, the OV is not sure if an animal from a TB restricted establishment requires detailed post-mortem examination and sampling.

7.4 Reactor animals: notification and responsibilities

7.4.1 Overview of responsibilities

Type	Responsibility	Duty
Reactors, IRs and DCs	APHA	<ul style="list-style-type: none"> • Inform FBO and FSA in advance of the date and number of animals delivered for slaughter. • Electronic submission of spreadsheet for each batch of animals for recording of post-mortem findings (TB110) • Allocation and communication of sample code that applies to each batch. • Issue licences (TB24, TB24a). <p>Provide Work Schedule Activity (WSA) and reactor tagging information.</p>
	FSA	<ul style="list-style-type: none"> • Detailed inspection of carcass and offal from reactors. • Collection of tissue samples as determined by the batch sampling code ensuring traceability during the inspection and sampling process. • Packing and despatch of all samples to the assigned APHA TB diagnostic laboratory. • Completion of electronic documentation, including the details of lesions in a way that facilitates tracing them back to the herd of origin and sign paperwork accompanying the samples to the lab. <p>Order of consumables (such as labels, pots and bags)</p>

7.5 Reactor animals: inspection requirements

7.5.1 Additional detailed inspection

A detailed inspection must be carried out on animals included in the following categories:

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- Reactor or direct contact cattle compulsorily purchased and slaughtered by APHA at contracted slaughterhouses. (These animals must arrive at the slaughterhouse with FCI advising they originate from a restricted herd, a movement licence (TB24), and be listed on the TB110.)
- Reactors or IR cattle voluntarily slaughtered for which APHA require samples (these will be accompanied by the same documents as above but they may be sent to any slaughterhouse). When samples are required for animals in this category, APHA will inform the SLA and Contract team, who will in turn forward the information to the FSA staff at the selected slaughterhouse.
- Deer compulsorily purchased and slaughtered by APHA.

In the case of reactor animals the following lymph nodes (LN) and organs must be examined in detail (visual inspection, palpation and incision) if they have not been examined already:

Routine inspection	Additional requirements
Retropharyngeal LN*	Prescapular LN
Parotid LN	Superficial inguinal LN
Submandibular/Submaxillary LN	
Bronchial* and Mediastinal* LN	
Lungs*	
Pleura	
Hepatic LN	
Liver	
Mesenteric LN (representative sample)	
Supramammary LN	
Udder**	

* Tissues where tuberculosis lesions are most commonly found

** See subtopic below

Note: Additional examinations of any other lymph nodes, such as those enlarged and / or haemorrhagic, may take place whenever considered necessary.

Regulation: (EC) 854/2004, Annex I, Section I, Chapter II, D, 2 (b)(i).

7.5.2 Udder inspection

The inspection of udders from reactor cattle is particularly important as they are not routinely incised unless they are for human consumption. In addition to the visual inspection and incision of the supra-mammary lymph nodes, the udder of cows must be visually inspected and palpated. If abnormalities are found during these, or when the udder is intended for human consumption, then deep incisions must be done into each quarter of the udder as far as the lactiferous sinuses.

Regulation: (EC) 854/2004, Annex I, Section IV, Chapter I, B 11.

7.5.3 Incision method

Cuts into the lymph nodes should be made across the node in at least two directions (criss-cross pattern) to reveal as much as possible of the core of the node. Care should be taken to examine the tips of the node. This method will reveal most TB lesions or reveal an area which appears abnormal which can be further incised.

Lesions in the lungs, liver and udder are most commonly found on inspection or palpation. Where abnormalities are felt on palpation the abnormal areas should be incised for further investigation. Careful small incisions at the border of the lesions should be made to reduce exposure to infective material. If the lesion is found to be typical of TB, no further incision is required into that lesion.

7.5.4 Hygiene precautions

Any equipment used to incise or examine the lymph nodes must be cleansed and sterilised before undertaking post-mortem procedures on subsequent carcasses.

7.6 Reactor animals: actions when rejected at ante-mortem due to being dirty

Whenever a TB Reactor animal is rejected at ante-mortem inspection because it was dirty and it could not be processed hygienically, the OV must inform APHA by reporting through the 'LA notification form: welfare breaches' found in Chapter 2.3 on Animal Welfare, Annex 4, as an animal welfare concern, including a picture(s) of the rejected animal(s) and its ear tag.

The LA notification form is to be submitted to the CSC one health welfare mailbox CSCOneHealthWelfare@apha.gsi.gov.uk like other animal welfare referrals.

The OV will also complete the relevant details of this event in the comments box of the TB110 form, describing the reason why the animal was rejected, for example: when presented for slaughter the animal was not clean and it could not be processed hygienically, adding details of the nature of the contamination.

7.7 Reactor animals: post-mortem decision

7.7.1 Judgement of meat

Decision on whether meat is fit for human consumption is based on the findings during post-mortem inspection.

Where there are indications of generalised TB or TB lesions with emaciation the entire carcass and all the blood and offal should be rejected as unfit for human consumption.

All meat from animals in which post-mortem inspection has revealed localised tuberculosis in a number of organs or a number of areas of the carcass are to be declared unfit for human consumption. However, when a TB lesion has been found in the lymph nodes of only one organ or part of the carcass, only the affected organ or part of the carcass and the associated lymph nodes need to be declared unfit for human consumption.

Regulation: (EC) 854/2004, Annex I, Section IV, Chapter IX, E.

7.8 Reactor animals: sampling

7.8.1 Relevant animals

In general, the collection of diagnostic samples by the FSA is limited to reactors, DCs compulsorily slaughtered and some reactors or IRs which have been voluntarily slaughtered (cattle entered on a TB110 as requiring detailed post-mortem inspection).

In the rare but possible occurrence when reactors arrive to a non-contracted plant (considering that farmers do have the option of refusing valuation and private

slaughter), APHA will issue a TB110 and advice on the sampling protocol. These animals cannot be considered / treated as slaughterhouse cases.

7.8.2 Responsibility for collecting samples

APHA, before sending animals to the abattoir, will provide the OV with the details of likely numbers and sampling protocol 48 hours in advance and will then submit electronically to the OV a copy of the TB110 (see annex 15) by noon the day before the kill date. The form will include:

- the number of animals to be sent from each holding
- the reason for submission (reactor, IR, DC)
- the sampling code for each batch

Once the required samples have been collected the carcasses and offal can be released if they have been found fit for human consumption.

7.8.3 Death of reactors / DC / IR on arrival or in lairage

In the event of a Reactor being found dead on arrival (DOA), or dead in the lairage (DIL), the OV must contact APHA and explain the circumstances. APHA will inform the OV if any diagnostic samples for TB are to be collected.

Reference: The OV must be aware of the requirement to test for TSEs in over 48/over 24 month DOA or DIL bovines as per instructions in chapter 2.6 on 'TSE Testing' and also consider the possibility of anthrax.

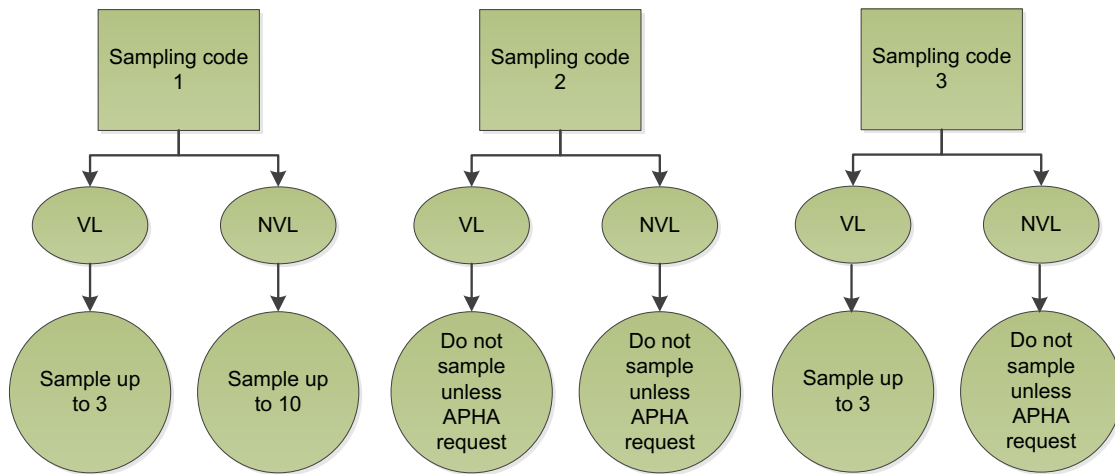
7.8.4 Sampling codes

APHA will request a sampling protocol for suspect animals from each farm using two sampling codes (SC1, SC2 and SC3). The sampling codes are allocated by APHA depending on the herd history and its current status. In addition, APHA will indicate whether additional or exceptional sampling is required.

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Sampling code 1		Sampling code 2		Sampling code 3
Visible lesions (VL)	No visible lesions (NVL)	Visible lesions (VL)	No visible lesions (NVL)	Visible lesions (VL)
Collect samples from maximum of 3 VL animals per herd. No NVL samples required	Submit samples from 10 animals per herd (or from all if less than 10 animals) *	Do not collect samples unless APHA request	Do not collect samples unless APHA request	Collect samples from maximum of 3 VL animals per herd

***APHA will indicate which 10 need to be sampled where all are NVL and more than 10 cattle are submitted from each farm**



7.8.5 Sampling code 1: typical lesions identified (VL)

All lesions typical of TB should be collected when required (sampling code 1 or sampling code 2 with specific request from APHA).

A **typical lesion** is where infection with *M bovis* is suspected and common colours (cream / yellow) and common consistency (caseous / calcified / purulent) are identified.

APHA has defined a **visible lesion (VL)** as a lesion that is visible to the naked eye **and** typical of infection with *M bovis*.

Lesions due to skin TB should not be collected and will not be classed as VL.

All the lesions from each carcass should be pooled and placed in a single sealed 60 ml plastic pot to give one submission per animal. The samples should be two-thirds of the pot and should include the lesion plus some normal tissue from the border of the lesion, where possible. However, this may result in a large amount of tissue if a carcass presents multiple TB lesions. In this situation, sample only the two most characteristic lesions; however, if the lesion in its entirety does not fill two-thirds of the pot, please include comments to that effect in the relevant comments box of the form.

Note: Unaffected lymph nodes must never be submitted when typical TB lesions have already been found in the same carcass.

7.8.6 Sampling code 1: typical lesions not identified (NVL)

Non-visible lesions are those where no lesions typical of infection with *M bovis* are visible to the naked eye.

While this is not part of the APHA definition of NVL, for practical purposes this includes both where no lesions are found and where there are lesions that can be seen but infection with *M bovis* has been ruled out.

Where no lesions are found it is necessary to collect samples from all the following lymph nodes:

- all bronchial and mediastinal lymph nodes
- paired retropharyngeal lymph nodes
- any other lymph node if enlarged, abnormal and / or haemorrhagic

7.8.7 Sampling code 1: atypical lesions identified

An atypical lesion is a lesion where infection cannot be definitely attributed to *M bovis* and where common colours (cream / yellow) or common consistency (caseous / calcified / purulent) are not identified, but where infection with *M bovis* cannot be ruled out.

Please note that an atypical lesion is neither a VL nor NVL for reporting purposes.

If both typical and atypical lesions are found on the same carcass, submit samples from the typical lesion only. The only exception to this is when suspect udder/supra-mammary lesions are found; these should be submitted in addition to the typical lesion and in a separate pot (one per holding).

Where only atypical lesions are found, sample a pool of lymph nodes and record as NVL but also collect and send the atypical lesion in a separate pot. Ask for urgent histology and laboratory fast track of this sample.

This should only be used where a decision cannot be made and the possibility of infection with TB cannot be ruled out.

7.8.8 Sampling code 2

Where APHA has allocated a sampling code 2 to a batch of animals there is no need to collect any samples, with only two exceptions:

- APHA may specifically request samples in certain cases.
- Where atypical lesions are found and there are no typical lesions in any animal from the same herd, sample the atypical lesion only and send for urgent histology / culture, making remarks to that effect on the 'specific information' section of the TB110.

7.8.9 Method

Each animal from which samples are needed must be individually sampled. Samples from more than one animal must **never** be pooled in the same pot. Care must be taken to prevent cross-contamination.

The following method should be used to collect samples for TB diagnosis.

Stage	Description
1	Collect samples cleanly to limit contamination. Ensure the equipment used for inspection and sampling of carcasses is disinfected between carcasses to prevent the possibility of cross-contamination.
2	Dissect samples free of surrounding tissues to limit the volume of tissue submitted. Samples should be as fat and muscle free as possible.

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3	Where the carcass had visible lesions (VL) or non-visible lesions (NVL) samples are to be treated as follows:	
	VL	NVL
	Remove suspicious node or lesion in its entirety if small or a sample the size of 2/3 of a pot if large and pool up to two of the lesions from the same area of the carcass in a pot. If the lesion in its entirety does not fill 2/3 of the pot please include comments to that effect in the relevant comments box of the form.	Pool lymph nodes collected from the same carcass and place in a pot. The 60ml pot should be 2/3 full. If there are any atypical lesions, collect separately from pool.

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Stage	Description
4a	Mesenteric chain lymph nodes should only be collected when no other lesions are present. They must not be included in the pooled sample and must be collected separately from other lymph nodes from the same carcase. This is to minimise contamination of the pooled sample with bacteria that could inhibit the growth of <i>M. bovis</i> in the laboratory.
4b	Suspicious lesions in the supramammary nodes should always be submitted from any carcase (max. 1 per CPH). As for mesenteric nodes they should not be included in any pool of samples they need to be submitted in a separate pot.
5	The OV must be present in the slaughterhall during the post-mortem inspection to ensure that the correlation is maintained and that findings are accurately recorded for each carcase. The OV must also ensure that the samples are secured prior to despatch.
6	<p>APHA requires complete and accurate records of all findings from each animal, including those from which no samples have been taken, in the electronic form (TB110). This information will be used in deciding the future management of the herd. The completed form must be e-mailed to APHA (at the email address from which the TB110 originated) before despatch of samples (by 3pm if samples sent to the lab on the same day, or by noon next day when the samples are despatched the following day). If samples are collected, the TB110 must also be emailed to the APHA laboratory: (TBDiagnosticTeam@apha.gsi.gov.uk).</p> <p>A hard copy of the TB110 must be signed by the OV and should be faxed without delay to the relevant APHA office. The signed hard copy must be placed in an envelope, this envelope should be marked 'Originals' and placed between the outer box and the biobox / biobottle. APHA laboratory staff will forward the signed hard copies internally to the relevant APHA regional office.</p> <p>A copy of the form should be placed in a ziplock bag and taped to the outside of the biobottle / placed in biobox. The OV should retain a further copy in the plant files for future reference.</p>
7	Each sample pot must have a unique traceability label stuck on the outside of the pot. The outside of the pot must be kept clean and the lids must be tightly closed to prevent leakage. In the event of the pot getting wet, it must be dried to ensure that the traceability label can be affixed when the sample is placed inside the pot. To maintain traceability, pots must be labelled before being moved from the slaughterhall. Each pot must then be placed inside a bag which is knotted tightly and excess bag trimmed off.

Stage	Description
8	If more than one pot is submitted for a single animal (pool in one pot and atypical lesion in a separate pot) place all the individual sample pots, each in its own bag.
9	All bagged pots must then be placed in a biobox or biobottle (depending on number of pots) which is sealed. A copy of the completed forms must then be placed in a ziplock bag which is taped to the outside of the biobox.
10	Further packaging (box/bag) is then applied in line with courier instructions (see topic 7.12 on 'Packing and despatch of samples').
11	Retain chilled, pending their collection by a courier for transfer to the APHA laboratory. They must not be frozen unless instructed to do so by APHA. If frozen the sample and the packaging must be marked: 'frozen sample'.

7.8.10 Sampling code 3

Where APHA has allocated a sampling code 3 to a batch of animals, only VL samples need to be taken up to a maximum of 3 animals per specific holding.

Check the 'specific information' column of the TB 110 form because in some cases only 1 or 2 samples per holding may be required by APHA.

Please ensure that at least 2/3 of the pot is full when collecting the sample.

NVL lesions do not need to be submitted with this sampling code.

7.8.11 Completion of sampling and submission from (TB110)

The TB110 has two parts.

- The first will be completed by APHA with details of the holding, CPH number, ear tags, any other relevant information and the sampling code that applies to each batch.
- The second part must be completed by the FSA and be signed by the OV. The findings in each carcass, including those for which samples are not required, must be recorded using codes to identify the lymph nodes/tissues and the description of the lesions where applicable (see below).

Where lesions are found in the lungs and / or udder suggestive of possible discharge of bacilli to the exterior (open tuberculosis) this has epidemiological importance and should be recorded in the comments box of the TB110.

The form must be sent electronically on completion to the originating email address and a hard copy, signed by the OV, must also be faxed and posted.

The TB110 must also be sent electronically to the APHA laboratory (TBDiagnosticTeam@apha.gsi.gov.uk) and a signed hard copy must accompany the samples.

7.8.12 Completion of TB 50

The TB50 form is used to record post-mortem findings on suspect TB carcasses in all species (see section 7.9 on 'The slaughterhouse case').

Note: There is no need to complete TB50 forms for reactors slaughtered at APHA contracted abattoirs as the post-mortem findings are collated on the TB110.

Reference: See annex 16 on 'Sample: TB50' for a copy of the form.

7.8.13 Codes used to complete the TB forms

Codes used to complete the TB forms will be used to describe the lesions, with six criteria used: location, number, size, colour, consistency/texture and presentation.

1. **Location:** Retropharyngeal (RP); Parotid (PA); Submandibular / Submaxillary (SM); Bronchial and Mediastinal (BM); Lungs (Lu); Pleura (PI); Hepatic (HEP); Liver (Li); Prescapular (PSc); Superficial Inguinal (SI); Mesenteric (MES); Supramammary (SMA); Udder (U); Other (O)
2. **Number:**
 - Single (S) – a distinct single lesion in the lymph node / organ
 - Multiple (M) – up to 6 distinct lesions in the lymph node / organ
 - Diffuse (D) – multiple lesions throughout the lymph node / organ that may or may not coalesce
3. **Size:** <2mm – (1); 2-10mm – (2); 11-50mm-(3); >50mm- (4)
4. **Colour:** Cream (C); Yellow (Y); White (W); Other (O)

5. **Consistency / texture:** Caseous (Ca); Calcified (Cf); Purulent (P); Granulomatous (Gr); Mixed [Ca and CF] or [Ca and P] (Mx)
6. **Presentation:** Typical (T); Atypical (A)

For atypical lesions if the description cannot be provided from the above options a description can be entered in the comments box.

Reference: a template for recording findings on the line during post-mortem inspection is available at annex 17 on 'Description of lesion template'.

Note: For packing and despatch of samples, please see topic 7.12 on 'Packing and despatch of samples' later in this section.

7.9 Reactor tag sampling

7.9.1 Overview

The aim of this programme is to compare the ears collected from TB reactors in order to audit fraudulent procedures in relation to reactor removal. This will be audited by cross matching 2 tissue samples:

- tissue collected in the DNA capsule when tagging TB reactors at the time of the TB test
- tissue taken from the ear of TB reactors at the point of slaughter

The Reactor Ear testing programme will comprise of 3 elements:

- targeted collection where FSA have identified at point of slaughter possible tampering with tags, either official or reactor tags, or missing reactor tags
- targeted collection where APHA identify a risk and request FSA to collect both whole ears (which do not have to be connected), from specifically identified animals
- random collection of the required number of ears selected by FSA at each slaughterhouse on a monthly basis

7.9.2 Notification to slaughter house / FSA of reactor details

Animals submitted for slaughter for TB control will either be R or DCs and will be sent for slaughter in one of the following ways:

- submitted as part of haulage and salvage to one of the slaughterhouses contracted by APHA to process TB reactors
- private slaughter organised by the owner but moved under licence issued by APHA

DCs will not have reactor tags and are excluded from this programme, however any other suspicion of fraud should be investigated as described in the MOC.

Most TB reactors will have a reactor tag applied. However, there are a few exceptions to that rule where reactors may not be tagged and are considered ineligible categories:

- reactors identified following re-interpretation (standard to severe) after PM/culture results
- animals have not been tagged at Tuberculin Test 2 (animal reading) for operational reasons
- gamma positive reactors

The assumption is therefore that apart from those ineligible for this programme all reactors disclosed at a skin test and entering the slaughterhouse will be marked with a reactor tag. In the comments box of the TB110, the following reasons will be given to indicate that an animal will not have a reactor tag and is ineligible:

- ‘tag not applied’ where APHA are aware that an animal has not been tagged for any reason
- ‘re-interpretation’ where an animal became a reactor after the skin test due to re-interpretation of the skin measurements
- ‘gamma’ where an animal has failed the gamma interferon test

7.9.3 Action when animal arrives at slaughterhouse

Apart from those specifically requested by APHA, the level of reactor animal identity checking by FSA should be as per existing instructions in the MOC.

Where FSA undertake an identity check, the following details should be compared with the information submitted to them by APHA:

- ear tags match the cattle passport
- reactor tag present if not reported as ‘tag not applied’ or one of the categories not eligible for tagging (re-interpretations or gammas)

The following action should be taken:

- record findings, on ID checklist or FBO sheets where applicable
- check if any evidence of tampering or other fraud
- if evidence found, notify Local Authority Trading Standards as per existing processes and retain relevant part of the animal

7.9.4 When is an ear sample required?

The reactor tag scheme requires a sample (comprising both whole ears and all tags present in those ears) to be collected from any animal which comply with one of the criteria described below.

A sample will be required in the following circumstances unless otherwise instructed. The FSA Targeted and the APHA Targeted may be required in slaughterhouses in England and Wales whilst the FSA Random samples are required in slaughterhouses in England and Wales:

- **FSA targeted** – Whenever a FSA Operations Group officer finds evidence of fraud, the tag has been tampered with or other ID non-compliance.
 - For example, reactor tag missing when expected to be present (TB110 will state if ‘not applied’ or one of the other ineligible categories), ear tags tampered with, indecipherable documentation, animal does not appear to match that expected (age, breed, sex). Guidance is being produced, that gives details of what constitutes ear tag tampering.
- **APHA targeted** - When requested by APHA, Intelligence led targeted examination of animal ID and sampling.
 - APHA will state ‘COLLECT EARS’ in the TB110 comments box when ears are required to be collected.

In exceptional cases APHA may contact the FSA representative at a slaughterhouse (by phone) to request an urgent identify check and request ear samples to be taken.

- **FSA random** – random testing process.
 - Slaughterhouses in England, 3 samples should be collected every month at each of the slaughterhouses which regularly receive reactors. The random samples should only be taken from reactors which originate from England and which have reactor tags.

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- Slaughterhouses in Wales, 3 samples should be collected every month at each of the slaughterhouses which regularly receive reactors. The samples should be taken at different times in the month and not together and only from animals with reactor tags.
- Random samples should **not** be collected on a Friday although targeted samples may have to be taken.

For all other animals, that is TB reactors that have not had a reactor tag applied or Direct Contacts, any suspicion of fraud should be investigated as described in the chapter 6 on 'Notifiable diseases', section 7.

7.9.5 Collection of sample, packing and despatch of ear samples from FSA


For continuity of evidence all processes should be completed by the same person (removal of the ears, completion of sample submission form, labelling and bagging in tamperproof / evidence bag and packaging of samples packed for dispatch).

The following protocol should be followed:

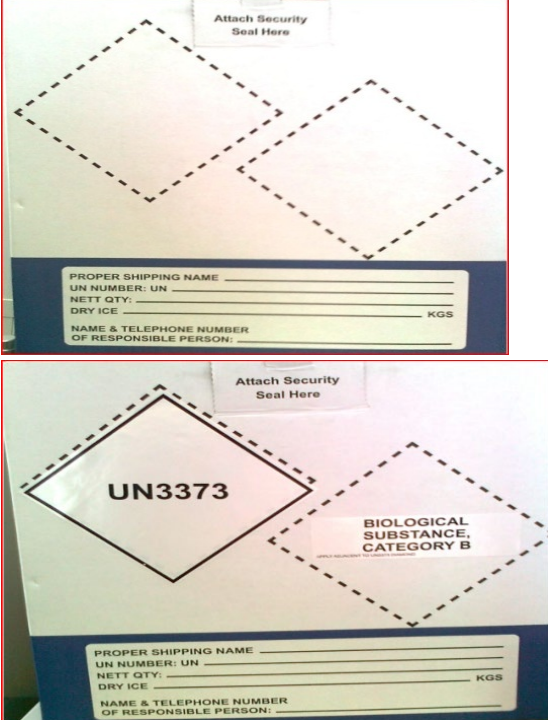
A Preparation of packing systems:

Step	Action
1	The packing materials consist of the following: <ul style="list-style-type: none">• Biotherm boxes (system 5, 10 or 15, depending on number of samples collected)• Grip seal bags (8" x 11")• Absorbent pads• Tamperproof/ evidence bag• Ice Brix (2 per box)
2	Biotherm 5 boxes have been issued for routine sampling and only one pair of ears should be packed in this system. In the event multiple sample collection is required (targeted sampling) the Biotherm 10 and 15 systems should be used and will be supplied by APHA.
3	All Biotherm systems will be supplied by APHA and need to be prepared for first initial use; once preparation has been completed, using the protocol below, the systems can be re-used and will be returned by APHA.

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	<p>Nett Qty:</p> <p>Dry Ice:</p> <p>Name and telephone number of responsible person:</p>	<p>One sample</p> <p>less than 1 kilogram.</p> <p>FSA contact name and number</p> <p>Ice Brix must be 'hard' frozen before use, x2 Ice Brix should be sufficient for the Biotherm 5 system.</p>
4	<p>On the lid of the box complete legibly and accurately.</p> <div style="text-align: center; margin: 10px 0;">  </div> <div style="display: flex; justify-content: space-between; margin-top: 20px;"> <div style="width: 45%;"> <p>a) Consignee details with:</p> <p>APHA TB DNA Testing Food Standards Agency Sample Reception Area New Haw Addlestone Surrey KT15 3NB</p> </div> <div style="width: 45%;"> <p>b) Consignor details with:</p> <p>Full Address of the abattoir Postcode</p> </div> </div>	
5	<p>Open the box and remove the labels supplied, place to one side.</p>	
6	<p>On the front panel stick the UN3373 label in one of the pre-marked diamonds and place the Biological Substance Category B label adjacent to the UN3373 diamond (see photographs).</p>	

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7	Discard the Infectious Substance label; this must not be used.											
8	<p>Complete legibly and accurately the front panel:</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%;">Proper shipping name:</td> <td>Biological Substance Category B</td> </tr> <tr> <td>UN Number:</td> <td>UN3373</td> </tr> <tr> <td>Nett Qty:</td> <td>One sample</td> </tr> <tr> <td>Dry Ice:</td> <td>less than 1 kilogram.</td> </tr> <tr> <td>Name and telephone number of responsible person:</td> <td>FSA contact name and number</td> </tr> </table> <p>Ice Brix must be 'hard' frozen before use, x2 Ice Brix should be sufficient for the Biotherm 5 system.</p>		Proper shipping name:	Biological Substance Category B	UN Number:	UN3373	Nett Qty:	One sample	Dry Ice:	less than 1 kilogram.	Name and telephone number of responsible person:	FSA contact name and number
Proper shipping name:	Biological Substance Category B											
UN Number:	UN3373											
Nett Qty:	One sample											
Dry Ice:	less than 1 kilogram.											
Name and telephone number of responsible person:	FSA contact name and number											

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B Notify APHA that ear samples have been taken:

Step	Action
1	Whenever ear samples are taken, FSA abattoir staff must notify APHA Central Tagging Team that a sample has been taken and submitted to APHA Lab at Weybridge.inspection
2	A copy of the signed sample submission form (annex 22 on 'Material for DNA analysis') should be faxed or scanned and emailed to the APHA central tagging team at: Fax: 01905 768649 Email: AHspecialistservicecentreworcester@apha.gsi.gov.uk

C Collection and preparation of ears (x1 pair):

Step	Action
1	Place the pair of ears (from the same animal) into a grip seal bag (8" x 11"); remove any excess air from the bag and seal.
2	Place the bagged sample (x1 pair of ears) inside another grip seal bag (8" x 11"), add an absorbent pad, remove excess air and seal.
3	Place the 'double bagged' sample (x1 pair of ears) into the tamperproof/ evidence bag and seal to meet continuity of evidence requirements.
4	Complete legibly and accurately the tamperproof / evidence bag in the section marked ' FSA Use Only '.
5	Put in the refrigerator or freezer for chilling. This will reduce excessive moisture collecting in the bag.
6	Complete the sample submission form legibly and accurately. If samples have been taken due to evidence of tampering, ensure the tampering suspected box is ticked on the sample submissions form.
7	Send a copy by fax to APHA Central Tagging Team (as above at B step 2) and place in a grip seal bag (8" x 11") remove excess air and seal.
8	Add the hard frozen Ice Brix to the Biotherm system and place the sample next to the Ice Brix (x2 Ice Brix per biotherm system).
9	Place the sample submission form on top of the sample (inside a plastic bag), close the polystyrene lid (expanded polystyrene), close outer flaps and seal with security label or brown tape. Where samples from more than

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	one animal are in the box, ensure the bag containing the sample submission form is attached to the corresponding tamperproof bag.
10	<p>As soon as you receive the sampling request information from APHA, email the APHA Preferred Courier (currently Topspeed Couriers at tb@topspeedcouriers.co.uk) with the following information:</p> <ul style="list-style-type: none"> • establishment name and approval number • date for each kill day and whether samples are likely to be sent from that day (will depend on whether any are sample code 1); this information will allow Topspeed Couriers to plan the collections to include multiple pickups where possible • destination laboratory • name and telephone number for the FSA contact at the plant

D Preparation of biotherm replacement of outer box:

Step	Action										
1	<p>If the outer carton becomes damaged a replacement carton should be obtained and prepared for use, using the protocol below:</p> <p>N.B. A replacement outer carton is not supplied with UN3373 label and this will need to be obtained when ordering replacement carton</p> <ul style="list-style-type: none"> • Assemble the flat pack box • On the front panel stick the UN3373 label in one of the pre-marked diamonds • Write in permanent black marker pen, <u>in letters at least 6mm high</u> and adjacent to the UN3373 label <p>‘BIOLOGICAL SUBSTANCE CATEGORY B’</p>										
2	<p>Complete legibly and accurately the front panel:</p> <table style="width: 100%; border: none;"> <tr> <td style="padding: 5px;">Proper shipping name:</td> <td style="padding: 5px;">Biological Substance Category B</td> </tr> <tr> <td style="padding: 5px;">UN Number:</td> <td style="padding: 5px;">UN3373</td> </tr> <tr> <td style="padding: 5px;">Nett Qty:</td> <td style="padding: 5px;">One Sample</td> </tr> <tr> <td style="padding: 5px;">Dry Ice:</td> <td style="padding: 5px;">less than 1 kilogram.</td> </tr> <tr> <td style="padding: 5px;">Name and telephone number of responsible person:</td> <td style="padding: 5px;">FSA contact name and number</td> </tr> </table>	Proper shipping name:	Biological Substance Category B	UN Number:	UN3373	Nett Qty:	One Sample	Dry Ice:	less than 1 kilogram.	Name and telephone number of responsible person:	FSA contact name and number
Proper shipping name:	Biological Substance Category B										
UN Number:	UN3373										
Nett Qty:	One Sample										
Dry Ice:	less than 1 kilogram.										
Name and telephone number of responsible person:	FSA contact name and number										
3	Insert the polystyrene box										

4	Ice Brix must be 'hard' frozen before use, x2 Ice Brix should be sufficient for the Biotherm 5 system.
5	Follow Collection and Preparation of Ears (x1 pair) protocol
6	Resupply of packaging and dispatch equipment should be ordered by completing and submitting the CS115 form (annex 21)

7.10 The slaughterhouse case

7.10.1 Definition

Carcases and offal with suspicious TB lesions found during routine meat inspection are called 'slaughterhouse cases'. The animals may or may not have come from a TB restricted premises.

7.10.2 Responsibilities

The table below outlines the responsibilities.

Slaughterhouse cases	APHA	<ul style="list-style-type: none"> • Advise and authorise whether samples are required and provide batch number (Work Schedule Activity- WSA) • Requesting and authorising the submission of suspected tissue samples
	FSA	<ul style="list-style-type: none"> • Reporting of cases found during post-mortem inspection where TB is suspected to APHA • Additional detailed inspection of the carcasses and offal, • Collection of samples, packing, completion of paperwork and submission of samples (when authorised) to the APHA TB diagnostic laboratory as per instructions • Ensuring traceability of samples during the inspection, collection and despatch of samples • Order consumables (such as labels and pots)

7.10.3 Skin tuberculosis

Animals presenting skin lesions only should not be treated as a slaughterhouse case, surveillance is not required and samples do not need to be collected. *M. bovis* is rarely isolated from skin lesions.

7.10.4 Differentiate between lesions

Because different sampling and diagnostic testing is required in each situation, FSA staff must positively differentiate between lesions which are:

- tuberculous (TB) Action – Inform APHA and collect samples for analysis
- tumourous (EBL) Action – **Reference:** See section 5 on ‘Enzootic Bovine Leukosis’ for additional information

7.10.5 Notifying APHA

Where the OV cannot positively rule out TB as the possible cause of the lesion(s) the suspect case must be reported to APHA without delay. The OV must inform APHA by telephone, to allow trace back to the farm of origin, giving details of the case such as:

- the nature of lesions found with their location
- the name and address of the person submitting the animal with ear tag number, lot number, CPH number and kill number in the additional remarks box of the TB50
- a description of the animal
- when the sample can be despatched

The details need to be recorded in a TB50, signed by the OV, and faxed to the local APHA office so that they can make a decision as to whether samples must be sent to the laboratory.

The OV must retain legible copies of the animal’s identification (for example, cattle passport), kill sheet, FCI and other records that can be necessary for future investigations.

Regulation: The Tuberculosis Orders in England and Wales (as amended).

7.10.6 APHA action

On notification from the FSA of the finding of suspect TB lesions, APHA must provide the sample Work Schedule Activity (WSA) ID number that must be recorded in the box at the top of the TB50 form. Once they have received the completed TB 50 form APHA will advise whether samples should be submitted for culture and of any special conditions. Where required, samples must be collected and submitted to the APHA laboratory for analysis.

7.10.7 Movement to detained area

After dressing, carcasses and offal suspected of being affected with tuberculosis should be placed immediately in the detained area before additional detailed inspection is carried out and before being sampled, if required by APHA.

7.10.8 Transfer of carcasses and offal

When transferring offal / carcasses to a detained area for further inspection or sampling, care must be taken to prevent cross-contamination of other meat / equipment / fittings in the slaughterhall. In the event of suspected contamination, cleansing and disinfection of the affected area / equipment must take place before production recommences.

Note: Failure by the plant operator to co-operate with this procedure would constitute a contravention of the operator's responsibility to prevent cross-contamination and must be dealt with accordingly.

Regulation: (EC) 854/2004 Annex I, Section IV, Chapter IX, E.

7.11 The slaughterhouse case: additional detailed inspection

7.11.1 Detailed inspection

In the case of animals in which there are grounds for suspecting TB the following lymph nodes (LN) and organs must be examined in detail (visual inspection, palpation and incision) if they have not been examined already:

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Routine inspection	Additional requirements
Retropharyngeal LN*	Prescapular LN
Parotid LN	Superficial inguinal LN
Submandibular / Submaxillary LN	
Bronchial* and Mediastinal* LN	
Lungs*	
Pleura	
Hepatic LN	
Liver	
Mesenteric LN (representative sample)	
Supramammary LN	
Udder**	

* Tissues where tuberculosis lesions are most commonly found

** See subtopic below

Note: Additional examinations of any other lymph nodes, such as those enlarged and / or haemorrhagic, may take place whenever considered necessary.

Regulation: (EC) 854/2004, Annex I, Section I, Chapter II, D, 2 (b)(i).

7.11.2 Udder inspection

The inspection of udders in 'slaughterhouse case' is particularly important as they are not routinely incised unless they are for human consumption. In addition to the visual inspection and incision of the supra-mammary lymph nodes, the udder of cows must be visually inspected and palpated. If abnormalities are found during these, or when the udder is intended for human consumption, then deep incisions must be done into each quarter of the udder as far as the lactiferous sinuses.

Regulation: (EC) 854/2004, Annex I, Section IV, Chapter I, B 11.

7.11.3 Incision method

Cuts into the lymph nodes should be made across the node in at least two directions (criss-cross pattern) to reveal as much as possible of the core of the node. Care should be taken to examine the tips of the node. This method will reveal most TB lesions or reveal an area which appears abnormal which can be further incised.

Lesions in the lungs, liver and udder are most commonly found on inspection or palpation. Where abnormalities are felt on palpation the abnormal areas should be incised for further investigation. Careful small incisions at the border of the lesions should be made to reduce exposure to infective material. If the lesion is found to be typical of TB, no further incision is required into that lesion.

7.11.4 Hygiene precautions

Any equipment used to incise or examine the lymph nodes must be cleansed and sterilised before undertaking post-mortem procedures on subsequent carcasses.

7.11.5 Correlation of TB suspect carcasses and offal

The OV at any red meat slaughterhouse, where a TB suspect carcass and offal might be identified, will prepare a protocol to ensure the proper identification and correlation of TB suspect carcasses and offal. The protocol will be tailored to each plant so that any issues related to identifying and correlating the TB suspect carcass and offal are addressed. It must state that 'each TB suspect carcass and offal are identified by a detained grey tag'.

The detained grey tags will be ordered by the Inspection Team Leader from CSU@food.gov.uk to ensure that each red meat slaughterhouse holds a stock of these tags on the premises.

7.11.6 Judgement of meat

Decision on whether meat is fit for human consumption is based on the findings during post-mortem inspection.

Where there are indications of generalised TB or TB lesions with emaciation, the entire carcass and all the blood and offal should be rejected as unfit for human consumption.

All meat from animals in which post-mortem inspection has revealed localised tuberculosis in a number of organs or a number of areas of the carcass are to be declared unfit for human consumption. However, when a TB lesion has been found in the lymph nodes of only one organ or part of the carcass, only the affected organ or part of the carcass and the associated lymph nodes need to be declared unfit for human consumption.

Regulation: (EC) 854/2004, Annex I, Section IV, Chapter IX, E.

7.12 The slaughterhouse case: sampling

7.12.1 Collection of samples

When visible lesions found during post-mortem inspection cause suspicion of tuberculosis, samples need to be collected and may need to be sent for analysis, if requested and authorised by APHA. The sampling procedures are the same as previously described for reactors, where VL are found and Sampling Code 1 applies. Please note that NVL samples are NOT to be sent for slaughterhouse cases.

Remove suspicious node or lesion in its entirety if small or a sample the size of two-thirds of the pot if large and pool up to two of the suspected lesion tissues from the same carcass. Samples may be held in a polythene bag until APHA confirm that they are needed.

If the size of the affected tissue and/or lesions from slaughterhouse cases is too small to make up two-thirds of the pot, then comments must be included on the TB50 form to that effect. If the lesion identified is small, but there are multiple lesions, the multiple lesions must be included to make up the maximum required volume, to enable part of it to be used for histological examination. However, mesenteric lymph node and supramammary / udder tissue are exceptions and should be submitted separately.

The above is required because, where histology cannot be carried out on a sample and the initial culture result is negative, the culture must be extended. Extending the culture period increases the costs for APHA and impacts on the farmer's business, as restrictions will remain in place on the farm during the extended culture period; this could be up to 10 weeks.

Samples are not required from clear testing cattle from TB restricted establishments (cattle arriving at the slaughterhouse without a TB24), unless

lesions suggestive of TB are found during post-mortem inspection. In this case, the 'slaughterhouse case' procedures apply.

7.12.2 Completion of TB 50 form

In addition to the telephone report, fill in a separate sample submission form (TB50) for each slaughterhouse case detected. The OV must give a detailed description of the location and nature of the suspect lesions on the TB50, including comments where the sample is smaller than required for histological examination. A properly completed TB50 form (including the WSA number) will enable APHA to quickly trace back the slaughterhouse case to its herd of origin. Based on this information APHA will decide whether samples need to be sent to the laboratory and put in place the appropriate TB control measures.

In this type of scenario, the OV is expected to either confirm the lesion as being characteristic of TB or, alternatively, be able to rule it out. If the OV has any doubts and/or difficulties are found when completing the TB50 form, the OV can contact APHA and discuss any concerns with the duty Veterinary Officer to obtain the necessary advice.

Reference: See annex 16 on for sample TB50 form.

7.12.3 Distribution of the TB 50 form

The properly completed and signed TB50 form must initially be faxed to the local APHA office as soon as possible.

If APHA require the samples to be submitted to the laboratory the process is as follows:

- signed hard copy original TB50 form must be placed in an envelope, this envelope should be marked 'Originals' and placed between the outer box and the biobox / biobottle; APHA laboratory staff will forward the signed hard copies internally to the relevant APHA regional office
- a copy of the form should be placed in a ziplock bag and taped to the outside of the biobottle / placed in biobox; copy of the forms should be faxed or emailed to the relevant APHA office

OV should retain a further copy in the plant files for future reference (retention period 12 months).

7.12.4 Packing and despatch of all TB samples

If APHA confirm that samples are required they must be transferred from the polythene bag(s) into pots.

Samples must be sent to the APHA laboratory with the forms. They should be sent as soon as possible and by the next working day at the latest.

If APHA advise that the samples do not need to be sent to the laboratory then they must be disposed of as ABP. These discarded samples are classed as category 2 ABP and can also be disposed of as category 1 ABP.

Reference: See topic 7.12 on 'Packing and despatch of samples' at the end of this section.

7.13 Packing and despatch of samples

7.13.1 Packing

1. All samples must be submitted in a 60ml pot.
 - Outside of pot must be kept clean.
 - Remember to tighten lids. Give an extra turn before packing.
 - Avoid cross threading the lids as they will cause the pots to leak.
2. Stick label on outside of pot: ear tag / CPH printed on label.
3. Place each individual pot in a plastic bag which is knotted tightly. Trim off excess bag.
4. If submitting more than one pot for a single animal (pool in one pot) atypical lesion in a separate pot:
 - Label each pot and write on label what is in each pot, for example, pool / mesenteric.
 - Place each pot in a separate bag and tie as previously.
 - Place both bagged pots in a third bag and tie the bag.
 - Make note in comments section on the TB110 or TB50 detailing how many pots submitted and what is in each pot.
5. Place all bagged pots into a biobox / biobottle along with the absorbent pad / material and seal the box. The person introducing samples inside the

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biobox / biobottle must wipe their hands with 70% ethanol wipes before introducing the samples. The outside of the biobox / biobottle must also be wiped. The process for sending forms is as follows:

- Signed hard copy TB110 and original TB50 forms must be placed in an envelope, this envelope should be marked 'Originals' and placed between the outer box and the biobox / biobottle. APHA laboratory staff will forward the signed hard copies internally to the relevant APHA regional office.
 - Copies of those forms should be placed in a ziplock bag and taped to the outside of the biobottle / placed in biobox. Copies of these forms should be faxed or emailed to the relevant APHA office. The OV should retain a further copy in the plant files for future reference. (Retention period 12 months)
6. Place biobottle into the outer box. Before use the biobox / biobottle must be stored in a separate clean area to avoid possible cross contamination.
 7. Attach address label.
 8. Attach security seal.

Store the package in the chiller until the time of collection. Ideally, place in a waterproof bag / container to avoid contamination. The outer box needs to clearly read: 'TB samples open only in CL3'. If the box has not been pre-stamped, please write or use the sticker provided.

**Despatch: The current courier for the sampling process is
 Topspeed Couriers. The courier process is as follows:**

Step	Action
1	<p>As soon as you receive the sampling request information from APHA, book a collection at http://www.topspeedcouriers.co.uk/ with the following information:</p> <ul style="list-style-type: none"> • establishment name and approval number • date for each kill day and whether samples are likely to be sent from that day (will depend on whether any are sample code 1); this information will allow Topspeed Couriers to plan the collections to include multiple pickups where possible

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	<ul style="list-style-type: none">• specify whether a non-bovine or bovine sample• destination laboratory (not Penrith for non-bovines)• name and telephone number for the FSA contact at the plant <p>The complete process is set out in Annex 23.</p>
2	The APHA preferred courier will confirm the date that the samples will be collected. If samples need to be kept at the establishment overnight, please ensure that they are sealed in the packaging requested from APHA and store in a chiller or cold room.
3	The APHA preferred courier is required to deliver the samples within 2 working days. For example, if samples are taken on Tuesday, samples are required to be with APHA by 5pm on Thursday. Samples can be delivered up to 3pm only on a Friday.
4	On detection of a slaughterhouse case that needs samples submitting, notify the courier that samples are required to be collected and they will organise a collection which meets the 2 working days delivery requirement; for example, a SH case found on a Monday, samples are required to be with APHA laboratory by 5pm Wednesday but collection could either take place on Monday, Tuesday or Wednesday, as the couriers are required to consolidate their delivery runs to be cost effective.

7.13.2 Ordering consumables

The OV at each abattoir is responsible for ensuring that there are sufficient supplies of consumables for packing samples. It is important that only the specified packaging materials (such as pots and labels) are used as failure to do so may result in the sample being un-assayable at the lab.

The consumables must be ordered directly from APHA Weybridge by using the following procedure:

1. Fill in the requisition form (annex 8a and 8b)
2. Make sure that you complete all the boxes (establishment name, address, FSA contact name and telephone number, and any others).
3. The requisition form should be emailed to:
StoresStockOrders@apha.gsi.gov.uk or faxed to APHA Weybridge: 01932 357497.

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APHA will endeavour to complete delivery of consumables orders within 7 working days of receipt. If you have any queries regarding an order that you have placed you should telephone the APHA stores in Weybridge on 01932 359451.

8. Avian Influenza

- 8.1 Introduction
- 8.2 Controlled zones
- 8.3 Movement licences for poultry to slaughter
- 8.4 FBO responsibilities
- 8.5 Commercial documents
- 8.6 FBO duties within AI free zones
- 8.7 FSA duties in establishments within the protection, surveillance, restricted and free zones
- 8.8 Waste disposal
- 8.9 Disinfection procedures (level 2 designations only)
- 8.10 Enforcement
- 8.11 Timesheets

8.1 Introduction

8.1.1 AI outbreak

Before the confirmation of any outbreak of Avian Influenza (AI), the FBO and the OV should have contingency plans in place which may include the application for the pre-designation of the slaughterhouse for processing birds from controlled zones.

Upon confirmation that AI has been found in poultry, captive and / or wild birds in GB, animal health protection measures are imposed to prevent the spread of disease.

The latest information about the Avian Influenza situation in UK, including the “Rules on meat produced from poultry and farmed game birds originating in Protection Zone(s)” and applicable general licences for meat can be found at: <https://www.gov.uk/guidance/avian-influenza-bird-flu>

8.1.2 Domestic legislation

Domestic legislation that applies in the case of a **domestic poultry** outbreak:

- the Avian Influenza and Influenza of Avian Origin in Mammals (England) (No. 2) Order 2006
- the Avian Influenza and Influenza of Avian Origin in Mammals (Scotland/Wales) Order 2006
- the Avian Influenza (Vaccination) (England / Wales) Regulations 2006
- the Avian Influenza (Slaughter and Vaccination) (Scotland) Regulations 2006
- the Avian Influenza (H5N1 in Poultry) (England / Wales) Order 2006

Domestic legislation that applies in the case of a **wild bird** outbreak:

- the Avian Influenza (H5N1 in Wild Birds) (England / Wales) Order 2006
- the Avian Influenza (H5N1 in Wild Birds) (Scotland) Order 2006 as amended

8.2 Controlled zones

8.2.1 Controlled zones and AI free zones

Controlled zones may be declared around the place(s) where birds have been found to be infected with notifiable AI virus. Those zones are classified as follows:

- **Protection Zone (PZ)** (or wild bird control area or wild bird protection zone, under the Wild Bird Order): a ring with a radius of at least 3 km around the point where high pathogenic AI virus has been confirmed.
- **Surveillance Zone (SZ)** (or wild bird monitoring area or wild bird surveillance zone, under the wild bird Order): a ring with a radius of at least 10 km around the point where high pathogenic AI virus has been confirmed and including the PZ.
- **Restricted Zone (RZ)**: a ring around the SZ that separates the SZ from the Free Zone.
- **Low Pathogenic Restricted Zone (RZ)**: minimum size of 1km around the premises where low pathogenic notifiable AI is confirmed.
- **Free Zone (FZ)**: area outside the PZ, SZ and RZ that is free of notifiable AI. The transport of live birds and meat within this area is allowed without restriction.
- **Vaccination Zone (VZ)** (or emergency vaccination zone or preventive vaccination zone): the Secretary of State considers that poultry or other captive birds in this zone should be vaccinated under a preventive vaccination plan or an emergency vaccination notice.

Biosecurity and veterinary surveillance measures are also imposed within those zones to prevent the introduction of the virus into poultry flocks.

A map showing the extent of PZ, SZ and FZ is available from:
<http://www.gisdiseasemap.defra.gov.uk/intmaps/avian/map.jsp>

The movement of live poultry and other captive birds will be subject to restriction.

However, the direct movement for slaughter of poultry is allowed providing the movement takes place under a licence issued by a Veterinary Inspector or by an inspector under the direction of a Veterinary Inspector.

Whether or not these licences are available will depend on an assessment by APHA / Defra. These may not be available for premises located in certain zones

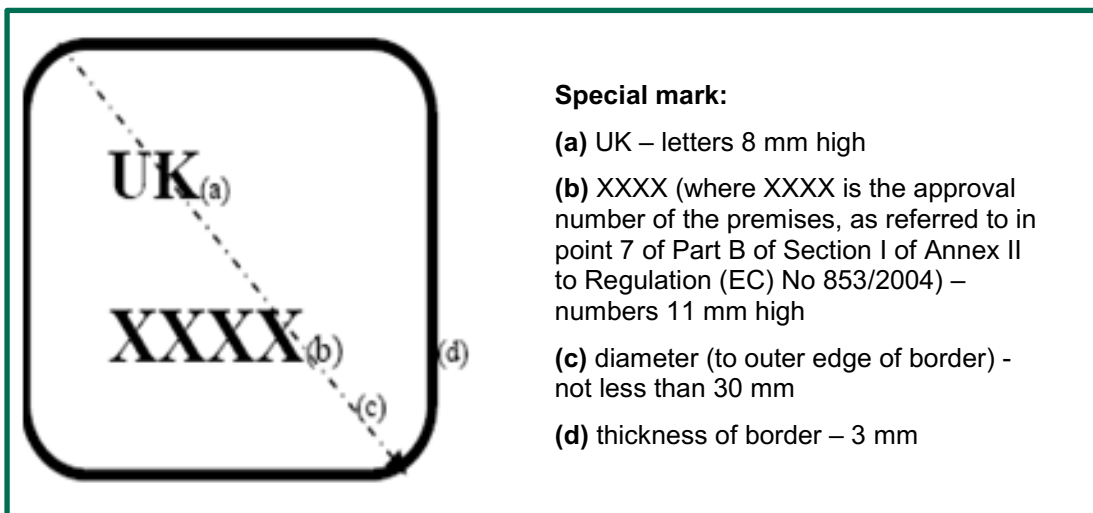
or for certain species of birds. The requirement for a movement licence applies even where poultry sheds are collocated on the same premises as the abattoir.

Full details of movement licences can be found at: <https://www.gov.uk/avian-influenza-bird-flu> or by contacting the local APHA office. The movement licence requires the completion of part of it by the OV/MHI confirming the slaughtering of all the birds and requires that the FBO returns the completed licence to the APHA licencing team. The OV should monitor that FBO returns the movement licences to APHA without delay. An example of movement licence is available in the Annex 28.

8.2.2 Movement of meat during outbreak in domestic poultry

The movement of poultry and wild bird meat, minced meat, meat preparations and meat products containing such meat within a PZ, SZ or RZ will be subjected to restrictions as follows:

- meat from poultry originating in a PZ must be restricted meat; the restricted meat or its packaging must bear a special mark which may replace the ID mark and be produced in accordance with the domestic legislation
- the categorisation as restricted meat and special mark also applies to poultry meat from PZ produced between 21 days prior to the estimated earliest infection for that PZ



Only designated slaughterhouses can dispatch poultry meat from birds originating in the PZ, SZ and RZ.

Also, cutting plants, cold stores and establishments preparing minced meat, meat products and meat preparations situated within the PZ, SZ and RZ can dispatch their products providing the applicable general licence/s are complied with and the raw material has been obtained in accordance with the domestic legislation and is not intended for supply to intra-community or international trade.

If the product is intended for supply outside the UK then processing plants may require designation – please refer to the sub topic ‘Production of poultry from a PZ under a domestic poultry outbreak’.

8.2.3 Hunting ban

Where there is a confirmed outbreak in **wild birds** the hunting of wild birds may be prohibited in the wild bird PZ or wild bird control area and the wild bird SZ or wild bird monitoring area.

Where the confirmed outbreak is in **domestic poultry** no person shall release game birds in the protection or SZ.

A shooting ban may be introduced.

8.3 Movement licences for poultry to slaughter

8.3.1 Types of movement licences

Movements involving poultry for slaughter from and/or to premises situated within a PZ, SZ or RZ are only allowed under a movement licence issued by a Veterinary Inspector (VI) or Inspector under the direction of a VI (check licence requirements for details).

There are three types of movement licence:

- Specific Movement Licence (LS)
- Multiple Movement Licence (LM)
- General Movement Licence (LG)

Note: Movements of poultry to an abattoir located within the same farm complex also need to be licenced.

8.3.2 Specific movement licences (LS)

The movement of poultry from a PZ or SZ is subject to LS.

A VI or Inspector under the direction of a VI must examine the birds within 24 hours before they leave the premises of origin. This licence is issued as a single document for each flock (not lorry load) of birds and can only be used once.

The person transporting the birds must comply with the conditions attached to the licence; carry the original (or a copy in the case of multiple loads) with them and produce it on request.

Conditions for movement of live poultry are detailed in the licence.

An example of specific movement licence is included in the Annex 28.

8.3.3 Multiple movement licences (LM)

The movement of live poultry from the RZ or FZ to a slaughterhouse in the PZ **may be subject** to a Multiple Movement Licence (LM). This licence is issued as a unique document that can be used as many times as necessary between the same premises of origin and destination, and for the whole duration of the restrictions.

The person transporting the birds must comply with the conditions attached to the licence and carry a copy of it, and a consignment note detailing:

- the serial number of the licence
- the description of the consignment
- the name and location of the premises of origin
- the name and location of the premises of destination

The copy of the licence and the consignment note must be produced on request to an inspector or other officer of the Secretary of State on demand and allow a copy or extract to be taken; and on such demand, furnish his name and address.

Conditions for movement of live poultry are detailed in the licence.

8.3.4 General licence (LG)

The movement of live poultry to and from the RZ or FZ to a slaughterhouse in the SZ or RZ and from a RZ to a FZ may be subject to an LG.

Please note that FCI covers the information required in the general licence and can be used as such.

This licence is **not** issued as a document, but is published on the Defra website at <https://www.gov.uk/avian-influenza-bird-flu>

The person transporting the birds must comply with the conditions attached to the licence.

8.3.5 Conditions of the LG

Conditions for movement of live poultry are detailed in the licence.

The person moving anything under authority of this licence must at all times during the licenced movement carry a consignment note.

8.3.6 No licence required

The movement of live poultry between premises situated in the FZ to a slaughterhouse in the FZ does not require a licence.

8.3.7 Summary

The tables below summarise the movement licences required for poultry to slaughter during AI outbreaks:

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Movement licences for live poultry to slaughter in a highly pathogenic AI outbreak:

Birds from	To slaughterhouse situated in			
	PZ (3km)	SZ (10km)	RZ	FZ
PZ (3km)	Specific Licence (LS)			
SZ (10km)				
RZ	General Licence (LG)* <i>[*This may initially be specific or multiple and is subject to change by Defra]</i>			
FZ				No licence required

Movement Licences for live poultry to slaughter in a low pathogenic AI outbreak:

Birds from	To slaughterhouse situated in	
	RZ	FZ
RZ	Direct movement under a General Licence (LG) by VI / AHI to designated slaughterhouse	
FZ	No licence required	

Movement Licences for live poultry to slaughter in an H5N1 in a wild bird AI outbreak:

Birds from	To slaughterhouses situated in		
	PZ (3km)	SZ (10km)	FZ
PZ (3km)	Specific Licence (LS)		
SZ (10km)			
FZ	*General Licence (LG) <i>[*This may initially be specific or multiple and is subject to change by Defra]</i>	No licence required	

8.4 FBO responsibilities

8.4.1 Designation of slaughterhouses under a domestic poultry outbreak

Slaughterhouses will need to be designated by the FSA on behalf of Defra / Welsh Government / Scottish Ministers before receiving and processing poultry from premises within a:

- highly pathogenic avian influenza protection zone
- highly pathogenic avian influenza surveillance zone
- highly pathogenic avian influenza restricted zone
- low pathogenic avian influenza infected premises
- vaccination zone

In addition, slaughterhouses situated within a zone subject to movement restrictions must be designated by the FSA to receive and process poultry including where this originates from an area free from disease restrictions.

In order to facilitate the preparedness for a potential outbreak, slaughterhouse operators can apply for a pre-designation anytime. On request of the FBO, the pre-designation may be subsequently activated during an outbreak of avian influenza.

Designations are only valid during the outbreak period. Once the outbreak officially ends, the designated slaughterhouses will remain pre-designated. In the case of a new outbreak, the establishments will have to apply for the activation of the pre-designation.

Only approved establishments can be designated. Establishments with seasonal activities (on farm slaughter of fewer than 10,000 birds per year) cannot be designated as they are not required to be approved.

Activation of a designation does not mean the establishment will be able to receive poultry for slaughter as the movements of poultry will need a licence.

8.4.2 FBO action

The FBO must apply to be pre-designated or designated to the FSA Approvals Team.

There are two types of designation for slaughterhouses:

- **Level 1.** To receive and process poultry from premises within a highly pathogenic avian influenza surveillance zone, a highly pathogenic avian influenza restricted zone, or a low pathogenic avian influenza restricted zone (or vaccination zone in Scotland) or, being a slaughterhouse within a zone subject to movement restrictions, to receive and process poultry from premises within an area free from disease control restrictions.
- **Level 2.** To receive and process poultry from premises within a highly pathogenic avian influenza protection zone and, therefore, producing restricted meat.

A slaughterhouse can apply to receive and process poultry from premises both within and outside a PZ, providing the conditions detailed in the “Application for Designation of a Slaughterhouse” are met; see Annex 25.

8.4.3 Production of poultry meat from a PZ under a domestic poultry outbreak

Meat from birds originated in the Infected Premises (IP) slaughtered within 21 days of the date estimated as being the earliest date of infection at that premises must be traced and detained. Defra may decide the disposal of that meat.

Meat produced from birds originated in the PZ slaughtered within 21 days of the date estimated as being the earliest date of infection at the infected premises of that zone becomes restricted meat once the PZ is declared. That meat must be traced for the removal of the oval identification mark and the application of the special mark.

Production of poultry meat, minced meat, meat products and meat preparations from healthy birds originating in the PZ can take place in slaughterhouses, cutting plants and other establishments within the PZ, SZ, RZ and / or FZ if:

- the slaughterhouse is approved and designated and complies with all the designation requirements,
- the birds have been transported under a Licence,
- the meat is produced in accordance with Commission Regulations 852/2004, 853/2004 and 854/2004
- the special mark is applied to the product
- the meat is restricted
- the conditions of the applicable general licence(s) are complied with

Restricted poultry meat and products from healthy birds originating from the PZ can be marketed within the UK with no further treatment.

This meat from a PZ will only be supplied for export (intra-community or international trade) if **ALL** of the following conditions are complied with:

- the meat or its packaging is marked with the special mark; this mark identifies them as originating in a PZ

Note: This special mark is the Identification (ID) Mark and no additional ID Mark must be applied. When marked with this special mark the product is not eligible for export.

- the product undergoes heat treatment to inactivate any AI virus present
- the oval ID Mark is applied after the treatment has been completed
- the establishment applying the heat treatment and the oval ID mark and follows the conditions of the applicable general licences

Where birds from a PZ are slaughtered and processed, the parts of the slaughterhouse and the equipment used for the slaughter and processing of those birds must be cleaned and disinfected before other poultry is slaughtered or processed.

8.4.4 Production of poultry meat from SZ and RZ

These restrictions only apply for a highly pathogenic outbreak in domestic poultry.

Production of poultry meat, minced meat, meat products and meat preparations from healthy birds originating in the SZ or RZ can take place in slaughterhouses, cutting plants and other establishments within the PZ, SZ, RZ or FZ if:

- the birds have been transported under a licence
- the slaughterhouse is approved and designated and complies with all the designation requirements

The meat is handled and transported in compliance with the applicable general licence(s).

8.4.5 Production of wild feathered game meat from PZ and SZ

Defra may establish restrictions and controls on wild feathered game meat depending of the epidemiology and risk of the outbreak.

8.5 Traceability and Commercial documents

8.5.1 Commercial documents for poultry meat and wild feathered game meat

For details of commercial and export documentation see Defra website at:
<https://www.gov.uk/avian-influenza-bird-flu>

8.5.2 Traceability of poultry meat before the PZ

Traceability of the meat is a legal requirement in all circumstances. The FBO should be aware that robust internal traceability systems will help to minimize the costs of the required tracing of the meat produced from the PZ before the declaration of the PZ.

8.5.3 Reporting requirements for the traceability of restricted meat

FBOs of slaughterhouses which have been designated as Level 2 must complete and submit to the FSA approvals team the traceability information using the form provided at the time of the designation. This information will be used for arranging the unannounced inspections at cutting plants receiving that meat for verifying the compliance with the general licence for restricted meat.

The OV of a slaughterhouse which has been designated as Level 2 must verify that that FBO complete and provide the traceability information for all the dispatched restricted meat to the FSA Approvals team without delay.

8.6 FBO duties within the AI free zone in not designated slaughterhouses

8.6.1 Restriction applicable to establishments

Slaughterhouses within the FZ must be designated by the FSA on behalf of Defra / Welsh Government / Scottish Ministers to receive birds that originate within the PZ, SZ, RZ or VZ.

Reference: See sub-topic: 'Designation of slaughterhouses under a domestic poultry outbreak'.

Any slaughterhouse situated within the FZ can receive birds that originate within the FZ without any designation.

8.6.2 Production of poultry meat from the FZ

There are no restrictions to the production of poultry meat from birds originating in the AI FZ in establishments situated within the AI FZ, providing it is produced in accordance with Commission Regulations 852/2004, 853/2004 and 854/2004 and that adequate biosecurity measures are implemented

The oval ID Mark is to be applied.

8.6.3 Production of wild feathered game meat from the FZ

There are no restrictions to the production of wild feathered game meat from birds originating in the AI FZ in establishments situated within the AI FZ, providing it is produced in accordance with Commission Regulations 852/2004, 853/2004 and 854/2004.

Where the establishment is approved, the oval ID Mark is to be applied.

8.6.4 Control of animal by-products

Animal by-products produced in slaughterhouses situated within an AI FZ must be handled, stored and disposed in accordance with The Animal By-Products (Enforcement) (England)/(Scotland) Regulations 2013 and (Wales) Regulation 2014.

Reference: See Chapter 2.8 on 'Animal By-Products' for additional information.

8.7 FSA duties in establishments within the PZ, SZ, RZ and in designated slaughterhouses in the FZ

8.7.1 FSA presence

The FSA must be present at all times when slaughtering takes place until all birds have passed post-mortem inspection in designated slaughterhouses.

Poultry which have come from premises in the PZ are deemed to be under official control, and must be lairaged, slaughtered, chilled and stored separately from product which is not under official control until such time as it is wrapped and packaged.

The OV must verify that the FBO complies with the requirements to keep those birds and meat separated and cleaning and disinfection takes place before slaughter of other birds commences.

8.7.2 Confirmation of designation

OVs must obtain confirmation from the FSA that the slaughterhouse is designated before releasing birds from PZ, SZ or RZ for slaughter.

OVs are to encourage FBOs to apply for pre-designation to the FSA even if they do not need it so they can operate without disruption should they require it at a later stage.

8.7.3 Movement of live birds

Live birds originating from the FZ can be accepted by a slaughterhouse situated within the FZ without a movement licence.

The OV or MHI must obtain from the FBO a list of all expected farms delivering live birds from PZ, SZ and/or RZ for slaughter 24 hours in advance.

On arrival to the slaughterhouse the OV or MHI must inspect the movement licence or consignment note to verify:

- the origin of the birds
- that the consignment is intended for that slaughterhouse
- that where the birds originate from a PZ, they are kept separated from other birds

Reference: See topic 'Movement licences for poultry to slaughter'.

8.7.4 Cleansing and disinfection

Additional FSA checks are required to verify compliance with the cleaning and disinfection conditions attached to the licences:

After unloading at the premises of destination, the parts of the vehicle used to transport (including crates and equipment) anything which might be contaminated with mud, slurry, animal faeces, excretions, feathers or any other similar matter must be cleansed and disinfected on site.

FSA staff must carry out **100% checks of cleansing and disinfection** of crates, modules and vehicles used to transport birds originating from a PZ and / or SZ and of all the crates, modules and vehicles if the slaughterhouse is located in a PZ or SZ Additional FSA staff may be required to perform those checks.

A reminder of some important areas to be considered:

- Birds in the sheds / crates / modules must have no access to the abattoir area. There should be no poultry freely roaming within the curtilage of the abattoir. Welfare standards must be maintained.
- The hard standing area used for the cleaning and disinfection of the livestock transport must be maintained clean and free of animals / vermin / pets. This area must be cleaned and disinfected before commencing operations if necessary and other vehicles should not have access to this loading area for the duration of operation as a designated establishment.
- All transport vehicles and crates must be thoroughly cleaned and disinfected after unloading the birds. Special care must be taken to avoid any recontamination of vehicles, modules and crates after cleaning and disinfection, particularly through soil and dirt adhering to the wheel arches and surrounding parts (as this is not controlled by the wheel mats at the exit). This may necessitate spraying the exterior of the vehicle at the boundary of the site.
- The abattoir must be clean prior to commencing killing. Naturally vermin and poultry should not have access to the abattoir to avoid transmission of undetected disease.

No additional FSA cleansing and disinfection checks are required for the transport of birds that originate from the RZ and FZ. However, the FBO must maintain high standards of cleaning and disinfection of all crates, modules and vehicles.

8.7.5 Confirmation of slaughter

The OV or an MHI under the OV supervision must confirm that the birds arriving under a Specific Licence (LS) have been slaughtered by endorsing the licence presented by the FBO.

Where any problems arise relating to live bird movements the OV must contact the local Trading Standards Office and the local APHA office.

The OV should verify that the FBO is returning the completed LS to the issuing APHA office.

8.7.6 Use of Plant Inspection Assistants (PIAs)

PIAs are not authorised to carry out Animal Health Official Controls. Only OVs or MHIs are authorised to carry out animal health tasks.

8.7.7 Application of special mark

The special mark must be applied to poultry meat from birds originating from the Protection Zone or its packaging under the direction and control of the FSA.

8.7.8 Restricted meat

The term “**restricted meat**” is used to mean:

- meat from poultry originating from a Protection Zone (PZ)
- meat from poultry originating from an area that subsequently became a protection zone and was slaughtered **within** 21 days of the date estimated by a veterinary inspector as being the earliest date of infection at a premise in the relevant zone
- meat that has not been kept separate from the previous 2 categories
- any meat, processed meat or meat products derived from any of the above

The term “**unrestricted meat**” is used to mean:

- meat from poultry originating outside of a PZ
- meat from poultry originating in an area that subsequently became a PZ but was slaughtered at least 21 days before the date estimated by a veterinary inspector as being the earliest date of infection at a premise in the relevant PZ
- any meat falling into the restricted meat category that has been heat treated to at least 70°C throughout by an approved establishment (in accordance with Article 4 of Regulations (EC) 853/2004) becomes unrestricted meat and can be marked with the oval identification mark

Restricted meat bearing the special mark will be dispatched from designated slaughterhouses to approved establishments under a general licence issued by Defra and available at <https://www.gov.uk/guidance/avian-influenza-bird-flu>.

Designated slaughterhouses are required to notify their clients that the slaughterhouse has been designated for receiving and processing poultry from premises within a PZ for avian influenza. The FBO must ensure that the customers to whom the FBO is dispatching any restricted meat are fully informed of the requirement of maintaining the special mark after the meat is cut or processed in the cutting plants and the need of keeping the segregation of the restricted meat from other meat. As a condition of the designation of the

slaughterhouse for Level 2, the FBO must, at least, send the document “Communication lines for FBO’s to their clients”; see Annex 26.

The primary purpose of this special mark is to prevent trade (intra-community or international) of the meat or resultant products.

Establishments that intend to further process meat bearing the special mark don’t need to be designated. Further process in this context means any activity that removes the special mark from the meat / wrapping / packing. When removed, the special mark will need to be replaced by the new establishment’s own special mark all the way down to retail level.

FSA staff will carry out additional unannounced inspections in establishments receiving meat bearing the special mark to ensure that it is processed separate from meat bearing the oval identification mark and that the special mark is maintained.

FSA officials are to check, in particular:

- correct marking (special mark) of the meat obtained from birds originating from the PZ
- separation of special marked meat from oval ID mark meat in cutting establishments
- special marked meat is processed separately from oval ID marked meat
- if special marked meat is mixed with oval ID mark meat, the resulting meat / products must bear the special mark
- special marked meat is wrapped / packed with the special mark of the new establishment where it has been unwrapped / unpacked; the requirements for the correct application of the special mark are equivalent to those for the oval ID mark

When restricted meat is heat treated to at least 70°C throughout in an approved establishment (in accordance with Article 4 of Regulations (EC) 853/2004) to produce unrestricted meat, the HACCP based procedures, document and records – particularly the monitoring records for the heat treatment process and the prevention of cross-contamination must be strictly adhered to.

8.8 Waste disposal

8.8.1 Waste disposal

L2 Designated slaughterhouses slaughtering birds from the PZ:

Special ABP categorisation and disposal rules apply for ABPs originating from birds from the PZ as follows:

- No raw product is allowed to go into pet food production.
- FBO will need a written confirmation from the rendering company that Category 3 ABP material will be subjected to a minimum heat treatment of 70°C.
- If the FBO does not have this confirmation, Category 3 ABPs from birds originating from a PZ must be disposed as Category 2 ABP or above.
- If Category 3 ABPs from birds originating in the PZ get mixed with Category 3 ABP from birds outside the PZ, the above controls apply to the entirety.

Meat processing establishments:

Meat processing establishments handling meat bearing the special mark (birds from PZ) are advised to dispose Cat 3 ABP through a route that involves heat treatment to a minimum of 70°C.

8.9 Disinfection procedures (level 2 designations only)

8.9.1 Disinfection of contaminated litter, manure and slurry

Manure and used bedding must:

- be steam treated at a temperature of at least 70°C
- be destroyed by burning
- be buried deep enough to prevent access by wild birds and animals
- be stacked to heat, sprayed with disinfectant and left for at least 42 days

Slurry must be stored for at least 60 days after the last addition of infectious material unless (in the case of slurry which has been treated in accordance with a veterinary inspector's instructions) a veterinary inspector authorises a shorter storage period.

Manure, litter and bedding which may be contaminated may, if licenced by a veterinary inspector, be moved to:

- a treatment plant carrying out procedures for the destruction of avian influenza virus
- storage prior to destruction
- such other place as the veterinary inspector may license

The transport of such manure, litter or bedding must be in closed, leak-proof vehicles or containers and in accordance with an APHA's Veterinary Inspector's instructions.

8.9.2 General procedures for cleansing, disinfection and treatment

Defra approved disinfectants must be used in live animal areas in accordance with this list:

<http://disinfectants.defra.gov.uk/DisinfectantsExternal/Default.aspx?Module=ApprovalsList> SI

FBOs using a disinfectant or degreasing agent must ensure that they are used as effectively as possible and must, in particular, give consideration to the following in deciding which products to use and how to use them:

- the nature of the premises to be cleansed or disinfected
- the type of vehicle or other thing to be cleansed or disinfected
- any instructions from the manufacturer of the product (or of a veterinary inspector) as to pressure, minimum temperature and required contact time

FBOs cleansing and disinfecting must ensure that:

- bedding, litter and faecal matter are thoroughly soaked with disinfectant
- equipment and installations which would otherwise impair effective cleansing and disinfecting are, where possible, removed or dismantled and either cleansed and disinfected or destroyed (if this is considered necessary by the person carrying out the cleansing and disinfecting or is required by a veterinary inspector)
- the ground, any floors, ramps and walls are washed and cleansed by thorough brushing and scrubbing

When washing with liquids applied under pressure, recontamination of areas or parts previously cleansed must be avoided. Once the FBO has cleansed and disinfected part of any premises, they must avoid recontamination of that part as they cleanse and disinfect other parts.

FBOs carrying out a cleansing or disinfecting procedure must ensure that a written record of that procedure is made, showing the date and time the procedure took place. Such record must be kept at the premises for a period of 12 months.

8.10 Enforcement

8.10.1 Enforcement of licence requirements

The Local Authority (LA) is the enforcing authority for movement controls.

FSA staff are authorised to verify compliance with the conditions of the licence. Any suspected non-compliance must be reported to the LA Trading Standards Department and the local APHA office.

8.10.2 Enforcement of cleaning and disinfection requirements

Additional FSA checks are required to verify compliance with the cleaning and disinfection conditions attached to the licences.

In accordance with the Transport of Animals (Cleansing and Disinfection) (No 3) (England) (Wales) (2003) Order, Scotland (2005) Order, FSA staff must carry out 100% checks of cleansing and disinfection of crates, modules and vehicles used to:

- transport birds from a PZ or SZ
- transport birds to a slaughterhouse situated within a PZ or SZ

Where cleaning and disinfection is unsatisfactory, FSA officers must serve a notice on the person in charge of the vehicle and report the incident to the LA.

Reference: See Chapter 2.2 Section 5 on 'Cleansing and Disinfection'.

8.10.3 Designated slaughterhouses

Where the OV is not satisfied that the FBO is complying with the conditions to be designated, they must advise the FBO to correct the deficiency immediately.

Where this informal approach is not successful, the OV must contact the Approvals Team at the FSA immediately and recommend that the designation is suspended.

8.11 Timesheet codes

8.11.1 GAVI code

Any time spent by FSA officials on additional controls related to avian influenza must be coded as GAVI in the timesheet.

9. Annexes

Annex 1	AN24 - Form A: Notice
Annex 2	AN1 – Report
Annex 3	AN2 – Certificate
Annex 4	BS112 – Licence
Annex 5	BS15B – Notice
Annex 6	EBL9 – Licence
Annex 7	EBL7 – Submission form
Annex 8a	CS117 – TB/EBL FSA consumables for other red meat abattoirs form
Annex 8b	CS118 – TB/EBL FSA consumables for APHA contracted abattoirs
Annex 9	Sample: TB24
Annex10	Sample: TB24c
Annex 11	Sample: TB16b
Annex 12	Sample: TB24b
Annex 13	Sample: TB24g
Annex 14	Sample: TB104
Annex 15	Sample: TB110 Reactor sampling and submission form
Annex 16	Sample: TB50
Annex 17	Description of lesion template
Annex 18	Sample: TB24a

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Annex 19	Sample: TB55a
Annex 20	FSA consumables requisition form - REMOVED
Annex 21	CS115 – DNA equipment form
Annex 22	Material for DNA analysis
Annex 23	Sample Despatch Process
Annex 24	Aujeszky's Disease Training Note
Annex 25	Application for designation of slaughterhouse
Annex 26	Communication lines for FBOs
Annex 27	Traceability of restricted meat
Annex 28	Specific licence – movement of poultry to slaughter from premises in a PZ or SZ