GUIDE TO FOOD HYGIENE & OTHER REGULATIONS FOR THE UK MEAT INDUSTRY

FOREWORD

This Guide to Food Hygiene & Other Regulations for the UK Meat Industry 'or 'Meat Industry Guide' ('MIG') is relevant to those UK food businesses that slaughter animals for human, dress carcases, cut or process meat (see table), particularly those establishments that are subject to approval and veterinary control.

Operations covered in the Guide:

- **Slaughter and dressing of red meat species**
- **Slaughter and dressing of poultry and rabbits**
- **Slaughter and dressing of farmed game**
- **Dressing of wild game in Game Handling Establishments**
- **Cutting of red, white or game meat**
- **Production of Meat Products, Minced Meat, Meat Preparations and Mechanically Separated Meat (MSM)**

Food hygiene legislation emphasises every food business operator's responsibility to produce food safely by applying good hygienic practices and food safety management procedures based on hazard analysis and critical control point (HACCP) principles.

The Food Standards Agency has worked with representatives of the meat industry, other government departments and enforcement bodies to produce a single guide to the legislation to which operators, enforcement officers and policy makers may refer for information and a widely agreed view of good practice. The texts will be reviewed and updated in the same way.

The Agency would like to thank everyone involved in producing this document and invites any user to submit suggested amendments to:
The Editor (Meat Industry Guide), Meat Hygiene & Veterinary Division, Food Standards Agency, 125 Kingsway, London WC2B 6NH; or by e-mail to: MeatIndustryGuide@foodstandards.gsi.gov.uk.

MIG Editor
December 2006

PART ONE

1. CONTENTS

Animal By-Products *–* ***with Edible Co-Products guidance*** *– see:*

www.food.gov.uk/foodindustry/guidancenotes/meatregsguid/coproductbyproductguide

PART ONE

2. AMENDMENT RECORD

2.1 This Guide will be updated when necessary, in consultation with a stakeholder panel. For example, when advice on good practice, government policy or legislation changes. Serially numbered amendments will be issued with an updated copy of this page.

2.2 **Guide holders should record the insertion of new page(s) on the amendment sheet below √.**

Amendment No.	Chapter	Amendments	Amended Date	√
1.	Part Two, Chapter 2, page 12 (Water Testing – Microbiological Parameters)	Third bullet point, add "(total coliforms)" after "Coliform bacteria".	Aug 2007	
2.	Part Two, Chapter 2, page 12 (Water Testing – Microbiological Parameters)	Delete whole of 6th bullet point, "Sulphite reducing Streptococci".	Aug 2007	
3.	Part Two, Chapter 2, page 12 (Water Testing – Microbiological Parameters)	7th bullet point, "Clostridium perfringens (including spores)…..", after "surface water", delete "e.g. boreholes".	Aug 2007	
4.	Part Two, Chapter 2, page 13 (Interpretation of Results)	At 2nd bullet point, "TVC at 37ºC…….. up to 10 per ml", delete "10" and insert "20"	Aug 2007	
5.	Part Two, Chapter 2, page 14	Sentence beginning "Coliform bacteria", add the words "(total coliforms)" after the word "bacteria" and before the dash.	Aug 2007	
6.	Part Two, Chapter 2, page 14	Sentence beginning "Enterococci and…." delete "sulphite reducing Streptococci" and replace it with "Clostridium perfringens".	Aug 2007	
7.				
8.				
9.				
10.				
11.				
12.				
13.				

PART ONE

3. HOW TO USE THE MEAT INDUSTRY GUIDE

3.1 Each chapter in Parts Two and Three of this Guide is set out in a similar way:

Section		Page
X.	**Contents**	1
X.1	**Why is [e.g. water supply] important?**	2
X.2	**General information**	3
X.3.1	**What are the legal requirements for [water supply]?**	4
	A. Legislation	4
	B. Legislation	6

Each section quotes the legal text and the regulation that it comes from. Each point has a number (e.g. **A1**) for reference in the 'Operator's Obligations' column that appears below

A1. There is to be an adequate supply of potable water.
852/2004 Annex II Water Supply Chapter VII: point 1a

OPERATOR'S OBLIGATIONS	*ADVICE*
	Supply of Potable Water
• **Provide an adequate potable water supply.**	***Gives advice on how the operator's legal obligations can be met. Other practices may also comply.***

X.3.2	**What are the official control requirements?**	9

Audits by officials of good hygiene practices shall verify that meat plant operators apply procedures concerning [e.g. water supply] continuously and properly.
854/2004 Article 4 point 4

X.3.3	**Applying procedures continuously and properly**	10

OPERATOR'S OBLIGATIONS	*ADVICE*
	Operator's Responsibilities
• **Operator responsibility includes applying and verifying the company's procedures.**	***Gives advice on delegation of this responsibility, management checks to verify that company procedures have been followed and corrective actions that should be considered if those procedures fail.***

PART ONE

4. INTRODUCTION TO THE REGULATIONS

This Guide sets out the legal obligations that apply to food business operators in the meat sector and provides advice on how these obligations can be met. Operators are not obliged to follow the advice in the Guide, as other ways of achieving compliance with the law may be equally valid.

The Guide is not an authoritative interpretation of the law as only the courts can make such decisions.

EC FOOD HYGIENE REGULATIONS

4.1 Three EU Food Hygiene Regulations have applied in all Member States from 1 January 2006, replacing 17 directives, including eight relating specifically to meat. These regulations are [1]:

- **Regulation 852/2004** - Hygiene of Foodstuffs [2].
- **Regulation 853/2004** - Specific Hygiene Requirements for Food of Animal Origin [3].
- **Regulation 854/2004** - Organisation of Official Controls on Products of Animal Origin intended for human consumption [4].

Implementation of some requirements has been delayed by up to four years by:

- **Regulation 2076/2005** - Transitional Arrangements [5]

Further Legislation

4.2 As changes are made to the Regulations, information is placed on the Agency website (www.food.gov.uk) and the need to amend this Guide appropriately will be considered with a stakeholder group. See the Annex at the end of this chapter.

Regulation 852/2004[2] - Hygiene of Foodstuffs

4.3 Regulation 852/2004 sets out general hygiene rules in the form of objectives for 'good hygienic practices' to be applied by all food businesses to protect consumers. These include structural, cleaning, maintenance and training requirements. The combined implementation of these 'pre-requisite' hygiene requirements and permanent procedures based on hazard analysis and critical control point (HACCP) principles should together form the operator's 'food

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1 View EU legal texts on this website: http://europa.eu.int/eur-lex/en/search/search_lif.html
2 Regulation EC No. 852/2004 published in the Official Journal L226 on 25.6.2004, pages 3-21
3 Regulation EC No. 853/2004 published in the Official Journal L226 on 25.6.2004, pages 22-82
4 Regulation EC No. 854/2004 (OJ L191, 28.5.2004) as amended by Regulation 882/2004 published in the Official Journal L226 on 25.6.2004, pages 83-127.

safety management system'. The Guide aims to provide risk-based, proportionate advice on the facilities and procedures that can meet the requirements.

Regulation 853/2004[3] - Specific Hygiene Requirements for Food of Animal Origin

4.4 Annex III of Regulation 853/2004 includes additional structural and operational requirements for meat production. The Guide provides advice on complying with the meat-specific requirements for:

- Slaughter and cutting of meat of domestic ungulates *(Section I*)
- Slaughter and cutting of meat from poultry & lagomorphs *(Section II)*
- Meat of Farmed Game *(Section III)*
- Wild Game Meat *(Sections IV)*
- Minced Meat, Meat Preparations & MSM *(Section V)*
- Meat Products *(Section VI)*

Separate guidance on the processing of the following edible co-products (and animal by-products) is available on www.food.gov.uk/foodindustry/guidancenotes/meatregsguid/coproductbyproductguide

- Rendered Animal Fats & Greaves *(Section XII)*
- Treated Stomachs, Bladders & Intestines *(Section XIII)*
- Gelatine *(Section XIV)*
- Collagen *(Section XV)*

Regulation 854/2004[4] - Official Controls on Products of Animal Origin

4.5 Regulation 854/2004 includes the specific requirements for inspection and auditing duties of official veterinarians (OVs) and official auxiliaries (meat inspectors in UK). The MHS and DARD Manuals for Official Controls [6] contain operational instructions for staff, including the task of auditing of HACCP and good hygiene practices to verify that food business operators apply procedures 'continuously and properly' [7]. Officials may use the Guide when auditing an operator's compliance with food hygiene and the other legislation that it covers, but should always refer back to the original legislation.

Regulation 2076/2005[5] - Transitional Arrangements

4.6 Regulation 2076/2005 allows stocks of food of animal origin to continue to be placed on the national market until licensed establishments have been approved, stocks of pre-printed labels to be used until the end of 2007 and existing marking equipment to be used until 2009. It sets out a staged approach to implementing food chain information relating to animals sent

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[5] Regulation EC No. 2076/2005 published in the Official Journal L338 on 22.12.2005, pages 83-88

[6] Electronic copies of MHS and DARD Manual of Official Controls are available at:
(i) MHS: www.food.gov.uk/enforcement/meathyg/mhservice/
(ii) DARD: www.dardni.gov.uk/index/fisheries-farming-and-food/food-and-feed-safety-and-quality/meat-inspection/meat-inspection-vphu-manual-of-official-controls.htm

for slaughter; and continues the requirements for veterinary certification for farmed game mammals and compositional and labelling requirements for minced meat. The Regulation also allows a transitional period for the training of slaughterhouse staff assisting with official controls in poultry slaughterhouses and the certification of those plants.

GENERAL FOOD LAW REGULATION

Regulation 178/2002 [8]

4.7 In common with other food businesses, all meat plant operators have an obligation to keep supplier and customer records, see Part Two Chapter 13 (Food Traceability etc) of this Guide.

MICROBIOLOGICAL CRITERIA REGULATION

Regulation 2073/2005 [9]

4.8 Microbiological criteria are set for products of animal origin including carcases of cattle, sheep, pigs, goats and horses, broiler chickens and turkeys, and for minced meat, meat products, and meat preparations. See Part Three Chapter 2 of this Guide and www.ukmeat.org.

ANIMAL WELFARE AND OTHER LEGISLATION

4.9 Certain meat plant operators also have to meet requirements for animal welfare, animal identification, TSE testing and other legislation. These are referred to in appropriate chapters of this Guide. Animal health legislation is the responsibility of Defra and equivalent bodies in Scotland, Wales and Northern Ireland.

UK REGULATIONS

4.10 See PART ONE Chapter 5.4.

EUROPEAN COMMISSION GUIDANCE [10]

4.11 The Commission has published guidance on issues relating to the implementation of Regulations 852/2004 and 853/2004 and to the application of HACCP principles, and this has been taken into account in the Guide.

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[7] Regulation 854/2004 Article 4 points 2, 3, 4 and 5
[8] Regulation EC No. 178/2002 published in the Official Journal L31 on 1.2.2002, pages 1-24
[9] Regulation EC No. 2073/2005 published in the Official Journal L338 on 22.12.2005, pages 1-26
[10] Guidance available at http://europa.eu.int/comm/food/food/biosafety/hygienelegislation/index_en.htm

PART ONE

5. GENERAL OBLIGATIONS OF OPERATORS & OFFICIAL CONTROLS

5.1 The safe production of food is a fundamental legal obligation of the food business operator (see Section A below) and Competent Authorities have a duty to undertake official controls (see Section B below) and enforce the regulations.

5.2 Operators are expected to apply good hygiene practices and food safety management procedures to control food safety hazards (see Chapter 6). These procedures should cover:

- Adequate training and/or instruction of staff;
- Working instructions for staff, including what to do in the case of foreseeable disruptions to normal working, such as breakdowns or contamination incidents;
- Periodic verification checks to see if working instructions are being followed continuously and properly;
- Corrective actions to restore control if food safety management procedures fail; including dealing with any contaminated product; establishing the underlying cause of a failure; preventing similar incidents in the future;
- Confirming (verifying) that company procedures meet legal requirements.

5.3 This Guide makes suggestions on training, monitoring and maintaining hygiene and food safety management procedures.

UK FOOD HYGIENE REGULATIONS

5.4 The EU regulations are applied in the UK by:

- The Food Hygiene (England) Regulations 2006 (SI 2006/14)[11]
- The Food Hygiene (Scotland) Regulations 2006 (SSI 2006/3)[12]
- The Food Hygiene (Wales) Regulations 2006 (SI 2006/31 (W.5))[13]
- The Food Hygiene Regulations (Northern Ireland) 2006 (SR 2006/3)[14]

Copies are available online from www.opsi.gov.uk. Printed copies are available from The Stationery Office (www.tso.co.uk), telephone 0870 600 5522 or from: TSO Orders/Post Cash Dept., PO Box 29, Norwich NR3 1GN.

[11] www.opsi.gov.uk/si/si2006/20060014.htm
[12] www.opsi.gov.uk/legislation/scotland/ssi2006/20060003.htm
[13] www.opsi.gov.uk/legislation/wales/wsi2006/20060031e.htm
[14] www.opsi.gov.uk/sr/sr2006/20060003.htm

5.5 These regulations make provision for the enforcement and execution of these Regulations and of the Community Regulations and provide for enforcement measures (hygiene improvement notices, hygiene prohibition orders, hygiene emergency prohibition notices and orders, and remedial action notices and detention notices) to be available in respect of a food business operator.

5.6 These regulations provide that a person who contravenes or fails to comply with specified provisions of Regulation (EC) No. 852/2004 or Regulation (EC) No. 853/2004 is guilty of an offence; but provides a defence, that the accused prove that he took all reasonable precautions and exercised all due diligence to avoid the commission of the offence. They also provide powers of entry for authorised officers of an enforcement authority; penalties for offences and rights of appeal.

ENFORCEMENT POLICY

5.7 The MHS' Enforcement Policy is set out in their Manual for Official Controls available electronically at www.food.gov.uk/foodindustry/meat.

5.8 The DARD Veterinary Service prosecution policy is set out in the Prosecutions Policy booklet and referred to in the Manual for Official Controls. The Policy is available electronically at www.dardni.gov.uk/vetservice/enforcement/index.htm.

A. FOOD BUSINESS OPERATOR'S OBLIGATIONS

- **'Food business' means any undertaking whether for profit or not and whether public or private, carrying out any of the activities related to any stage of production, processing and distribution of food.**
- **'Food business operator' means the natural or legal persons responsible for ensuring that the requirements of food law are met within the food business under their control.**
- **Definitions of other terms are set out in PART ONE Chapter 8.**

A1. Food … business operators at all stages of production, processing, and distribution within the businesses under their control shall ensure that foods … satisfy the requirements of food law which are relevant to their activities and shall verify that such requirements are met.

178/2002 Article 17

A2. This Regulation [852/2004] lays down general rules for food business operators on the hygiene of foodstuffs, taking particular account of the following principles:
(a) primary responsibility for food safety rests with the food business operators;
(d) general implementation of procedures based on the HACCP principles, together with the application of good hygiene practice, should reinforce food business operators' responsibility.

852/2004 Article 1

A3. Food business operators shall ensure that all stages of production, processing and distribution of food under their control satisfy the relevant hygiene requirements laid down in Regulation 852/2004.

852/2004 Article 3

A4. Food business operators carrying out any stage of production, processing and distribution of food after [primary production] shall comply with the general hygiene requirements laid down in Annex II [of Regulation 852/2004] and any specific requirements provided for in Regulation 853/2004.

852/2004 Article 4 point 2

A5. Food business operators may use the National/Community guides as an aid to compliance with their obligations under this Regulation.

852/2004 Article 4 point 6

A6. Food business operators shall put in place, implement and maintain a permanent procedure or procedures based on the HACCP principles.

852/2004 Article 5 point 1

A7. Food business operators shall:
(a) provide the competent authority with evidence of their compliance with paragraph 1 in the manner that the competent authority requires, taking account of the nature and size of the food business;
(b) ensure that any documents describing the procedures developed in accordance with this Article are up-to-date at all times;
(c) retain any other documents and records for an appropriate period.

853/2004 Article 5 point 4

See also: Annex 1 of Chapter 7 (Approvals) & PART TWO Chapter 13 (Food Traceability)

B. OFFICIAL CONTROL REQUIREMENTS

- **'Official control' means any form of control that the competent authority performs for the verification of compliance with feed and food law, animal health and animal welfare rules.**
- **Definitions of other terms are set out in PART ONE Chapter 8.**

B1. The competent authority shall carry out official controls to verify food business operators' compliance with the requirements of:
(a) Regulation (EC) No 852/2004;
(b) Regulation (EC) No 853/2004; and
(c) Regulation (EC) No 1774/2002 [Animal By-products].

B2. The official controls referred to in paragraph 1 shall include:
(a) audits of good hygiene practices and hazard analysis and critical control point (HACCP)-based procedures;
(b) the official controls specified in Articles 5 to 8; and
(c) any particular auditing tasks specified in the Annexes.

B3. Audits of good hygiene practices shall verify that food business operators apply procedures continuously and properly concerning at least:
(a) checks on food-chain information;
(b) the design and maintenance of premises and equipment;
(c) pre-operational, operational and post-operational hygiene;
(d) personal hygiene;
(e) training in hygiene and in work procedures;
(f) pest control;
(g) water quality;
(h) temperature control; and
(i) controls on food entering and leaving the establishment and any accompanying documentation.

B4. Audits of HACCP-based procedures shall verify that food business operators apply such procedures continuously and properly, having particular regard to ensuring that the procedures provide the guarantees specified in Section II of Annex II to Regulation (EC) No 853/2004. They shall, in particular, determine whether the procedures guarantee, to the extent possible, that products of animal origin:
(a) comply with microbiological criteria laid down under Community legislation;
(b) comply with Community legislation on residues, contaminants and prohibited substances; and
(c) do not contain physical hazards, such as foreign bodies.

When, in accordance with Article 5 of Regulation 852/2004, a food business operator uses procedures set out in guides to the application of HACCP principles rather than establishing its own specific procedures, the audit shall cover the correct use of these guides.

B5. Verification of compliance with the requirements of Regulation 853/2004 concerning the application of identification marks shall take place in all establishments approved in accordance with that Regulation, in addition to verification of compliance with other traceability requirements.

B6. In the case of slaughterhouses, game handling establishments and cutting plants placing fresh meat on the market, an official veterinarian shall carry out the auditing tasks referred to in paragraphs 3 [B2] and 4 [B3].

B7. When carrying out auditing tasks, the competent authority shall take special care:
(a) to determine whether staff and staff activities in the establishment at all stages of the production process comply with the relevant requirements of the Regulations referred to in paragraph 1(a) and (b). To support the audit, the competent authority may carry out performance tests, in order to ascertain that staff performance meets specified parameters;
(b) to verify the food business operator's relevant records;
(c) to take samples for laboratory analysis whenever necessary; and
(d) to document elements taken into account and the findings of the audit.

B8. The nature and intensity of auditing tasks in respect of individual establishments shall depend upon the assessed risk. To this end, the competent authority shall regularly assess:
(a) public and, where appropriate, animal health risks;
(b) in the case of slaughterhouses, animal welfare aspects;
(c) the type and throughput of the processes carried out; and
(d) the food business operator's past record as regards compliance with food law.

854//2004 Article 4 points 2 – 9

For other official controls relating to fresh meat, see also specific requirements in Regulation 854/2004, Annex I [see Footnote 1]

PART ONE

6. HAZARDS IN MEAT PRODUCTION

- **A hazard is 'a biological, chemical or physical agent in, or condition of, food with the potential to cause an adverse health effect'.** ***(Codex Alimentarius)***

6.1 Hazards may be introduced, increased, or controlled at each step in meat handling operations. Establishing what those hazards are in a business, is a key step in the HACCP (Hazard Analysis and Critical Control Point) process.

Biological Hazards/ Bacteria

6.2 The main hazards that can occur in meat are harmful food poisoning bacteria, like *E.coli* O157, Salmonella and Campylobacter. The Annex at the end of this Chapter has more details. These harmful bacteria live in the guts of healthy animals, are shed in their faeces and can be carried on the hide, fleece, feathers or skin. The risks from these hazards are that:

- Food-poisoning bacteria can be transferred to meat/offal during dressing;
- Food-poisoning bacteria from e.g. worker's hands, tools, working surfaces, equipment, water, pests, cleaning equipment, packaging or other meat/offal, can be transferred on to raw meat/offal and ready-to-eat product;
- Food-poisoning bacteria on meat/offal can grow during production, storage or transport if the conditions, particularly temperature, are suitable.

6.3 Although thorough cooking kills most food poisoning bacteria, meat may be handled many times before it is cooked and the bacteria on it may be spread to other foods that may not be cooked before being eaten. When conditions are ideal, certain types of bacteria can double their numbers every 20 to 30 minutes. Depending on the organism, the number of bacteria needed to cause illness in a healthy adult may vary from 1,000,000 to as low as 10 (*E. coli* O157). Food business operators and consumers need to take precautions that include maintaining temperature controls and keeping raw meat separate from cooked meat and other ready to eat foods.

Biological Hazards/ BSE

6.4 Research has shown that there may be a direct link between BSE and the appearance of variant Creutzfeld-Jacob Disease (vCJD) in humans. Like BSE in cattle, vCJD is always fatal in humans (as at 1 October 2006 there have been 156 deaths in the UK from definite or probable vCJD). Those parts of animals most likely to contain BSE infectivity are known as Specified Risk Material (SRM) and are banned from the food supply. The hazards associated with SRM are that:

- SRM is not correctly or completely removed from the carcase so consumers could potentially be exposed to BSE infectivity.
- Cross contamination of other carcases may occur during SRM removal
- SRM is not correctly disposed of and may be diverted for food use.

Biological Hazards/ Parasites

6.5 Trichinosis is a parasitic disease caused by roundworms belonging to the genus *trichinella*. Larvae may survive for prolonged periods in muscle tissues and, if infected meat is eaten raw or undercooked, they may migrate and encyst in human musculature and cause severe illness. Susceptible animals include pigs, wild boar, horses, rodents and foxes. Testing indicates that, while found in animals in continental Europe, the parasite has not been found in domestic pigs or foxes for over 25 years, but it is a hazard that needs to be considered in feral wild boar.

6.6 Cysticercus bovis is a parasite (*Taenia saginata*) with cattle as its main intermediate host where the larval form in these animals is a cysticercus in the muscles and heart. Man can become infected by ingestion of undercooked or raw meat, when the parasite can become attached to the intestinal wall and grow into the mature adult tapeworm. Infections are often completely asymptomatic, but in some cases a degree of pathology may be seen, most seriously, intestinal blockage.

Chemical Hazards

6.7 Possible sources of chemical contamination of animals include residues of veterinary medicines or pesticides if conditions of use have not been followed. Possible sources of chemical cross-contamination of meat/offal during processing, storage or transport include contact with cleaning and disinfecting agents, lubricants, or pest baits used in the meat plant or from a reaction between packaging material and the product.

Physical Hazards - 'foreign bodies'

6.8 Possible sources of physical hazards that may occur in animals include material such as metal or string that has been eaten or broken needles from veterinary treatment. Possible sources of physical contamination during meat production include metal from rails, clips, tags, machinery; knife blades, grease, oil, paint flakes, rust, plastic; rubber bands, jewellery; pens; buttons, hair, glass splinters; bone splinters; wood splinters; sawdust; dust and dead insects, animal droppings.

Conditions of Food/ Allergens

6.9 Some people have an allergy to meat but 90% of allergic reactions to food in the UK are caused by eight of the twelve foods covered by the requirements for labelling[15] namely: milk, eggs, peanuts (groundnuts), nuts, fish, shellfish, soyabeans, cereals, celery, mustard, sesame seed and sulphur dioxide.

[15] Food Labelling (Amendment) (No.2) Regulations 2004 implementing Directive 2003/89/EC

BACTERIAL CAUSES OF FOODBORNE INFECTION

(In alphabetical order – see further details below)

AGENT	NORMAL INCUBATION PERIOD	NORMAL DURATION	MAIN CLINICAL SYMPTOMS	COMMONLY ASSOCIATED FOODS
1. Campylobacter spp.	3 - 5 days	2-7 days	Abdominal pain, diarrhoea (sometimes bloody), headache, fever	Poultry, cooked meats, milk
2. Clostridium botulinum	12 - 36 hours	Extended	Swallowing difficulties, respiratory failure	Preserved foods, e.g. canned, bottled
3. Clostridium. perfringens	10 - 12 hours	24 hours	Abdominal pain, diarrhoea	Stews, roasts
4. *E.coli* O157	12 hours - 10 days	Possibly extended	Abdominal pain, diarrhoea (sometimes bloody). May lead to kidney failure	Beefburgers, meat, dairy products
5. Listeria monocytogenes	3 - 21+ days	Varies	Fever, headaches, spontaneous abortion, meningitis	Soft cheeses, patés, poultry meat
6. Salmonella spp.	12 - 36 hours	2-20 days	Abdominal pain, diarrhoea, fever, nausea	Meat, poultry, eggs, dairy products
7. Staphylococcus aureus	2 - 6 hours	12-24 hours	Vomiting, abdominal pain, diarrhoea	Cooked meat, human source
8. Yersinia enterocolitica	3 - 7 days	1-3 weeks	Acute diarrhoea, abdominal pain, fever and vomiting	Pig meat products

See also the Health Protection Agency website: www.hpa.org.uk/infections/topics_az/list.htm

1. Campylobacter spp

The likely cause of many cases of 'travellers' diarrhoea. In addition to the foods listed above, pigs, cattle, sheep, birds, dogs, cats and other pets can be reservoirs of infection. It can survive vacuum packing but is destroyed by thorough cooking. ***Temperature range for growth*** *is 28-45°C all species grow at 37C but they do not grow below 28°C. Will persist in chill and frozen conditions.*

2. Clostridium botulinum

This organism is found in the soil and aquatic environments as well as the intestinal tract of animals and fish. Food poisoning occurs when the spores of Clostridium botulinum have germinated in a foodstuff and the bacteria then grow and produce toxin that is consumed when food is eaten. The spores are very heat resistant so a temperature of 121°C for three minutes is required to destroy them. Outbreaks have involved inadequately cooked canned products, or damaged cans. Inadequately processed low-acid foods and vacuum-packed products have been implicated. ***Temperature range for growth*** *is about 3°-50°C, with an optimum between 20°-30°C.*

3. Clostridium perfringens

Found everywhere in the environment: in soil, the gut of man and animals. These organisms form spores which are resistant to heat. They can be transmitted by eating contaminated food, usually stews, curries, gravies that have not been properly heated or re-heated. Spores are very likely to revert to live, vegetative bacteria and multiply during slow cooking and re-heating. ***Temperature range for growth*** *is about 20°-50°C, with an optimum between 37°- 45°C.*

4.* Escherichia coli *(Entero haemorrhagic E. coli O157)

There are several strains of *E.coli* classified by groups. The group causing the symptoms described consists of the haemorrhagic strains of *E.coli*. Many produce a toxin called a verocytotoxin and these are known as VTEC, the most common being *E.coli* O157:H7. Entero haemorrhagic *E.coli* is an important cause of both haemorrhagic colitis and haemolytic uraemic syndrome. The latter is the most common cause of acute kidney failure in children. *E.coli* lives in the intestines of cattle and can contaminate meat during slaughter and dressing. An outbreak in Scotland in 1996 resulted in 21 deaths. ***Temperature range for growth -*** *growth can occur at 7°-44.5°C, and possibly as low as 4°C with an optimum for VTEC around 37°C. Acid tolerant, will persist in frozen and chill conditions.*

5. Listeria monocytogenes

Widely distributed in the environment in soil, foilage water and sewage*, Listeria* can be excreted by human and animal carriers. Any product of animal origin can harbour the bacterium. Often found in chilled or delicatessen products such as soft cheeses, paté, cook-chill meals and ready to eat sausages. A low temperature, salt tolerant pathogen, this poses special problems for food handling and storage as standard refrigeration will not inhibit growth and the cells can survive for long periods even in unfavourable conditions. Can become established in food production environments surviving in biofilms. ***Temperature range for growth -*** *growth can occur as low as 1°-3°C and up to 42°C*

6. Salmonella spp.

Salmonellosis is a major cause of food borne human gastroenteritis The organism is found widely in the environment and in the gut of animals and man. Farm animals, wild birds and domestic pets are common reservoirs. Infection is most commonly associated with the consumption of meat (especially poultry and pork) and eggs and their products. Contamination commonly results from raw food coming into contact with ready-to-eat products. ***Temperature range for growth*** *is between 6°-45°C.*

7. Staphylococcus aureus

The organism is found on man, in cuts, pimples, boils, sores, on the hands and in the nose. Cows with infected udders also carry the organism. Transmitted to food by contaminated hands or equipment, or to milk from infected cows. A heat resistant toxin forms in the food at ambient temperature following growth of the bacteria. Illness is caused by ingestion of the toxin. Severity of illness may depend on how much toxin has developed. ***Temperature range for growth*** *is usually between 7°-48°C with toxin being produced at between 10°-46°C.*

8. Yersinia enterocolitica

Many members of the genus can grow under extremes of temperature and are well adapted to survive in the environment. Found in the guts of many species of wild and domestic animals and birds. Transmitted by contaminated food and water and direct contact with infected animals. Person to person spread may occur. Particularly associated with raw pork and pork products. ***Temperature range for growth*** *is 0°-44°C with an optimum range of 32°-34°C.*

PART ONE

7. APPROVAL OF FRESH MEAT ESTABLISHMENTS

7.1 Establishments handling products of animal origin normally require approval unless they benefit from permitted exemptions. Slaughterhouses, cutting plants and game handling establishments require veterinary control and must (together with co-located cold stores, minced meat, meat preparations and meat products plants) be approved by the Food Standards Agency (FSA). See Annex for legal obligations.

Establishments licensed under the meat hygiene regulations up to 31 December 2005

7.2 Establishments licensed under the meat hygiene regulations and operating immediately before 1 January 2006 are entitled to continue operating until 'the first subsequent inspection' under the Food Hygiene Regulations. This first inspection does not refer to routine visits by the official veterinarian, but to a formal approval assessment being carried out by the FSA or DARD in Northern Ireland. Conversely, establishments not operating immediately before 1 January 2006 require approval or conditional approval before resuming operations after that date, unless the closure was the result of seasonal operation. Each case will be considered in its merits.

7.3 Establishments licensed as low throughput plants before 2006 will not be able to export until they are approved under the new regulations. Any such plant intending to export should inform the FSA that it requires an early assessment.

7.4 An application form is not required, but operators may be asked to provide or confirm any information relevant to the approval of the establishment.

Establishments newly subject to approval

7.5 Establishments newly subject to approval, such as certain catering butchers and wild game handling establishments which were operating immediately before 1 January 2006 are also entitled to continue operating until 'the first subsequent inspection' under the Food Hygiene Regulations. This first inspection does not refer to routine enforcement visits but to a formal approval assessment being carried out by the FSA or DARD in Northern Ireland. Until then, they will remain subject to enforcement by the Food Authority.

7.6 Plants will not be able to export until they are approved. Any such plant that intends to export should inform the FSA that it requires an early approval assessment.

7.7 An application form must be submitted to the FSA (see 7.9 below).

New establishments

7.8 New establishments requiring approval cannot start operating until granted conditional or full

approval. They must submit an application form. Approval visits will be carried out as soon as practicable by the FSA or by DARD officers in Northern Ireland to allow establishments to begin operating within the shortest possible period.

Approval procedures

- **Definitions of terms relevant to approval are set out in PART ONE Chapter 8**

7.9 Approval procedures are set out in Article 31.2 of the Official Controls Regulation 882/2004. Following assessment:

- *if the establishment complies with all the relevant requirements of food law (structural, equipment and operational requirements), full approval will be granted;*
- *if the establishment meets only the infrastructure and equipment requirements, conditional approval may be granted;*
- *following a new assessment carried out within three months of conditional approval, full approval will be granted if the establishment complies with operational requirements and has maintained compliance with infrastructure and equipment requirements;*
- *if clear progress has been made but the establishment is still not fully compliant, conditional approval may be extended up to a maximum of 6 months in total;*
- *if conditional approval or approval is refused, establishments have the right to appeal to a magistrates' court.*

7.10 An approval application form and guidance for applicants may be obtained from the FSA website at www.food.gov.uk/foodindustry/meat/meatplantsprems/meatpremlicence.

Contact:

England:
Ms Angela Bull
Food Standards Agency
3rd Floor, Aviation House
125 Kingsway,
London WC2B 6NH
Tel: 020-7276-8366
Email:angela.bull@foodstandards.gsi.gov.uk

Scotland:
Ms Karen Robertson
Food Standards Agency
6th Floor, St Magnus House,
25 Guild St, Aberdeen AB11 6NJ
Scotland
Tel: 01224-285168
Email:Karen.Robertson@foodstandards.gsi.gov.uk

Wales:
Ms Trish Davis
Food Standards Agency
11th Floor, Southgate House
Wood St, Cardiff CF10 1EW
Wales
Tel: 029-2067-8959
Email:trish.davis@foodstandards.gsi.gov.uk

Northern Ireland:
Ms Andrea McCloskey
Food Standards Agency
10A-10C Clarendon Road
Belfast BT1 3BG
Northern Ireland
Tel: 02890-417705
Email:andrea.mccloskey@foodstandards.gsi.gov.uk

Which operations / establishments require approval?

7.11 Approval is required for all operating meat establishments listed below unless specifically exempt from the Regulations (see 7.13 below):

OPERATION	APPROVAL
Slaughter of domestic ungulates: bovine, porcine, ovine and caprine animals and solipeds. ▪ cattle (*including Water Buffalo and Bison*) ▪ pigs ▪ sheep ▪ goats ▪ domestic solipeds (*horses*) ▪ farmed game mammals *(deer, wild boar)* ▪ ratites (*ostriches*) **Dressing of:** ▪ farmed deer, farmed wild boar, bison and ratites slaughtered at the place of production ▪ large wild game (if also approved as a Game Handling Establishment)	**Red meat Slaughterhouse (by species)** **Note**: An establishment may be approved as a slaughterhouse without slaughter facilities if its activities are limited to the dressing of carcases.
Slaughter of: ▪ poultry ▪ lagomorphs (*rabbits, hares and rodents*) ▪ ratites *(ostriches)* **Dressing of:** ▪ delayed eviscerated poultry, ▪ geese and ducks reared for foie gras ▪ ratites *(ostriches)* slaughtered at place of production ▪ wild game birds and lagomorphs (if also approved as a Game Handling Establishment)	**White meat Slaughterhouse (by species)**
Slaughter at the place of origin of: ▪ poultry ▪ farmed deer and wild boar ▪ farmed ratites *(ostriches)* ▪ bison (when necessary)	**Approved Farm Slaughter Facilities**
Dressing of: ▪ wild game *(*large: *deer, feral wild boar)* (small: *game birds, lagomorphs*) **Cutting of:** ▪ wild game	**Game Handling Establishment**
Cutting of: ▪ meat from domestic ungulates for supply as cut meat	**Red meat Cutting Plant**
Cutting of: ▪ meat from poultry and lagomorphs for supply as cut meat	**White meat Cutting Plant**

TABLE CONTINUED OVERLEAF

OPERATION	APPROVAL
Storage of: • red, white or game meat and meat products	**Cold Store** SEE TABLE FOOTNOTE
Re-wrapping of: • red, white or game meat and meat products	**Re-wrapping Establishment** SEE TABLE FOOTNOTE:
Production of: ▪ Minced meat, meat preparations and mechanically separated meat (MSM), ▪ Meat products	**Minced meat / Meat preparation / Mechanically Separated Meat / Establishment** SEE TABLE FOOTNOTE
Production of: ▪ Rendered animal fats and greaves ▪ Treated stomachs, bladders and intestines ▪ Gelatine ▪ Collagen	**Processing Plant**
Intermediate Storage of: ▪ Rendered animal fats and greaves	**Intermediate Storage Plant**
Collection Centre & Tanneries: ▪ Gelatine ▪ Collagen	**Collection Centre / Tannery**
FOOTNOTE: Approved by FSA if situated on the same site as a slaughterhouse, cutting plant or game handling establishment, otherwise approved by the Food Authority.	

- **Note on Species**
  - **Domestic ungulates** - cattle, sheep, goats, pigs, bison, water buffalo and *solipeds* (horses, asses and mules)
  - **Poultry** - farmed birds, (e.g. chicken, turkey, ducs, geese, guinea fowl, quail) but excluding *ratites* (flightless birds e.g. ostrich, rhea, emu)
  - **Farmed Game** - farmed deer *(cervidae),* farmed wild boar *(suidae)* and flightless birds *(ratites)*
  - **Wild game (large)** - wild deer *(cervidae)* and feral wild boar *(suidae)*
  - **Wild game (small)** - game birds (e.g. pheasant, partridge, pigeon, grouse) and *lagomorphs* (rabbits, hares and rodents)

- **Note on Farmed Game**

  Farmed game and bison may be slaughtered at the place of origin with the authorisation of the Agency, subject to conditions. These conditions are similar to those previously required of Farmed Game Handling Facilities. Farmed game slaughtered at the place of origin must be transported to a slaughterhouse for dressing. Premises previously licensed as Farmed Game

Processing Facilities require approval as slaughterhouses (but without slaughter facilities), subject to the condition that they only dress carcases.

- **Note on Game Handling Establishments**

  Establishments that process wild game for the national market only have been subject to enforcement by food authorities (See 7.5 - 7.7 above). The regulations now require approval of establishments and veterinary post-mortem inspection but allow an application to be made to vary the presence of the competent authority.

  The Agency expects to make an application to the EU Commission to vary the requirements for game handling establishments producing small quantities (0.5 tonnes per week) of wild game meat from carcases sourced locally, examined by 'trained persons' and sold with a distinctive identification mark. A two year pilot would be proposed.

  Retail butchers taking in small quantities of wild game carcases for processing into wild game meat for sale to the final consumer will not require approval. They will also be able to supply other retailers or caterers within the 'marginal' and 'localised' thresholds (see 7.13 box A below).

- **Note on Wholesale Markets**

  Wholesale meat markets will continue to be approved as a single establishment. While the Regulations allow the allocation of secondary numbers to units within a market, there is currently no intention to use this option in the meat sector.

- **Note on Cold Stores**

  There is no requirement for veterinary control of meat cold stores and food authorities are responsible for enforcement except where cold stores are co-located with approved slaughterhouses, cutting plants or game handling establishments. If veterinary certification is required, it is for the operator to arrange through the Divisional Veterinary Manager of the State Veterinary Service.

  European Commission guidance advises that cold stores require approval in so far as they are used in relation to activities for which Annex III of Regulation 853/2004 lays down requirements. Food authorities are responsible for the approval of stand-alone meat cold stores.

- **Note on Cutting of Meat for Manufacture into Meat Products etc.**

  Establishments that cut raw meat exclusively for the manufacture of meat products, minced meat, meat preparations or mechanically separated meat, require approval in respect of their manufacturing activities. They also need to comply with the requirements of Annex III of Regulation 853/2004, including those relating to cutting plants. However, because they do not place the meat they cut on the market as fresh meat they will not require approval as a 'cutting plant' and therefore do not require veterinary control.

Significant Changes in Activity

7.12 Operators are required to ensure that the competent authority has up-to-date information on establishments, including notifying any significant change in activities and the closure of establishments (*852/2004 Article 2).*

What are the Exemptions from Approval?

7.13 Regulation 853/2004 provides certain exemptions from approval.

A. RETAIL ESTABLISHMENTS

The exemption is for retail establishments that supply food of animal origin to the final consumer, or supply other establishments (including caterers) on *a '*marginal, localised and restricted' basis *(853/2004 Article 1 Scope point 5).*

Recital 13 of Regulation 853/2004 interprets 'marginal' as 'a small part of the establishment's business', but subsequent EU Commission guidance provides that it may also be interpreted as 'a small amount of food of animal origin in absolute terms'. Following consultation, the UK is interpreting the terms 'marginal', 'localised' and 'restricted' in relation to meat as follows:

- '***Marginal****': supply of food of animal origin:*
  - *(i) up to a quarter of the business in terms of food;* ***or***
  - *(ii) in relation to: fresh or processed meat, (but not wild game meat) up to 2 tonnes a week, subject to the establishment having a genuine retail outlet supplying the final consumer with part of its production of meat;*

and

- *'****Localised****': supply of food of animal origin within the supplying establishment's own county plus the greater of either the neighbouring county or counties or 50 km/30 miles from the boundary of the supplying establishment's county;*

and

- ***'Restricted****': supply of food of animal origin is limited to certain types of products or establishments. In the meat sector, the restrictions are in relation to the amounts of meat supplied and the requirement for a 'genuine' retail outlet (see 'marginal' above).*

Note: supply to a final consumer can include mail order and internet sales.

EXAMPLES:

A1. WHOLESALE BUTCHERS

A butcher supplying retailers (e.g. butchers shops, restaurants, pubs) as well as final consumers from his own premises, may be exempt from approval as a cutting plant if the

wholesale element of the business is 'marginal, localised and restricted' exemption (see 'A' above). For example

- A butcher cutting 12 tonnes a week, supplying 3 tonnes to caterers and 9 tonnes to the final consumer, would be exempt from approval because the 3 tonnes does not exceed a quarter of his production.
- A butcher cutting 3 tonnes a week, of which 2 tonnes goes to caterers, would be exempt because, although it is 70% of his production, it doesn't exceed 2 tonnes.

A2. FARMERS MARKETS

The 'marginal, localised and restricted' exemption (see 'A' above) allows a butcher to cut meat on a farmer's behalf and return it to the farmer for onward sale, provided this is a marginal part of that butcher's business and the farmer being supplied is local.

B. POULTRY SLAUGHTER AND CUTTING ON FARM

There is an exemption for producers supplying small quantities of meat from poultry and lagomorphs slaughtered on the farm directly to the final consumer and to local retail establishments directly supplying the final consumer *(853/2004 Article 1 point 3d amended by Regulation 2076/2005 Article 3)*.

Producers must be registered and comply with Regulation 852/2004 and the labelling and record keeping requirements of Schedule 5 of the Food Hygiene Regulations (England) 2006 or equivalent legislation in Scotland, Wales and Northern Ireland.

Following consultation, the UK is interpreting the terms 'small' and local' as follows

- ***'Small'*** *supply is interpreted as (i) under 10,000 birds or lagomorphs; or (ii) producers annually slaughtering over 10,000 birds or lagomorphs who are members of an appropriate assurance scheme <u>and</u> who either (a) dry pluck by hand or (b) slaughter for 40 days per year or less;*

and

- ***'Local'*** *supply is interpreted as being the same as 'localised' – see 'A' above; additionally anywhere within the UK in the two weeks preceding Christmas or Easter and for geese, Michaelmas (late September).*

C. SLAUGHTER FOR PRIVATE DOMESTIC CONSUMPTION

Where slaughter is carried out for private domestic consumption and the meat is not placed on the market (whether free of charge or not) such activity is exempt from both 852/2004 and 853/2004, although the Food Safety Act (or in NI the Food Safety Order) will apply. However, it is unlawful to supply the meat of cattle, sheep and goats to a third party, including family members, if the TSE Regulations 2002 *as amended* and the EU Animal By-Products Regulations 1774/2002 have not been complied with. In practice this is only possible if the meat has been slaughtered in an approved slaughterhouse.

For more information - see the guidance note at www.food.gov.uk/multimedia/pdfs/privatekillguidance2006.pdf

D. WILD GAME

There is an exemption for primary producers (individual hunters or shooting estates) supplying small quantities of wild game carcases in fur/feather directly to the final consumer and to local retail establishments directly supplying the final consumer *(853/2004 Article 1 point 3c)*.

There is also an exemption for hunters and active members of a hunting party supplying small quantities of wild game meat directly to the final consumer and to local retailers directly supplying the final consumer. The meat must be prepared by an individual who has played an active part in the shoot, such as a beater, so the exemption is available to shooting estates. *(853/2004 Article 1 point 3e).*

For more information - see the separate 'Wild Game Guide' available at www.food.gov.uk/foodindustry/meat/draftwildgameguidance

APPROVAL: THE FOOD BUSINESS OPERATOR'S LEGAL OBLIGATIONS

1. Food business operators shall place products of animal origin manufactured in the Community on the market only if they have been prepared and handled exclusively in establishments:

(a) that meet the relevant requirements of Regulation 852/2004, those of Annexes II and III of this Regulation and other relevant requirements of food law; and

(b) that the competent authority has registered or, where required in accordance with paragraph 2, approved.

2. Without prejudice to Article 6(3) of Regulation 852/2004, establishments handling those products of animal origin for which Annex III to this Regulation lays down requirements shall not operate unless the competent authority has approved them in accordance with paragraph 3 of this Article, with the exception of establishments carrying out only:

(a) primary production;

(b) transport operations;

(c) the storage of products not requiring temperature-controlled storage conditions; or

(d) retail operations other than those to which this Regulation applies pursuant to Article 1(5)(b).

3. An establishment subject to approval in accordance with paragraph 2 shall not operate unless the competent authority has, in accordance with Regulation 882/2004 on official controls:

(a) granted the establishment approval to operate following an on-site visit; or

(b) provided the establishment with conditional approval.

4. Food business operators shall cooperate with the competent authorities in accordance with Regulation 854/2004. In particular, food business operators shall ensure that an establishment ceases to operate if the competent authority withdraws its approval or, in the case of conditional approval, fails to prolong it or to grant full approval.

5. This Article shall not prevent an establishment from placing food on the market between the date of application of this Regulation and the first subsequent inspection by the competent authority, if the establishment:

(a) is subject to approval in accordance with paragraph 2 and placed products of animal origin on the market in accordance with Community legislation immediately prior to the application of this Regulation; or

(b) is of a type in respect of which there was no requirement for approval before the application of this Regulation.

853/2004 Article 4 Registration and Approval of Establishments.

PART ONE

8. DEFINITIONS & ABBREVIATIONS

DEFINITIONS USED IN THIS GUIDE

8.1 REGULATION 178/2002 GENERAL PRINCIPLES OF FOOD LAW (GFL)

'Final consumer' means the ultimate consumer of a foodstuff who will not use the food as part of any food business operation or activity.

'Food business' means any undertaking whether for profit or not and whether public or private, carrying out any of the activities related to any stage of production, processing and distribution of food.

'Food business operator' means the natural or legal persons responsible for ensuring that the requirements of food law are met within the food business under their control.

'Placing on the market' means the holding of food or feed for the purpose of sale, including offering for sale or any other form of transfer, whether free of charge or not, and the sale, distribution, and other forms of transfer themselves;

'Primary production' means the production, rearing or growing of primary products including harvesting, milking and farmed animal production prior to slaughter. It also includes hunting and fishing and the harvesting of wild products;

'Retail' means the handling and/or processing of food and its storage at the point of sale or delivery to the final consumer, and includes distribution terminals, catering operations, factory canteens, institutional catering, restaurants and other similar food service operations, shops, supermarket distribution centres and wholesale outlets;

'Stages of production, processing and distribution' means any stage, including import, from and including the primary production of a food, up to and including its storage, transport, sale or supply to the final consumer and, where relevant, the importation, production, manufacture, storage, transport, distribution, sale and supply of feed.

8.2 REGULATION 852/2004 GENERAL HYGIENE OF FOODSTUFFS

'Clean water' means clean seawater and fresh water of a similar quality;

'Food hygiene', hereinafter called 'hygiene', means the measures and conditions necessary to control hazards and to ensure fitness for human consumption of a foodstuff taking into account its intended use;

'Packaging' means the placing of one or more wrapped foodstuffs in a second container, and the latter container itself;

'Potable water' means water meeting the minimum requirements laid down in Council Directive 98/83/EC of 3 November 1998 on the quality of water intended for human consumption (OJ L 330, 5.12.1998, p. 32)

'Wrapping' means the placing of a foodstuff in a wrapper or container in direct contact with the foodstuff concerned, and the wrapper or container itself.

8.3 REGULATION 853/2004
SPECIFIC HYGIENE RULES FOR PRODUCTS OF ANIMAL ORIGIN

1.1 'Meat' means edible parts of the animals referred to in paragraphs 1.2 to 1.8, including blood.

1.2 'Domestic ungulates' means domestic bovine (including Bubalus and Bison species), porcine, ovine and caprine animals, and domestic solipeds.

1.3 'Poultry' means farmed birds, including birds that are not considered as domestic but which are farmed as domestic animals, with the exception of ratites.

1.4 'Lagomorphs' means rabbits, hares and rodents.

1.5 'Wild game' means: wild ungulates and lagomorphs, as well as other land mammals that are hunted for human consumption and are considered to be wild game under the applicable law in the Member State concerned, including mammals living in enclosed territory under conditions of freedom similar to those of wild game; and wild birds that are hunted for human consumption.

1.6 'Farmed game' means farmed ratites and farmed land mammals other than those referred to in paragraph 1.2.

1.7 'Small wild game' means wild game birds and lagomorphs living freely in the wild.

1.8 'Large wild game' means wild land mammals living freely in the wild that do not fall within the definition of small wild game.

'Carcase' means the body of an animal after slaughter and dressing.

'Cutting plant' means an establishment used for boning and/or cutting up meat.

'Fresh meat' means meat that has not undergone any preserving process other than chilling, freezing or quick-freezing, including meat that is vacuum-wrapped or wrapped in a controlled atmosphere.

'Game-handling establishment' means any establishment in which game and game meat obtained after hunting are prepared for placing on the market.

'Greaves' means the protein-containing residue of rendering, after partial separation of fat and water.

'Meat products' means processed products resulting from the processing of meat or from the further processing of such processed products, so that the cut surface shows that the product no longer has the characteristics of fresh meat.

'Meat preparations' means fresh meat, including meat that has been reduced to fragments, which has had foodstuffs, seasonings or additives added to it or which has undergone processes insufficient to modify the internal muscle fibre structure of the meat and thus to eliminate the characteristics of fresh meat.

'Mechanically separated meat' or **'MSM'** means the product obtained by removing meat from flesh bearing bones after boning or from poultry carcases, using mechanical means resulting in the loss or modification of the muscle fibre structure.

'Minced meat' means boned meat that has been minced into fragments and contains less than 1% salt.

'Offal' means fresh meat other than that of the carcase, including viscera and blood.

'Slaughterhouse' means an establishment used for slaughtering and dressing animals, the meat of which is intended for human consumption.

'Products of animal origin' means foodstuffs obtained from animals, including honey and blood.

'Viscera' means the organs of the thoracic, abdominal and pelvic cavities, as well as the trachea and oesophagus and, in birds, the crop.

'Wholesale market' means a food business that includes several separate units which share common installations and sections where foodstuffs are sold to food business operators.

8.4 REGULATION 854/2004 OFFICIAL CONTROLS ON POAO (*as amended by OFFC*)

'Approved veterinarian' means a veterinarian designated by the competent authority to carry out specific official controls on holdings on its behalf;

'Health mark' means a mark indicating that, when it was applied, official controls had been carried out in accordance with this Regulation.

'Official auxiliary' means a person qualified, in accordance with this Regulation, to act in such a capacity, appointed by the competent authority and working under the authority and responsibility of an official veterinarian; and

'Official veterinarian' means a veterinarian qualified, in accordance with this Regulation, to act in such a capacity and appointed by the competent authority.

8.5 REGULATION 882/2004 OFFICIAL FEED & FOOD CONTROLS (OFFC)

'Audit' means a systematic and independent examination to determine whether activities and related results comply with planned arrangements and whether these arrangements are implemented effectively and are suitable to achieve objectives; and

'Competent authority' means the central authority of a Member competent for the organisation of official controls or any other authority to which that competence has been conferred; it shall also include, where appropriate, the corresponding authority of a third country;

'Control body' means an independent third party to which the competent authority has delegated certain tasks;

'Inspection' means the examination of establishments, animals and food, of their processing, of food businesses, of their management and production systems, including finished product testing and feeding practices, and of the origin and destination of production inputs and outputs, in order to verify that all these items conform to legal requirements.

'Official control' means any form of control that the competent authority performs for the verification of compliance with feed and food law, animal health and animal welfare rules;

'**Verification'** means checking by examination and the consideration of objective evidence whether specified requirements have been fulfilled.

8.6 REGULATION 2073/2005 MICROBIOLOGICAL CRITERIA

'Batch' means a group or set of identifiable products obtained from a given process under practically identical circumstances and produced in a given place within one defined production period;

'Compliance with microbiological criteria' means obtaining satisfactory or acceptable results set in Annex I when testing against the values set for the criteria through the taking of samples, the conduct of analyses and the implementation of corrective action, in accordance with food law and the instructions given by the competent authority;

'**Food safety criterion'** means a criterion defining the acceptability of a product or a batch of foodstuff applicable to products placed on the market;

'Micro-organisms' means bacteria, viruses, yeasts, moulds, algae, parasitic protozoa, microscopic parasitic helminths, and their toxins and metabolites;

'**Microbiological criterion'** means a criterion defining the acceptability of a product, a batch of foodstuffs or a process, based on the absence, presence or number of micro-organisms, and/or on the quantity of their toxins/metabolites, per unit(s) of mass, volume, area or batch;

'Process hygiene criterion' a criterion indicating the acceptable functioning of the production process. Such a criterion is not applicable to products placed on the market. It sets an indicative

contamination value above which corrective actions are required in order to maintain the hygiene of the process in compliance with food law;

'Ready-to-eat food' means food intended by the producer or the manufacturer for direct human consumption without the need for cooking or other processing effective to eliminate or reduce to an acceptable level micro-organisms of concern;

'Representative sample' means a sample in which the characteristics of the batch from which it is drawn are maintained. This is in particular the case of a simple random sample where each of the items or increments of the batch has been given the same probability of entering the sample;

'Sample' means a set composed of one or several units or a portion of matter selected by different means in a population or in an important quantity of matter, which is intended to provide information on a given characteristic of the studied population or matter and to provide a basis for a decision concerning the population or matter in question or concerning the process which has produced it;

'Shelf-life' means either the period corresponding to the period preceding the "use by" or the minimum durability date, as defined respectively in Articles 9 and 10 of Directive 2000/13/EC.

ABBREVIATIONS USED IN THIS GUIDE

AV	Approved Veterinarian
DARD	Dept of Agriculture & Rural Development (enforcement role in NI licensed meat plants)
Defra	Dept of the Environment, Food & Rural Affairs (leads on animal health/welfare issues)
FSA	Food Standards Agency (Competent Authority for food safety in the UK)
FVO	Food & Veterinary Office (European Commission auditors)
GFL	General Food Law (EU Regulation setting general principles of food law)
GHP	Good Hygiene Practice
HACCP	Hazard Analysis and Critical Control Points (food safety management system)
MHI	Meat Hygiene Inspector (see OA)
MHS	Meat Hygiene Service (enforcement role in GB licensed meat plants)
OA	Official Auxiliary (EU term for Meat Hygiene Inspector)
OFFC	Official Feed & Food Controls (EU Regulation on official controls)
OPSI	Office of Public Service Information
OV	Official Veterinarian
SI	Statutory Instrument (UK secondary legislation)
SME	Small & Medium sized Enterprises
SR	Statutory Rule in Northern Ireland
SVS	State Veterinary Service

FURTHER FOOD HYGIENE LEGISLATION [16] (as it applies to meat - see para 4.2)

1. **Regulation 2074/2005 [17] - Implementing Measures**
   - clarifies requirements for the provision of food chain information relating to animals sent for slaughter; extends the exemption from skinning to bovine feet; prohibits the sale as fresh meat of poultry treated with water retention agents; and sets the calcium content for mechanically separated meat to which certain rules in Regulation 853/2004 apply.

2. **Regulation 1662/2006 [18] - amends Regulation 853/2004**
   - clarifies the requirement for a new identification mark where a previously marked product is further processed or its packaging removed. It allows the muzzle and lips of bovine animals to be left unskinned and corrects the omission of porcine tonsils from those required to be removed.

3. **Regulation 1663/2006 [19] - amends Regulation 854/2004**
   - deletes references to removal of tonsils which is an operator responsibility (see Reg. 1662).

4. **Regulation 1664/2006 [20]- Implementing Measures**
   - amends model health certificates for imports of certain products including frog's legs and snails, gelatine, collagen, and raw materials for the production of gelatine and collagen.

5. **Regulation 1665/2006 [21] - amends Regulation 2075/2005**
   - clarifies the possibility of health marking carcases tested for Trichinella before the results are known.

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[16] View EU legal texts on this website: http://europa.eu.int/eur-lex/en/search/search_lif.html
[17] Regulation EC No. 2074/2005 published in the Official Journal L338 on 22.12.2005, pages 27- 59
[18] Regulation EC No. 1662/2006 published in the Official Journal L320 on 18.11.2006, pages 1 - 10
[19] Regulation EC No. 1663/2006 published in the Official Journal L320 on 18.11.2006, pages 11 - 12
[20] Regulation EC No. 1664/2006 published in the Official Journal L320 on 18.11.2006, pages 13 - 45
[21] Regulation EC No. 1665/2006 published in the Official Journal L320 on 18.11.2006, page 46

PART TWO

1. DESIGN AND FACILITIES

1.1 WHY ARE DESIGN AND FACILITIES IMPORTANT?

The location, design, layout and construction of food premises and the choice of fixtures, fittings and equipment are crucial to ensure that food businesses can operate under hygienic conditions and produce food safely. Poorly designed and constructed buildings and equipment are potential source of physical, chemical and microbiological hazards. Such hazards could cause illness or injury to consumers and so must be prevented or minimised.

For example:

- Food premises that are sited in inappropriate locations (e.g. one that is prone to flooding, or adjacent to a business using toxic chemicals or producing a lot of dust) could increase the likelihood of food becoming contaminated.
- Badly designed buildings and equipment could create 'dirt traps' and make future cleaning and maintenance difficult, if not impossible, and thus become a source of microbiological contamination.
- Poorly constructed buildings and equipment might allow pest entry. Contamination could also be caused by water leaks, condensation or poor drainage.
- The use of inappropriate construction materials might result in surfaces that could not be kept clean, or which deteriorate and shed dirt, dust and other particles onto food.
- Poor layout (e.g. inadequate separation between 'clean' and 'dirty' areas or inappropriate flow lines for food in relation to waste, people etc.) would increase the chances of microbiological cross contamination of food products by food poisoning bacteria, such as *Salmonella*.
- Insufficient space for the operations being carried out or for the quantity of animals/food being handled would produce cramped conditions where cross contamination would be likely.
- Lack of adequate hygiene facilities, such as toilets and hand-washing basins, would prevent staff from following personal hygiene procedures and could lead to product contamination.

1.2 GENERAL INFORMATION

- **Approval of Establishments**

  All operating meat plants require approval under the hygiene regulations unless specifically exempt. See PART ONE Chapter 7 (Approvals) for further information about exemptions and approval procedures. Operations may need to be discontinued or special arrangements made to protect food from possible contamination if building work is to be carried out while premises are operating.

- **Construction Standards**

  The siting, design, layout, and construction of premises and of equipment used in the production and storage of food products needs to meet certain standards to achieve food safety. Similar food safety standards apply to the exterior of the premises, animal handling areas, refuse stores, staff changing facilities, wrapping and packaging stores etc.

- **Technical advice**

  Technical advice on the design and construction of new food premises or the rebuilding, refurbishment and alteration of existing premises should be obtained from suitably qualified and competent professionals. Such work may require consent from the relevant environmental and planning authorities. Food Standards Agency officials cannot give advice on technical matters but can advise on the legal food safety and hygiene requirements to be met.

  When employing professional advisers or contractors for building work or the installation of equipment, fixtures and fittings, it is advisable to use businesses or individuals that understand the operational and hygiene requirements of food establishments. They also need knowledge of other legislation (e.g. animal welfare, health and safety) and building regulations that will influence the design, layout and facilities. Inexperienced contractors may carry out work that is sub-standard or does not meet the requirements, which then has to be remedied or upgraded at considerable expense.

  As well as specialist companies, there are many sources of information and guidance available, including:

  - ***Meat Plant Design and Construction: Guideline Manual on the Buildings and Engineering Design Requirements for the Operation of Meat Plants,*** which gives technical information on materials, design points, layout etc. Contact the Meat & Livestock Commission, PO Box 44, Snowdon Drive, Milton Keynes MK6 1AX. Tel: +44 (0)1908 677577

  - ***Meat Hygiene*** 10th edition (1999) (ISBN 0 7020 2258 6) by J F Gracey, D S Collins, R J Huey published by W B Saunders Company Ltd.

- ***Livestock Handling and Transport*** (ISBN 0 85199 409 1) edited by Temple Grandin, published by CAB Wallingford, Oxon OX10 8DE, Tel: +44 (0)1491 832111 Fax: +44 (0)1491 829292 E-mail: orders@cabi.org International

- **Guidance on slaughter facilities and equipment**

Humane Slaughter Association, The Old School, Brewhouse Hill, Wheathampstead, Herts, AL4 8AN UK, Tel: +44 (0)1582 831919 Fax: +44 (0)1582 831414

- **Machinery**

The European Hygienic Equipment Design Group (EHEDG) is a consortium of equipment manufacturers, food industries, research institutes and public health authorities founded in 1989 which promotes hygiene during the processing and packing of food products. It produces guidelines to help industry comply with European Commission (EC) legislation for hygienic machinery. (www.ehedg.org)

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1.3.1 WHAT ARE THE LEGAL REQUIREMENTS FOR DESIGN & FACILITIES?

The following sections set out the design and facilities requirements of the regulations that apply to slaughter, dressing and further processing of meat.

A. GENERAL RULES FOR ALL FOOD PREMISES & FOODSTUFFS

A1. The layout, design, construction, siting and size of food premises are to:

- **a) Permit adequate maintenance, cleaning and/or disinfection, avoid or minimise air-borne contamination, and provide adequate working space to allow for the hygienic performance of all operations;**
- **b) be such as to protect against the accumulation of dirt, contact with toxic materials, the shedding of particles into food and the formation of condensation or undesirable mould on surfaces;**
- **c) permit good food hygiene practices, including protection against contamination and, in particular, pest control;**

852/2004 Annex II ***Food Premises:*** *Chapter I points 2a-c*

A2. At all stages of production, processing and distribution, food is to be protected against any contamination likely to render the food unfit for human consumption, injurious to health or contaminated in such a way that it would be unreasonable to expect it to be consumed in that state.

A3. Adequate procedures are to be in place to control pests. Adequate procedures are also to be in place to prevent domestic animals from having access to places where food is prepared, handled or stored (or, where the competent authority so permits in special cases, to prevent such access from resulting in contamination).

A4. … Food businesses manufacturing, handling and wrapping processed foodstuffs are to have suitable rooms; large enough for the separate storage of raw materials from processed material and sufficient separate refrigerated storage.

A5. Hazardous and/or inedible substances, including animal feed, are to be stored in separate and secure containers.

852/2004 Annex II ***Foodstuffs:*** *Chapter IX points 3, 4, 5 & 8*

A6. Adequate provision is to be made for the storage and disposal of food waste, non-edible by-products and other refuse. Refuse stores are to be designed and managed in such a way as to enable them to be kept clean and, where necessary, free of animals and pests.

852/2004 Annex II ***Food Waste:*** *Chapter VI point 3*

A7. Wrapping materials are to be stored in such a manner that they are not exposed to a risk of contamination.

A8. Wrapping and packaging operations are to be carried out so as to avoid contamination of the products.

852/2004 Annex II ***Wrapping & packaging:*** *Chapter X points 2 & 3*

	Siting/Location

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• **Site food premises in locations that avoid or minimise potential threats to food safety.** ***A1a-c***	***For new premises**, consider factors such as:* ▪ *Suitability of the ground for building;* ▪ *Availability of services, especially power, drainage and potable water - see Chapter 2 (Water Supply),* ▪ *Access/exit routes for vehicles delivering livestock or raw materials or transporting product and for staff transport;* ▪ *Need to dispose of animal by products,* ▪ *Proximity to residential areas,* ▪ *Prevailing wind.* *Avoid locations close to, for example:* ▪ *Environmentally polluted areas,* ▪ *Industrial activities that might present a risk of contamination (e.g. chemical production),* ▪ *Areas prone to flooding.* ***Site Plan** – Retain a copy of the site plan(s) provided when applying for approval of the meat establishment. Alterations may be such as to require further approval and submission of revised plans incorporating the changes. See PART ONE Chapter 7 (Approvals).*
	Operational Space & Contamination
Design, lay out and construct food premises so that: ▪ **there is sufficient space to allow good food hygiene practices to be followed in all operations, and adequate maintenance, cleaning and/or disinfection to be carried out** ***A1a*** ▪ **operations are protected at all stages of food production, processing, wrapping and packaging, storage and distribution, from**	*Avoid carrying out too many activities in one area or trying to handle too great a quantity of animals/food for the available space and facilities. Cramped conditions will compromise the ability to carry out good hygienic practices and increase the risk of spreading contamination between carcases, people and surfaces and/or the environment.* ***Cleaning, disinfection, maintenance and pest control –** the requirements for these hygiene practices are set out in other chapters – see Chapter 3 (Maintenance), Chapter 4 (Cleaning) and Chapter 5 (Pest Control).* ***Condensation / ventilation** - see A12 below.*

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contamination , particularly from airborne dirt and dust, rain, accumulation of dirt, contact with toxic materials, shedding of particles (e.g. paint, rust) formation of condensation or mould, and pests. ***A1c, A1d, A2, A3, A6, A7, A8, B1, C1a*** ▪ **the food premises and, in particular, the floors, walls, ceilings, windows and other openings, doors and surfaces in rooms where foodstuffs are handled, and equipment, are capable of being cleaned, disinfected and maintained in sound condition.** ***A1a, B1,*** ▪ **domestic animals are prevented from having access to places where food is prepared, handled or stored or, if allowed by the competent authority, to prevent such access from resulting in contamination.** ***A3*** ▪ **there are suitable rooms for separate storage of raw materials from processed foodstuffs.** ***A4*** ▪ **there is space for separate**	*In designing new or altering existing premises, consider factors such as:* ▪ *Expected daily throughput of animals (of each species); carcases, meat and products and possible future expansion.* ▪ *Need for sufficient space for hygienic processing and disposal of waste.* ▪ *Facilities for inspecting and keeping animals.* ▪ *Chapter 9 (Acceptance & Slaughter of Animals).* ▪ *Provision of adequate number of processing and storage rooms.* ▪ *Provision for staff facilities.* ▪ *The turning circles of transport vehicles.* ***Separation** - good hygienic practice requires that all operations are organised to minimise the opportunity for contamination to be introduced or to spread. This normally means ensuring that 'clean' and 'dirty' operations are carried out in separate rooms, or separate areas if adequate arrangements are made to avoid contamination. In premises where throughput is low, separation of operations in time rather than space may be possible with interim cleaning and disinfection. See also Section D below, and Chapters 9 (Acceptance & Slaughter of Animals) and 14 (Wrapping, packaging and transport hygiene).* ***Loading and unloading operations** – prevent contamination of meat from, for example, diesel fumes, dust, flies, birds, leaves, poor weather conditions, during loading and unloading between premises and vehicles. This is best achieved by using a vehicle docking system or, where this is not possible (e.g. for planning reasons), a canopy or awning may be sufficient. In limited situations (e.g. because*

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and secure storage of containers for hazardous and/or inedible substances and adequate provision for storage and disposal of food waste, non edible by products and other refuse. ***A5, A6*** ▪ **there is space for storage of wrapping materials so that they are not exposed to a risk of contamination.** ***A7***	*vehicles have to be loaded/unloaded on the street) it will be necessary for the operator to set out satisfactory procedures for protecting exposed meat from contamination.* ***Access/Security** - Secure the perimeter of the site so that access can be controlled. See also Chapter 5 (Pest Control)*

A9. And, where necessary, provide suitable temperature-controlled handling and storage conditions of sufficient capacity for maintaining foodstuffs at appropriate temperatures and designed to allow those temperatures to be monitored and, where necessary, recorded.

*852/2004 Annex II **Food Premises:** Chapter I point 2d*

A4. Raw material, ingredients, intermediate products and finished products likely to support the reproduction of pathogenic micro-organisms or the formation of toxins are not to be kept at temperatures that might result in a risk to health.
Food businesses manufacturing, handling and wrapping processed foodstuffs are to have suitable rooms; large enough for the separate storage of raw materials from processed material and sufficient separate refrigerated storage.

*852/2004 Annex II **Foodstuffs:** Chapter IX point 5*

	Temperature Control
• **Provide enough storage capacity for keeping meat at appropriate temperatures.** ***A9*** • **If manufacturing, handling or wrapping processed foodstuffs provide sufficient separate refrigerated storage for raw materials and**	*Make sure that storage facilities are capable of maintaining the mandatory temperature requirements for meat. See Chapter 8 (Temperature Controls).* *Particular consideration should be given to how to meet the requirements in periods of high throughput or high ambient temperatures.* ***Free-standing chilled storage** - if used to store chilled meat, free-standing 'reefers' must provide an acceptable level of protection and temperature control that meets legal*

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processed materials. *A4*	*requirements. Particular attention must be paid to the:* ▪ *Nature, condition and cleanliness of interior surfaces* ▪ *Maintenance of temperatures* ▪ *Temperature monitoring and recording* ▪ *Protection from contamination during loading and unloading.* ***Such facilities are rarely appropriate for chilling meat.***

A10. An adequate number of flush lavatories are to be available and connected to an effective drainage system. Lavatories are not to open directly into rooms in which food is handled. *852/2004 Annex II* ***Food Premises:*** *Chapter I point 3*	
	Toilets
Make sure that: ▪ **there are sufficient flush toilets for the number of employees are available.** *A10* ▪ **toilets do not open directly into food-handling areas.** *A10* ▪ **toilets are connected to a mains sewerage system or septic tank.** *A10*	*The number of flush toilets required is regulated by the Workplace (Health Safety and Welfare) Regulations 1992 in GB and the Workplace (Health Safety and Welfare) Regulations (Northern Ireland) 1993 in NI.* *Toilets must not open directly into a food room. Preferably, they should be in the same or a connected building as the food operation. Exceptionally, where staff numbers are very small and the premise is next door to a house with access throughout working hours, the house toilet may be sufficient.* *Allow space near the toilets so that staff can remove and hang up their protective clothing before using the toilet.*

A11. An adequate number of washbasins is to be available, suitably located and designated for cleaning hands. Washbasins for cleaning hands are to be provided with hot and cold running water, materials for cleaning hands and for hygienic drying. Where necessary, the facilities for washing food are to be separate from the hand-washing facility. *852/2004 Annex II* ***Food Premises:*** *Chapter I point 4*	
	Hand Washing Basins
Make sure that:	*The number of washbasins required to maintain good*

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▪ **there are enough designated hand washbasins for the number of employees at suitable locations.** ▪ **hand washbasins are supplied with hot and cold running water.** ▪ **hand washbasins have supplies of soap or detergent, and hand drying facilities.** ▪ **hand washing facilities are separate from food washing facilities.** ***A11***	*hygiene depends on the number of staff and on the nature and location of the operations being carried out.* ***Position –*** *hand washbasins should be placed conveniently close to toilets, entry points for food-handling areas and workstations, to encourage staff to wash their hands after visiting the toilet, before entry into food handling areas and during food handling activities.* ***Water Supply*** *- hot and cold water can be supplied through separate taps, but a mixed supply is preferable. Water should be at a suitable and comfortable temperature-so that staff are not discouraged from using the facilities provided.* ***Soap/hand drying etc.*** *– see Chapter 7 (Personal Hygiene).* ***Food Washing Facilities*** *– separate basins are required for hand and for food washing - see B3 below.*

A12. There is to be suitable and sufficient means of natural or mechanical ventilation. Mechanical airflow from a contaminated area to a clean area is to be avoided. Ventilation systems are to be so constructed as to enable filters and other parts requiring cleaning or replacement to be readily accessible.

A13. Sanitary conveniences are to have adequate natural or mechanical ventilation.

852/2004 Annex II ***Food Premises:*** *Chapter I points 5 and 6*

	Ventilation
Make sure that: ▪ **there is enough ventilation to avoid or minimise air-borne contamination, and to protect against the formation of condensation or undesirable mould on surfaces.** ***A12, A1a, A1b*** ▪ **where screens or filters are fitted to ventilation systems, they are placed and fitted so that they can easily be**	*Adequate ventilation is important to minimise the build up of heat and/or humidity that may compromise the safety of food. It helps prevent the development of drops of water that may contaminate food.* *The ventilation system may be natural or mechanical.* *Natural ventilation by opening windows (fitted with fly screens) is unlikely to be sufficient except in very small premises.* *Mechanical ventilation systems may be simple wall or window mounted fans, steam extractors, or more sophisticated*

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replaced or cleaned when necessary. ***A12*** ▪ **airflow from mechanical systems passes from clean towards dirty areas, to minimise the spread of contamination in dust or water droplets and odours.** ***A12*** ▪ **toilets are adequately ventilated to remove odours.** ***A13***	*ducted systems. They are best situated near sources of heat, steam, and odours to maximise their effectiveness.* *The positioning of air inlets for food handling areas is important so that dust or fumes are not drawn in. Fit cleanable filters to air inlets for food handling areas.* ***Toilets** - require either natural or mechanical ventilation to prevent offensive odours from reaching food handling areas.* ***Changing facilities** - for the same reason, it is also advisable for changing facilities to have adequate ventilation.*

A14. Food premises are to have adequate natural and/or artificial lighting. *852/2004 Annex II Food Premises: Chapter I point 7*	
	Lighting
• **Fit adequate lighting so that hygiene procedures can be carried out effectively.** ***A14*** • **Provide suitable conditions for ante- and post-mortem to be carried out.** ***853/2004 Annex III Section I Chapter IV points 5 & 12 and Section II Chapter IV points 2 & 6*** • **Protect lighting sources to minimise the potential for broken glass to contaminate food.** ***A1b, B1c***	*Lighting may be natural or artificial but must be good enough to allow safe food handling, effective cleaning, monitoring of hygiene standards and inspection. Lighting should not distort colours but allow any discoloration of meat to be identified easily.* *As a guide these minimum levels are considered adequate:* ▪ *540 lux at inspection points* ▪ *220 lux in workrooms* ▪ *110 lux in other areas* *High intensity lighting is recommended except where, for poultry welfare reasons, blue lighting is used in hanging on bays, although here too lighting needs to allow adequate inspections to be performed.* ***Glass** - enclose fluorescent tubes or light bulbs in shatterproof and waterproof covers to minimise the risk of contamination of food by glass fragments if there are*

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	breakages and for ease of cleaning.

A15. Drainage facilities are to be adequate for the purpose intended. They are to be designed and constructed to avoid the risk of contamination. Where drainage channels are fully or partially open, they are to be so designed as to ensure that waste does not flow from a contaminated area towards or into a clean area, in particular an area where foods likely to present a high risk to the final consumer are handled.

852/2004 Annex II ***Food Premises:*** *Chapter I point 8*

	Drainage
Make sure that: ▪ **the drainage system is able to dispose of waste water and effluent effectively and has enough capacity to cope with the maximum quantities produced at any time;** ***A15*** ▪ **in wet areas the floors allow for adequate drainage;** ***A15, B1a*** ▪ **where drainage channels are fully or partly open, they are designed so that waste cannot flow from a contaminated area towards or into a clean area, in particular an area where foods likely to present a high risk to the final consumer are handled.** ***A15***	*Drainage systems need to be able to handle material such as fat and blood as well as water.* *Connect wastes from e.g. wash basins, sterilisers, other washing facilities, production room cleaning facilities, carcase and offal showers and refrigeration equipment, to drains so that water does not flow freely on floors. Provide floor drainage in wet areas with enough capacity to prevent overflow. Lay floors so that waste water and effluent is directed down slopes into drains to minimise pooling.* *Fit open drainage channels with removable gratings for easy cleaning and maintenance. Open or partly open drain channels are to flow away from the product flow so that they do not carry waste from 'dirty' to 'clean' areas. Rodent screens should be fitted to drains that open to the outside of the building to prevent the entry of pests.* ***Traps** – protect the system by effective water traps or sediment traps that are easy to clean and do not allow foul air or effluent to enter food-handling areas.* *Water traps deal with smells and assist with rodent control.* *Sediment traps are buckets to prevent excess solid materials entering the lower drainage system where they can result in blockage or smell creation and cannot easily be accessed for cleaning. Sediment buckets should be easily removable for cleaning* ***Manholes** – avoid the use of internal drain inspection*

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	chambers (manholes), but if this is not possible ensure they are doubly sealed and secured so that overflow cannot occur.

A16. Where necessary, adequate changing facilities for personnel are to be provided. *852/2004 Annex II* ***Food Premises:*** *Chapter I point 9*	
	Changing Facilities
• **Provide changing facilities for staff required to wear protective clothing.** ***A16***	*Provide an area that is separate from food handling areas and from the toilets, with sufficient lockers so that staff can store outdoor clothing and belongings and some seating so they can change clothing and footwear without getting protective clothing dirty. It is not acceptable for areas used for changing into or storing clean protective clothing to be used as a mess room, a canteen or a store.* *Where possible, the changing area should be in the same or a connected building as the food operation. Exceptionally, where staff numbers are very small and the premise is next to a house with access throughout working hours, a room in the house may be sufficient.* ***Hygiene Lobby*** *- ideally, provide a 'hygiene lobby' between the food handling area and the changing room. The area may have a simple boot wash and hand wash facility or may include a 'wet' hygiene area for apron washes and hanging aprons.* *Make appropriate provision, in suitable locations that protect against possible contamination, for:* ▪ *Washing of protective footwear.* ▪ *Washing and drying of aprons.* ▪ *Hygienic storage of clean protective clothing.* ▪ *Laundry or disposal of dirty clothing.* *See Chapter 7 (Personal Hygiene)*

A17. Cleaning agents and disinfectants are not to be stored in areas where food is handled. *852/2004 Annex II* ***Food Premises:*** *Chapter I point 10*

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	Storage for Cleaning Chemicals
• **Store cleaning agents and disinfectants away from food handling areas so that these chemicals do not contaminate food.** ***A17***	*Keep cleaning chemicals and utensils in a separate room or, exceptionally in small premises, in a cupboard that can be locked and is used only for this purpose.*

A18. There is to be an adequate supply of potable water, which is to be used whenever necessary to ensure that foodstuffs are not contaminated. *852/2004 Annex II* ***Water Supply:*** *Chapter VII point 1a*	
	Water Supply
• **Provide an adequate supply of potable water, for use when necessary to ensure that foodstuffs are not contaminated.** ***A18***	*See Chapter 2 (Water Supply).*

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B. ROOMS WHERE FOOD IS HANDLED

B1. In rooms where foodstuffs are prepared, treated or processed, the design and layout are to permit good food hygiene practices, including protection against contamination between and during operations. In particular:

B1(a) Floor surfaces are to be maintained in a sound condition and be easy to clean and, where necessary, to disinfect. This will require the use of impervious, non-absorbent, washable and non-toxic materials unless FBOs can satisfy the competent authority that other materials used are appropriate. Where appropriate, floors are to allow adequate surface drainage;

852/2004 Annex II ***Rooms:*** *Chapter II point 1a*

	Floors
Make sure that: ▪ **floors are made of materials that are easy to clean, disinfect and can be maintained in a sound condition.** ***B1a, A1a-c*** ▪ **floors allow adequate surface drainage in wet areas.** ***B1a***	*Floors need to be maintained in a sound condition so that they can be kept clean. See Chapters 3 (Maintenance) and 4 (Cleaning).* *Avoid materials that require high levels of maintenance, are difficult to clean or are not durable. For example, floors with grouting are likely to require more frequent repair. Such surfaces will increase costs over time and may cause product contamination. Floor surfaces should be non-slip without compromising hygiene, especially in wet areas.* ***Drainage** - see drainage above (A15).* *Suitable materials are those that are impervious, non-absorbent, washable and non-toxic, such as sealed concrete, epoxy resin, unless the competent authority is satisfied that other materials are appropriate. Wood is not a suitable flooring material in food-handling areas.*

B1(b) Wall surfaces are to be maintained in a sound condition and be easy to clean and, where necessary, to disinfect. This will require the use of impervious, non-absorbent, washable and non-toxic materials and require a smooth surface up to a height appropriate for the operations unless FBOs can satisfy the competent authority that other materials used are appropriate;

852/2004 Annex II ***Rooms:*** *Chapter II point 1(b)*

	Walls
Make sure that:	*Walls need to be maintained in a sound condition so that they*

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▪ **wall surfaces are made of materials that are easy to clean, disinfect and can be maintained in a sound condition** ▪ **smooth wall surfaces extend to a suitable height above the working area.** ***B1b, A1a-c***	*can be kept clean. See Chapters 3 (Maintenance) and 4 (Cleaning).* *Avoid materials that require high levels of maintenance, are difficult to clean or are not durable. Such surfaces will increase costs over time and may cause product contamination (e.g. from paint, plaster, peeling laminate or damaged surfaces).* *Suitable materials are those that are impervious, non-absorbent, washable and non-toxic materials and have a smooth surface, unless the competent authority is satisfied that other materials are appropriate. Examples include properly installed ceramic tiles, plaster or rendering coated with washable paint (not recommended for walls that are close to work surfaces or equipment), plastic coated board (not recommended for wet areas or where impact damage may occur), plastic cladding, stainless steel sheeting, epoxy resin and similar coatings and insulated panelling.* ***Junctions** –between the walls and ceilings or floors junctions should be smooth and sealed using an impervious material (e.g. mastic). For floors, they may be rounded to minimise accumulation of dirt and to facilitate cleaning. Integral coving is preferred.* ***Colour** – ideally wall surfaces should be light coloured to reflect light and so that dirt can be seen easily.* ***Height** – as a minimum, extend smooth, cleanable wall surfaces to a height above that which might they reasonably be expected to come into contact with food when it is being worked on or stored, or for them to become soiled or splashed. Ideally, extend easily cleanable surfaces to ceiling height.*

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B1c Ceilings (or, where there are no ceilings, the interior surface of the roof) and overhead fixtures are to be constructed and finished so as to prevent the accumulation of dirt and to reduce condensation, the growth of undesirable mould and the shedding of particles;

852/2004 Annex II ***Rooms:*** *Chapter II point 1(c)*

	Ceilings or Interior Roof Surfaces
• **Make sure that ceilings or interior surfaces of the roof and overhead roof fixtures are made and finished so that they prevent the accumulation of dirt, and reduce condensation, growth of mould and shedding of particles.** ***B1c, A1b***	*Ceilings, or interior surfaces of the roof and overhead structures, need to be capable of being cleaned and maintained to prevent the risk of contamination of the product below from accumulated dirt or shedding of particles (e.g. from old paint, plaster, rust, fibres, peeling laminate surfaces). See Chapters 3 (Maintenance) and 4 (Cleaning). Poor surfaces will lead to higher maintenance costs over time.* *Ceiling materials, design and effective ventilation are all important in protecting against condensation and mould growth.* *Suitable ceiling surfaces are cleanable and durable and include plastic cladding and sealed concrete. Polystyrene or acoustic ceiling tiles are not suitable for ceilings in food handling areas.* ***Overhead Fixtures –*** *if overhead fixtures and services in food-handling areas are hard to clean they may be boxed in. Fitting a suspended ceiling made of a washable material (e.g. plastic cladding) with overhead fixtures, pipes and other services above it may be an alternative but may create other problems such as condensation, which may need extra ventilation, and create a space for pests.* ***Colour*** *– ideally ceilings should be light coloured to reflect light and so that dirt can be seen more easily.*

B1(d) Windows and other openings are to be constructed to prevent the accumulation of dirt. Those which can be opened to the outside environment are, where necessary, to be fitted with insect-proof screens which can be easily removed for cleaning. Where open windows would result in contamination, windows are to remain closed and fixed during production;

852/2004 Annex II ***Rooms:*** *Chapter II point 1(d)*

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	Windows and Other Openings
Make sure that: ▪ **windows (and other openings) are designed and fitted to prevent the accumulation of dirt.** ▪ **where open windows would result in contamination, they remain closed and fixed during production.** ▪ **removable insect-proof screens are fitted where needed to prevent pest entry.** ***B1d, A1a-c***	*Windows (and other openings such as skylights or external doors) need to be capable of being cleaned and maintained to prevent the accumulation of dirt. Windows/skylights in rooms where food is handled may compromise the product temperature and, if opened for ventilation during production periods, must be fitted with removable insect-proof screens.* ***External doors** – these need to be wide enough to allow the easy movement of staff, equipment and/or vehicle, as appropriate, but also tight fitting (i.e. so light is not visible around the frame when closed). Where doors are in frequent use (e.g. loading bays) additional measures (e.g. overlapping plastic strips or self-closing mechanisms) may help to minimise pest access.* ***Pest Control** – see Chapter 5 (Pest Control).*

B1(e) Doors are to be easy to clean and, where necessary, to disinfect. This will require the use of smooth and non-absorbent surfaces unless FBOs can satisfy the competent authority **that other materials used are appropriate;** *852/2004 Annex II **Rooms:** Chapter II point 1(e)*	
	Doors
• **Make sure that doors have smooth non-absorbent surfaces that can be easily cleaned and disinfected.** ***B1e, B1f***	*Suitable surfaces are those that are smooth, non-absorbent, easy to clean and disinfect unless the competent authority is satisfied that other materials are appropriate. Examples include steel (stainless or coated) and plastic panelling.* *Wooden doors need to be sealed and waterproofed (e.g. with cleanable paint) but are not recommended as the bottoms rot from exposure to water and they are easily damaged by forklift trucks, for example. If used, protect at least the bottom sections of wooden doors and door frames (e.g. with plastic or stainless steel).* ***Door furniture** – handles and push plates also need to be smooth, washable and resistant to cleaning chemicals – see*

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	surfaces below.

B1(f) Surfaces (including surfaces of equipment) in areas where foods are handled and in particular those in contact with food are to be maintained in a sound condition and be easy to clean and, where necessary, to disinfect. This will require the use of smooth, washable corrosion-resistant and non-toxic materials, unless FBOs can satisfy the competent authority that other materials used are appropriate.

852/2004 Annex II ***Rooms:*** *Chapter II point 1(f)*

	Other Interior Surfaces
• **Make sure that surfaces in food handling areas, including equipment and food contact surfaces in particular, are made of materials that are easy to clean, disinfect and to maintain in a sound condition.** ***B1f, A1a-c***	*Surfaces need to be smooth, washable and capable of being maintained in a sound condition. Regular disinfection is necessary for food contact surfaces. Suitable surfaces are continuous, avoiding crevices, ridges and hard-to-clean corners and joints.* *Suitable materials are those that are smooth, washable, corrosion-resistant and non-toxic, unless the competent authority is satisfied that other materials are appropriate. Examples include stainless steel and food-grade plastics. Galvanised metal is prone to corrosion and should be avoided. Wood is generally not acceptable as a food contact surface as it is difficult to clean and disinfect and may shed splinters, but may be acceptable for cutting blocks as long as the surface is smooth and well maintained.* ***Equipment*** *- see also Section C below.*

B2. Adequate facilities are to be provided, where necessary, for the cleaning, disinfecting and storage of working utensils and equipment. These facilities are to be constructed of corrosion-resistant materials, be easy to clean and have an adequate supply of hot and cold water.

852/2004 Annex II ***Rooms:*** *Chapter II point 2*

	Facilities for Cleaning and Storing Tools and Utensils
• **Provide facilities with hot and cold water for cleaning and disinfecting working utensils and equipment, that are made of corrosion-resistant**	*Facilities for cleaning and disinfecting tools and utensils will be necessary in most food-handling areas. This facility may be a sink (preferably double bowled), a machine or a cabinet, depending on the type of tools in use. Facilities are to be made of cleanable, corrosion-resistant materials. Stainless*

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materials and are easy to clean. • **Provide adequate storage facilities for working utensils and equipment.** ***B2***	*steel is a suitable material. Hot water baths are not recommended as the water within them rapidly becomes soiled. See Chapter 4 (Cleaning).* ***Position** – to encourage regular use, cleaning facilities may be placed next to food handling areas providing that measures are in place to avoid risk of cross contamination or condensation. Arrange a 'one way' system to avoid contaminating clean tools with dirty ones.* ***Storage** – store cleaned tools on a rack, positioned so those tools can dry quickly without being splashed or coming into contact with contaminated surfaces.*

B3. Adequate provision is to be made, where necessary, for washing food. Every sink or other such facility provided for the washing of food is to have an adequate supply of hot and/or cold potable water consistent with the requirements of Chapter VII (Water Supply) and be kept clean and, where necessary, disinfected. *852/2004 Annex II **Rooms:** Chapter II point 3*	
	Facilities for Food Washing
• **Where food is washed (e.g. bovine tongue and other edible offals), provide suitable equipment that can be kept clean and disinfected, and an adequate supply of potable water.** ***B3***	*Washing facilities may simply be a sink supplied with a continuous flow of potable running water (i.e. not occasionally filled and emptied), or may be customised equipment designed for the purpose (e.g. a rotating tongue washer). The use of static water tanks is not acceptable.* *Proper ducting into drains is necessary to prevent splashing and spray washing should be avoided to prevent possible aerosol contamination onto adjacent food, staff and surfaces.*

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C. EQUIPMENT

C1. All articles, fittings and equipment with which food comes into contact are to:

(a) Be so constructed, be of such materials and be kept in such good order, repair and condition as to minimise any risk of contamination;

(b) With the exception of non-returnable containers and packaging, be so constructed, be of such materials and be kept in such good order, repair and condition as to enable them to be kept clean and, where necessary, to be disinfected; and

(c) Be installed in such a manner as to allow adequate cleaning of the equipment and the surrounding area.

C2. Where chemical additives have to be used to prevent corrosion of equipment and containers, they are to be used in accordance with good practice.

*852/2004 Annex II **Equipment**: Chapter V points 1(b-d) and 3*

	Design & Construction
Make sure that: ▪ **articles, fittings and equipment that come into contact with food are designed and constructed to minimise the risk of contaminating food.** ***C1a*** ▪ **equipment surfaces in food-handling areas are made of materials that can be kept clean, disinfected and in good order and condition.** ***C1b,*** ▪ **where chemical additives have to be used to prevent corrosion of equipment and containers, this is done following good chemical practice.** ***C3***	*See also 'Other Interior Surfaces' Topic B1f above.* *Items that come into contact with food need to be capable of being kept clean, disinfected and maintained in a sound condition. Consider these points as well as the operational performance of equipment before purchase and installation, including in particular the:* ▪ *Use of suitable materials that are smooth, washable, corrosion-resistant, and non-toxic, such as stainless steel, or food grade plastics. Galvanised metal is prone to corrosion, and should be avoided. Wood is not generally acceptable (see B1f above).* ▪ *Smoothness of surface and joint finishes – minimise ridges or crevices where dirt can be trapped. Where possible, joints should be continuously welded and sharp edges, screws and rivets should be avoided where possible.* ▪ *Rounding off of corners within equipment to aid cleaning.* ▪ *Location of bearings away from food contact surfaces so that lubricants do not contaminate product.* ▪ *Presence of internal voids that cannot be cleaned and where food material can accumulate.*

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	▪ *Use of chemical additives to prevent corrosion of equipment and containers is done following good chemical practice.* ▪ *Ability of surfaces to allow water and cleaning residues to drain away quickly.* ▪ *Availability of 'clean-in-place' systems.*
	Position of Equipment
• **Install all articles, fittings and equipment that come into contact with food so that all parts of the equipment and the surrounding areas are accessible for adequate cleaning.** ***C1c***	*Avoid installing equipment where it is inaccessible and therefore uncleanable. Except where the nature of the machinery prevents it, install equipment so that the floor below can be easily cleaned, for example, through the use of brackets rather than being floor mounted.*

C2. Where necessary, equipment is to be fitted with any appropriate control device to guarantee fulfilment of this Regulation's objectives. *852/2004 Annex II* ***Equipment****: Chapter V point 2*	
	Temperature-Controlled Equipment
• **Install temperature-controlled equipment that allows temperatures to be monitored and, if necessary, recorded.** • **Fit appropriate control devices to guarantee that performance of equipment that is essential to ensure that food safety requirements are met (e.g. chillers, freezers, cooker units).** ***C2***	*Use equipment with temperature monitoring devices where mandatory temperature requirements are set.* *Automatic monitoring/recording device can give warnings when temperature limits are in danger of being breached. Alternatively, it will be necessary to keep records of temperature monitoring.* *See Chapter 8 (Temperature Controls) and A9 above.*

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D. GENERAL REQUIREMENTS FOR SLAUGHTERHOUSES

D1. Farmed Game provisions

The provisions of Section I [red meat] apply to the production and placing on the market of meat from even-toed farmed game mammals (Cervidae and Suidae), unless the competent authority considers them inappropriate.

The provisions of Section II [white meat] apply to the production and placing on the market of meat from ratites. However those of Section I [red meat] apply where the competent authority considers them appropriate. Appropriate facilities must be provided, adapted to the size of the animals.

853/2004 Annex III ***Farmed Game:*** *Section III points 1 & 2*

D2. Where establishments are approved for the slaughter of different animal species or for the handling of carcases of farmed game or wild game, precautions must be taken to prevent contamination by separation in time or space of operations carried out on different species. Separate facilities for the reception and storage of unskinned carcases of farmed game slaughtered at the farm and for wild game must be available.

853/2004 Annex III ***Slaughterhouses:*** *Section I Chapter IV point 19 & Section II Chapter IV point 3*

	Multiple Species
• **If handled in a slaughterhouse approved for other species, take precautions to prevent contamination by separation in time or space of operations carried out on different species.** ***D2***	*A slaughterhouse may be approved to handle different species, including the dressing of farmed game (deer and wild boar), farmed ratites (ostriches) or exceptionally bison, that are killed or slaughtered elsewhere.* *If a slaughterhouse handles multiple species, the slaughter and dressing of each species needs to be carried out on a different line or at a different time to prevent contamination between species.*
• **Make available separate facilities for the reception and storage of unskinned carcases of farmed game slaughtered at the farm and for unskinned wild game.** ***D2***	*If a slaughterhouse handles only carcases slaughtered elsewhere it need only have the facilities necessary to handle them. Separate facilities are required for the reception and storage of unskinned carcasses of farmed game slaughtered at the farm and for unskinned wild game.*
• **Where ratites are handled, adapt facilities to the size of the animals.** ***D1***	***Ratites*** *– ostriches may be handled in either red or white meat slaughterhouses, as long as the equipment is of an appropriate size and height to be able to deal with them hygienically.*

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D3. To avoid contaminating meat, [red meat slaughterhouses] must:

- **a) Have a sufficient number of rooms, appropriate to the operations being carried out;**
- **b) Have a separate room for the emptying and cleaning of stomachs and intestines, unless the competent authority authorises the separation in time of these operations on a case-by-case basis;**
- **c) Ensure separation in space or time of the following operations:**
  - **(i) stunning and bleeding;**
  - **(ii) in the case of porcine animals, scalding, depilation, scraping and singeing;**
  - **(iii) evisceration and further dressing;**
  - **(iv) handling clean guts and tripe;**
  - **(v) preparation and cleaning of other offal, particularly the handling of skinned heads if it does not take place at the slaughter line;**
  - **(vi) packaging offal; and**
  - **(vii) dispatching meat;**

D4. They must have lockable facilities reserved for the slaughter of sick and suspect animals. This is not essential if this slaughter takes place in other establishments authorised by the competent authority for this purpose, or at the end of the normal slaughter period.

*853/2004 Annex III **Slaughterhouses:** Section I Chapter II points 2(a-c) and 7*

D5. To avoid contaminating meat, [white meat slaughterhouses] must:

- **a) Have a sufficient number of rooms, appropriate to the operations being carried out;**
- **b) Have a separate room for evisceration and further dressing, including the addition of seasonings to whole poultry carcases, unless the competent authority authorises separation in time of these operations … on a case-by-case basis;**
- **c) Ensure separation in space or time of the following operations:**
  - **(i) stunning and bleeding;**
  - **(ii) plucking or skinning, and any scalding; and**
  - **(iii) dispatching meat**

*853/2004 Annex III **Slaughterhouses:** Section II Chapter II points 2(a)-(c)*

	Separation of Operations
Make sure that: ▪ **the slaughterhouse has sufficient rooms for the operations being carried out to ensure the adequate separation of the following processes so that meat does**	*Effective separation of clean and dirty operations is key in eliminating sources of contamination. Only where spatial separation is impossible should time separation be used and then only with an effective cleaning and disinfecting regime between operations.* *A 'straight line' layout leading from dirty to clean areas is preferable and allows easy physical separation of operations*

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not become contaminated: ***D3a, D5a*** **<u>For red meat,</u>** **Make sure there is separation of:** ▪ **Stunning and bleeding;** ▪ **For pigs: scalding, depilation, scraping and singeing;** ▪ **Evisceration and further dressing;** ▪ **Cleaning and handling of guts and tripe;** ▪ **Preparation and cleaning of offal, particularly handling of skinned heads if this is not done at the slaughter line;** ▪ **Packing offal;** ▪ **Dispatching meat.** ***D3*** • **Have a separate room for the emptying and cleaning of stomachs and intestines to prevent contamination of meat with gut contents, unless competent authority authorises separation on time separation on a case-by-case-basis.** ***D3b*** • **Provide lockable facilities reserved for the slaughter of sick and suspect animals,**	*and materials. In older premises there may be crossovers or a doubling back in the layout. If this is the case it may be necessary to install barriers to prevent contamination. The layout should make it difficult for staff to pass from dirty to clean areas without washing hands and changing protective clothing.* ***Examples of dirty areas:*** ▪ *Lairage* ▪ *Green offal (i.e. Stomach and intestine) emptying room* ▪ *Unfit meat holding facility* ▪ *By-products* ***Examples of transitional areas where clean and dirty operations meet:*** ▪ *Stun/stick* ▪ *Slaughter hall* ▪ *Detained meat loop and chiller* ▪ *Equipment wash rooms* ▪ *Staff amenities* ***Examples of clean areas:*** ▪ *Red offal preparation and packing* ▪ *Carcase chiller* ▪ *Despatch* ***Green offal*** *– time separation for emptying and cleaning green offal may be authorised at the premises, providing the OV agrees (and signs for the record) the operator's written procedure on how this operation will be carried out.* ***Separation of evisceration and further dressing*** *- time separation may be authorised at the premises, providing the OV agrees (and signs for the record) the operator's written procedure on how this operation will be carried out.* ***Slaughter of sick and suspect animals*** *- where separate*

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unless the slaughter of such animals take place at the end of the normal slaughter period. ***D4*** **<u>For white meat,</u>** **make sure there is separation of:** ▪ **Stunning and bleeding** ▪ **Scalding plucking, and skinning of lagomorphs** ▪ **Evisceration and further dressing (see below)** ▪ **Dispatching meat** ***D5*** • **Have separate rooms for evisceration and further dressing, including the addition of seasonings to whole poultry carcases, unless the competent authority authorises separation in time of these operations … on a case-by-case basis.** ***D5b***	*facilities, reserved for the slaughter of animals found or suspected to be suffering from disease, are not available in red meat slaughterhouses, those animals will have to be slaughtered at the end of the normal slaughter period. Note: for welfare reasons (e.g. injury) it may become necessary to slaughter an animal immediately.* ***Entrances/Exits** – where there is a single site entrance for livestock and finished products make sure that hygiene is not compromised.*

D6. [Slaughterhouses] must have installations that prevent contact between the meat and the floors, walls and fixtures; *853/2004 Annex III **Slaughterhouses:** Section I Chapter II point 2(d) & Section II Chapter II point 2(d)*	
	Meat Handling Systems
• **Position equipment so as to prevent meat from coming**	*Position equipment/fixtures such as conveyors, metal cradles or overhead rails for line dressing of carcasses, and*

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into contact with the floor or with walls and fixtures. ***D6***	*inspection tables, at a height and within the space so that carcases and meat can be kept clear of the floor or contact with walls and other potentially dirty surfaces.* *Workstations should also be at appropriate heights for safe and hygienic working.* *See also Equipment Section C above.*

D7. Have slaughter lines (where operated) designed to allow constant progress of the slaughter process and to avoid cross-contamination between the different parts of the slaughter line. Where more than one slaughter line is operated … there must be adequate separation of the lines to prevent cross-contamination. *853/2004 Annex III* ***Slaughterhouses:*** *Section I Chapter II point 2(e) & Section II Chapter II point 2(e)*	
	Slaughter Lines
• **Design slaughter lines so that the slaughter process can operate progressively without interruptions and to avoid cross contamination between different parts of the line.** • **Where more than one line is operated, make sure there is adequate separation to prevent cross contamination.** ***D7***	*The design of the slaughter line (where operated) should allow progressive working which avoids regular contact between carcases.* *After hide/skin removal red meat carcases must be kept separated from each other until post-mortem inspection is completed. Rail systems should allow suspect carcases to be moved to the detention area which should be located adjacent to the main slaughterhall inspection points to facilitate communication of disease findings. From the detained room the overhead rail should reconnect with the main slaughter line for the carcase to go either to the chill rooms or to the unfit rooms.* *See Chapter 9 (Acceptance & Slaughter of Animals)*

D8. … have facilities for disinfecting tools with hot water supplied at not less than 82ºC, or an alternative system having an equivalent effect. *853/2004 Annex III* ***Slaughterhouses:*** *Section I Chapter II point 3 & Section II Chapter II point 3*	
	Facilities for Disinfecting Tools
• **Where hot water is used for disinfecting tools, make sure**	*Where hot water is used, the effectiveness of disinfecting facilities 'sterilisers' needs to be maintained by means of a*

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it has a minimum temperature of 82°C. • **Other systems shown to have an equivalent effect as water at 82°C may be approved.** *D8*	*continuous flow of water with overflow ducted to a drain. Their design should allow knife blades/junctions and other tools to be fully immersed and should, ideally, be fitted with temperature indicators. Avoid temperatures above 90°C for steam control and health & safety reasons.* ***Position** - in slaughter and dressing rooms disinfecting facilities need to be located close enough to workstations to allow use throughout production. To minimise condensation in cutting rooms, 'batch sterilisers' may be installed to disinfect tools periodically during production.* ***Equivalent methods of disinfection** - historically, disinfection of tools is achieved by immersion in hot water. Approval may be sought for alternative methods, e.g. using chemicals. Proposals for alternative systems supported by data may be submitted to the Veterinary Director, FSA, 125 Kingsway, London WC2B 6NH, for consideration.* ***Note:** A review of this issue is in progress, including the need for performance criteria for establishing equivalence. Any agreed alternatives to the requirement for 82°C will be notified by a change to this industry guidance.*

D9. The equipment for washing hands used by the staff engaged in handling exposed meat must have taps designed to prevent the spread of contamination. *853/2004 Annex III **Slaughterhouses:** Section I Chapter II point 4 & Section II Chapter II point 4*	
	Handwashing Facilities
• **Install hand washing facilities for staff handling exposed meat fitted with taps designed to prevent cross contamination** *D9*	*Provide staff handling exposed meat with washbasins that are fitted with taps that are not hand operated as this may lead to re-contamination.* *Staff involved in slaughter, dehiding/skinning or evisceration, are likely to have contaminated arms and elbows as well as hands. In these cases fit washbasins with taps that are activated automatically by sensors or by feet or knees, not touched by hands or elbows.*

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D10. Lockable facilities for the refrigerated storage of detained meat and separate lockable facilities for the storage of meat declared unfit for human consumption. *853/2004 Annex III* ***Slaughterhouses:*** *Section I Chapter II point 5 & Section II Chapter II point 5*	
	Facilities for Detained Meat
• **Provide lockable refrigerated storage for detained meat.** ***D10***	*Meat may be detained for further inspection or while awaiting information e.g. results of tests or identification checks.* *A lockable refrigerated facility for storing detained meat is required. This may, be a dedicated room or a cage, made of corrosion-resistant, cleanable material with provision to contain drip, placed within a chiller, or, as long as hygiene cannot be compromised, an arrangement such as a lockable rail within a chiller.* *The acceptability of the facility will depend on the normal method of operation. It is not acceptable if its use interrupts or interferes with the normal operation of the chillers.*
	Facilities for Unfit Meat
• **Provide separate lockable facilities for the storage of meat declared unfit for human consumption** ***D10*** • **Store inedible substances in separate and secure containers.** ***A6***	*There should be no opportunity for cross contamination between fit and unfit meat.* *A separate, lockable and clearly marked place for storing meat declared unfit for human consumption, prior to disposal as an animal by-product, is required. This may, for example, be a dedicated room or lockable container(s) held in a secure area.* *See Edible Co-Products Guide Chapter 5 (Animal By-Products) available at www.food.gov.uk/foodindustry/guidancenotes/meatregsguid/coproductbyproductguide*

D11. They must have an adequately equipped lockable facility or, where needed, room, for the exclusive use of the veterinary service. *853/2004 Annex III* ***Slaughterhouses:*** *Section I Chapter II point 9 & Section II Chapter II point 7*	
	Facilities for the Veterinary Service
• **Provide adequately equipped lockable facilities for the**	*Make available a lockable room or rooms sufficient for the number of official veterinarians and/or meat inspectors*

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exclusive use of the official veterinarian and meat inspection staff. *D11*	*working at the premises, for their exclusive use. Where the premises are small and next door to a house with access throughout working hours, a room in the house may be sufficient. Exceptionally, a separate room may not need to be provided in small premises where a single official is normally working for only a few hours a week.* *Provide an appropriate number of desks or tables; chairs; storage for outdoor and protective clothing, lockable storage for official records, health marks (if used) and personal belongings; with power points and adequate lighting.*

D12. Post-mortem inspection is to be carried out under suitable conditions with suitable facilities. *853/2004 Annex III* ***Slaughterhouses:*** *Section I Chapter IV point 12 & Section II Chapter IV point 6*	
	Post-mortem Inspection Facilities
• **Provide suitable facilities for post-mortem inspection.** *D12*	*Locate the post mortem inspection points close after the following dressing procedure:* ▪ *head removal (for inspection of the head)* ▪ *evisceration (for inspection of green and red offal)* ▪ *carcase split (for carcase inspection and health marking)* ***Facilities*** *– the inspection point should have enough space to allow the inspection to be carried out hygienically and effectively, for post-mortem findings to be recorded and should include:* ▪ *lighting at 540 lux that does not distort colours.* ▪ *hand and if possible apron washing facilities and, steriliser (see above)* ▪ *a system that allows carcases to go to the detained room for further inspection (red meat) (see slaughterlines above)* ▪ *hang back facilities to allow further inspection (poultry).*

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E. RED MEAT SLAUGHTERHOUSES: LAIRAGES & LIVESTOCK TRANSPORT

E1. Slaughterhouses must have adequate and hygienic lairage facilities or, climate permitting, waiting pens that are easy to clean and disinfect. These facilities must be equipped for watering the animals and, if necessary, feeding them. The drainage of the wastewater must not compromise food safety.

E2. The size of the lairage facilities must ensure that the welfare of the animals is respected. Their layout must facilitate ante-mortem inspections, including the identification of the animals or groups of animals.

853/2004 Annex III ***Slaughterhouses:*** *Section I Chapter II points 1(a) & (c)*

E3. They must also have separate lockable facilities or, climate permitting, pens for sick or suspect animals with separate draining and sited in such a way as to avoid contamination of other animals, unless the competent authority considers that such facilities are unnecessary.

853/2004 Annex III ***Slaughterhouses:*** *Section I Chapter II point 1(b)*

	Red Meat Lairages
Make sure that: • **the design, construction and size of lairages or waiting pens for animals awaiting slaughter meets animal welfare requirements, including facilities to water animals at all times.** ***E1, E2*** • **the lairage can be easily cleaned and disinfected, has drainage that ensures that effluent does not compromise food safety, and the layout, provides for ante-mortem inspections of incoming animals, including their identification.** ***E1, E2***	*Lairages have been shown to be a source of contamination of animals' hides/fleeces/skin with organisms that can be present on meat and cause illness in humans. The design, construction and operation of lairages have an important role in the safe production of meat.* ***Floor surfaces*** *- these should be able to be cleaned and disinfected and designed to minimise the risk of animals slipping, while permitting effective cleaning and disinfection.* ***Pens*** *- divisions between pens should be of a suitable size, and constructed of materials that are sufficiently robust, for the species of animal penned. They must be maintained to ensure that there are no edges or protrusions that might cause injury to animals. All materials must be capable of being cleaned and disinfected.* ***Water*** *- make sure that animals have access to water at all times. Containers must be accessible and at an appropriate height for the type/age of the animals, so should be adjustable.* ***Drainage*** *- see E4 below* ***Ante-mortem facilities*** *- provide adequate lighting, space and access to enable ante-mortem inspection to be properly*

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	undertaken. Suitable animal restraint facilities (e.g. a crush) are recommended to allow detailed examination of individual animals. Where this is not the case appropriate procedures and/or assistance will need to be provided. ***For further information*** *on facilities for animals awaiting slaughter see Chapter 9 (Acceptance & Slaughter of Animals) Sections A and G.*
	Facilities for Sick or Suspect Animals
• **Provide a separate secure area for suspect or sick animals, with separate drainage, so the potential spread of disease is minimised, unless the competent authority agrees other arrangements.** ***E3***	*The secured area for sick or suspect animal should be designed so that the animal cannot escape and/or mix with other animals and remains under the control of the OV. A separate area/pen is not required where a single animal is held for slaughter. It may be used for temporary storage (e.g. bedding) as long as this can be and is removed immediately if the facility is needed for livestock.*

E4. If manure or digestive tract content is stored in the slaughterhouse, there must be a special area or place for that purpose. *853/2004 Annex III* ***Slaughterhouses:*** *Section I Chapter II point 8*	
	Manure
• **If manure or digestive tract content is stored in the slaughterhouse, provide a special area or place for that purpose.** ***E4*** • **Make arrangements for disposing of hay and/or straw to meet the requirements of relevant regulations.**	*Provide a manure bay near the lairage on the dirty side of the plant. The floor should slightly slope to the front where a drain should be provided to prevent the overflow of waste.* ***Disposal of hay and straw*** *– transport of animals regulations cover the disposal of hay and straw contaminated with animal manure (classified as a category 2 animal by-product).* *See - The Transport of Animals (Cleansing and Disinfection) (England) (No 3) Order 2003; The Transport of Animals (Cleansing and Disinfection) (Scotland) Regulation 2005; The Animal By-product Regulations (NI) 2003.*

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	See Chapter 4 (Cleaning) Section B

E5. There must be a separate place with appropriate facilities for the cleaning, washing and disinfection of means of transport for livestock. However, slaughterhouses need not have these places and facilities if the competent authority so permits and official authorised places and facilities exist nearby. *853/2004 Annex III* ***Slaughterhouses:*** *Section I Chapter II point 6*	
	Facilities for Cleaning Livestock Vehicles
• **Provide separate facilities for the cleaning, washing and disinfection of livestock transport vehicles, unless other arrangements are agreed with the competent authority.** ***E5***	*For biosecurity reasons, facilities for cleaning livestock transport vehicles are normally required on the slaughterhouse site.* **On site facilities require**: ▪ *Impervious hard standing, with space to cater for normal vehicle throughput without undue delay.* ▪ *Functionality in all weather conditions.* ▪ *Drainage facilities sufficient for the quantity of liquid waste generated during cleaning and disinfection.* ▪ *Adequate supplies of clean running water under pressure.* ▪ *Equipment (i.e. sprays, high-pressure hoses, brushes etc.) with which to apply approved disinfectant.* ▪ *Adequate supplies of approved disinfectant for use at approved dilution ratios, for thorough disinfection.* ▪ *Safe storage and cleaning of, and access to, equipment.* ▪ *Safe storage facilities for debris/hay/straw removed from vehicles, before its destruction, treatment or disposal, so that animals have no access to it.* ▪ *Sufficient light in which to work and inspect.* *See Chapter 4 (Cleaning) B2 for guidance on working practices.* *If suitable off-site facilities are available nearby the legislation allows them to be authorised.* *[**Note**: if necessary a derogation from this provision may be requested from the EC.]*

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F. WHITE MEAT SLAUGHTERHOUSES: RECEPTION AND TRANSPORT OF ANIMALS

F1. [Slaughterhouses] must have a room or covered space for the reception of the animals and for their inspection before slaughter. *853/2004 Annex III* ***Slaughterhouses:*** *Section II Chapter II point 1*	
	White Meat Animal Reception Areas
Make sure that: ▪ **rooms and/or covered spaces for poultry or lagomorphs awaiting slaughter meet welfare requirements, and** ▪ **the reception area layout allows ante-mortem inspections to be carried out.** ***F1***	***For further information*** *see Chapter 9 (Acceptance & Slaughter of Animals) Sections A and H.* ***Ante-mortem inspection*** *- provide adequate lighting, space and access to enable ante-mortem inspection to be properly undertaken.*

F2. There must be a separate place with appropriate facilities for the cleaning, washing and disinfection of (a) transport equipment such as crates; and (b) means of transport. These places and facilities are not compulsory for (b) if officially authorised places and facilities exist nearby. *853/2004 Annex III* ***Slaughterhouses:*** *Section II Chapter II point 6*	
	Facilities for Cleaning Poultry Transport Vehicles
• **Provide for the cleaning, washing and disinfection of means of transport.** ***F2***	*The requirements are as for red meat - see E5 above.*
	Facilities for Cleaning Poultry Crates
• **Provide on site facilities for washing poultry crates (or modules).** ***F2***	*Facilities for cleaning crates must be provided on site.* *Screen off crate washing areas and especially separate clean crates from the hanging area and crates with live birds. Equipment needs to be accessible for cleaning and maintenance. See E5 above.*

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	See Chapter 4 (Cleaning) B2 for guidance on working practices.

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G. FACILITIES FOR ON FARM SLAUGHTER OF POULTRY AND GAME

G1. The [poultry] holding must have facilities for concentrating the birds to allow an ante-mortem inspection of the group to be made. The [farmed game] holding must have procedures for concentrating the animals to allow an ante-mortem inspection of the group to be made;

G2. The [poultry] holding must have premises suitable for the hygienic slaughter and further handling of the birds. The [farmed game] holding must have facilities suitable for the slaughter, bleeding and, where ratites are to be plucked, plucking of the animals;

G3. Animal welfare requirements must be complied with.

G4. In the case of poultry reared for the production of 'foie gras', the uneviscerated birds must be transported immediately and, if necessary, refrigerated, to a slaughterhouse or cutting plant.

G5. Delayed eviscerated poultry obtained at the farm of production may be kept for up to 15 days at a temperature of not more than 4°C. It must then be eviscerated in a slaughterhouse or in a cutting plant.

G6. Slaughtered and bled [farmed game] animals are to be transported to the slaughterhouse hygienically and without undue delay. If transport takes more than two hours, the animals are, if necessary, refrigerated. Evisceration may take place on the spot.

853/2004 Annex III ***Poultry Slaughter on Farm:*** *Section II Chapter VI points 3, 4,5, 8 & 9 /* ***Farmed Game:*** *Section III points 3(e-h)*

	Poultry Holdings
• **Food business operators may slaughter delayed eviscerated poultry, geese and ducks reared for foie gras production, and poultry farmed as domestic animals on the farm in compliance with the following requirements.** • **Provide facilities for concentrating the birds to allow an ante-mortem inspection of the group to be made and for animal welfare requirements to be met.**	***For further information*** *on facilities for animals awaiting slaughter see Chapter 9 (Acceptance & Slaughter of Animals) Section E.* *Provide adequate lighting, space and access to enable ante-mortem inspection to be properly undertaken.* *Rooms used for slaughter and storage should meet the same hygiene requirements as the equivalent areas in a slaughterhouse – see relevant sections.*

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G1, G3 • **Provide premises suitable for the hygienic slaughter and handling of the birds.** *G2* • **Provide refrigeration facilities for storage of up to 15 days of 'delayed eviscerated poultry at no more than 4ºC', and if necessary, for keeping uneviscerated 'foie gras' birds before transport to a slaughterhouse or cutting plant.** *G2, G4, G5*	
	Farmed Game Holdings
• **Food business operators may slaughter farmed ratites, deer and boar, and bison in exceptional circumstances, at the place of origin with the authorisation of the competent authority in compliance with the following requirements:** • **Holdings have procedures for concentrating the birds/animals to allow an ante-mortem inspection of the group to be made. Animal welfare requirements are met.** *G3* • **Holdings have facilities**	***For further information*** *on facilities for animals awaiting slaughter see Chapter 9 (Acceptance & Slaughter of Animals) Section E.* *Provide adequate lighting, space and access to enable ante mortem inspection to be properly undertaken.* *Rooms used for slaughter and storage should meet the same hygiene requirements as the equivalent areas in a slaughterhouse – see relevant sections.* *Farmed game may be shot in the field and bled there using sterilised knives carried for the purpose.*

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suitable for the slaughter, bleeding and, where ratites are to be plucked, plucking of the animals. If necessary there are refrigeration facilities prior to transport of carcases to the slaughterhouse. ***G1, G6***	

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H. MEAT CUTTING AND PRODUCTION ESTABLISHMENTS

H1. [Premises] are constructed so as to avoid contamination of meat and meat products, in particular by: allowing constant progress of the operations; or ensuring separation between the different production batches;

H2. Have rooms for the separate storage of packaged meat and exposed meat and products, unless stored at different times or in such a way that the packaging material and the manner of storage cannot be a source of the contamination for the meat or products;

H3. Have rooms equipped to ensure compliance with the temperature requirements laid down in Chapter III;

H4. Have equipment for washing hands used by staff handling exposed meat and products with taps designed to prevent the spread of contamination; &

H5. Have facilities for disinfecting tools with hot water supplied at not less than 82°C, or an alternative system having an equivalent effect.

853/2004 Annex III ***Cutting:*** *Section I Chapter III and Section II Chapter III /* ***Farmed Game:*** *Section III points 1 and 2; /* ***Wild Game:*** *Section IV Chapter II point 9 and Chapter III point 7 (indirectly)* ***Production Establishments (Minced meat, Meat preparations, MSM):*** *Section V Chapter I /* ***Meat Products:*** *Section VI 2*

	Layout of Production Area
• **Make sure that premises are constructed to avoid contamination of meat and meat products, in particular by: allowing constant progress of the operations; or ensuring separation between the different production batches.** ***H1***	*The layout needs to allow for constant progress of product or separation between batches to avoid accumulation of exposed meat and the possibility of cross contamination and raised meat temperatures.*
	Storage Facilities
• **Provide storage facilities that allow the physical separation of exposed and packaged meat in time or space so that cross contamination cannot occur.** ***H2***	*Where cutting plants receive packaged meat for further processing, there should be suitable facilities for deboxing meat and the hygienic disposal of the packaging.* *Packaged meat and exposed meat may be stored in the same chiller providing that arrangements are in place to prevent hygiene being compromised.* *See Chapter 14 (Wrapping, Packaging and Transport Hygiene).*

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	Vacuum-packed meat and meat in clean trays can be stored with exposed meat as long as it is not contaminated by carcase drip (i.e. there is spatial separation between exposed meat and vacuum-packs). Protect meat in trays on racks from drip from meat above.
	Temperature Control
• **Make sure that cutting rooms can meet the statutory requirements for controlling the temperature of meat.** *H3*	*See A9 above and Chapter 8 (Temperature Controls).*
	Hand Washing Facilities
• **Provide hand washing facilities for staff handling exposed meat that are fitted with taps designed to prevent cross contamination.** *H4*	*Provide staff handling exposed meat with washbasins fitted with taps that are not operated by hand as this may lead to re-contamination. Taps activated automatically by sensors or by using knees or feet are recommended in preference to elbow operated taps as staff may use their hands to operate them.*
	Disinfecting Tools
• **Where hot water is used for disinfecting tools, make sure it has a minimum temperature of 82°C.** • **Other systems shown to have an equivalent effect as water at 82 °C may be approved.** *H5*	*See D8 above*

H6. If the following operations are undertaken in a [poultry] cutting plant:

a) the evisceration of geese and ducks reared for the production of "foie gras", which have been stunned, bled and plucked on the fattening farm; or

b) the evisceration of delayed eviscerated poultry,

…operators must ensure that separate rooms are available for that purpose.

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853/2004 Annex III ***Cutting:*** *Section II Chapter III point 2*	
	Evisceration of Certain Poultry Carcases
• **Have separate rooms in poultry cutting plants if foie gras or delayed eviscerated poultry are eviscerated.** ***H6***	*Cutting rooms may not be used for evisceration.*

I. EDIBLE CO-PRODUCTS

• **Required rooms and facilities**	*See Sections A, B and C of this Chapter relating to general requirements of Regulation 852/2004 for food establishments and the Industry Guide on Edible Co-Products available at www.food.gov.uk/foodindustry/guidancenotes/meatregsguid/coproductbyproductguide*

OPERATOR'S OBLIGATIONS	*ADVICE*

1.3.2 WHAT ARE THE OFFICIAL CONTROL REQUIREMENTS?

Audits by officials of good hygiene practices shall verify that meat plant operators apply procedures continuously and properly concerning the design of premises and equipment.

854/2004 Article 4 point 4b

Audits by officials of HACCP- based procedures shall verify that meat plant operators apply such procedures continuously and properly.

854/2004 Article 4 point 5

1.3.3 APPLYING PROCEDURES CONTINUOUSLY AND PROPERLY

The operator is responsible for food safety in the food business.

852/2004 Article 1 point 1(a)

Food business operators shall put in place, implement and maintain a permanent procedure or procedures based on the HACCP principles.

852/2004 Article 5 point 1

Food … business operators at all stages of production, processing, and distribution within the businesses under their control shall ensure that foods … satisfy the requirements of food law which are relevant to their activities and shall verify that such requirements are met.

178/2002 Article 17

	Operator Responsibilities for Structure & Layout
• **Operator responsibility includes applying and verifying procedures relating to the design, layout and construction or reconstruction, redesign and refurbishment of the premise and taking corrective action if those procedures fail.**	***Operator Responsibility*** *includes the hygienic design and layout of premises and taking corrective action if there is a failure.* ***These procedures should be based on HACCP principles*** *– see PART THREE Chapter 1 (Application of HACCP Principles).* ***Delegation*** *– responsibility for the application and verification of procedures relating to the design and facilities of the premise may be delegated to a nominated person, to whom problems are reported and who has sufficient authority to ensure that corrective action is taken when necessary.*
• **Implement and maintain a permanent procedure or procedures based on the**	***Verification*** *– check that contractors are working to agreed briefs and specifications for buildings and equipment so that any faults in design, layout or installation can be identified*

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HACCP principles	*quickly and corrective action taken before operations begin.* ***Frequency of verification*** *- this will depend on the circumstances and likelihood of a problem being found. The work of experienced staff/contractors can be checked less frequently than that of others.* ***Records*** *- keep an accurate, dated account of the date and result of each verification check, of problems raised (e.g. a snagging list), and of any corrective action taken. Keep copies of all plans, design drawings and specifications.* ***Corrective action*** *– Take action when failures of the design or construction of buildings or installation of equipment is identified to ensure that control is restored.* *Corrective action may include:* ▪ *Dealing with any product that has been contaminated;* ▪ *Establishing the underlying cause and what needs to be done to prevent similar incidents in the future;* ▪ *Ending the building or other contract.*

PART TWO

2. WATER SUPPLY

Note: Please see Amendment Record, August 2007

2.1 WHY IS THE QUALITY OF THE WATER SUPPLY IMPORTANT?

Water is an important potential source of microbiological and chemical hazards. Micro-organisms that cause food poisoning can survive for days or even months in water. Procedures are needed to minimise the risk of such hazards causing illness to consumers.

For example:

- Water supplies can become polluted with human sewage or agricultural waste containing faecal contamination from animals. Such pollution is likely to contain micro-organisms that can cause human disease.

- Bacteria are able to multiply in water distribution systems, even when the incoming water supply is not contaminated, especially where water remains for a long time in storage tanks or in pipes that are not in use. The problem will be greater if the water system is not kept clean. The resulting microbiological contamination can then spread to other parts of the system and be transferred to food.

- Water supplies can also be a source of chemical contaminants, such as heavy metals, pesticides, nitrates, and industrial pollutants. These chemical contaminants can be transferred from water used in processing or cleaning onto food.

2.2 GENERAL INFORMATION

- **Potable Water**

> **'Potable water' means water meeting the minimum requirements laid down in Directive 98/83/EC on the quality of water intended for human consumption.**
>
> *852/2004 Article 2* ***Definitions****: point 1(g)*

- **Water Supply (Water Quality) Regulations**

In England and Wales Directive 98/83/EC is implemented by The Water Supply (Water Quality) Regulations 2000 (www.opsi.gov.uk/si/si2000/20003184.htm).

Contact: *The Drinking Water Inspectorate,*
Ashdown House, 123 Victoria Street, London SW1E 6DE
(www.dwi.gov.uk) *Tel: 020 7082 8024*

In Scotland Directive 98/83/EC is implemented by The Water Supply (Water Quality) Regulations (Scotland) 2001 (SI 2001 /207) (http://www.opsi.gov.uk/legislation/scotland/ssi2003/20030331.htm). These regulations have been amended by SSI 2001/238 (The Water Supply (Water Quality) (Scotland) Amendment Regulations 2001) and were modified by SSI 2003/311 (The Water Industry (Scotland) Act 2002 (Consequential Provisions) Order 2003).

Contact: *The Drinking Water Quality Regulator for Scotland*
PO Box 23598, Edinburgh EH6 6WW
(www.dwqr.org.uk) *Tel: 0131 244 0190*

In Northern Ireland Directive 98/83/EC is implemented by The Water Supply (Water Quality) Regulations (NI) 2002 (SI 2002 /331 as amended by SR 2003/369).
(www.opsi.gov.uk/sr/sr2003/20030369.htm)

Contact: *The Drinking Water Inspectorate*
First Floor, Commonwealth House, 35 Castle Street, Belfast BT1 1GU
(www.ehsni.gov.uk/environment/drinkWater/drinkWater.shtml)
Tel: 028 90 546474

- **For technical information contact:**

The Water Regulations Advisory Scheme (www.wras.co.uk) Tel: 01495 248454

- **British Standards for Chemicals used for Treatment of Water**

Chemicals may be used, subject to the method of use and purity of the products such that, in the case of water for public supply, the water so treated meets the requirements of the Water Supply (Water Quality) Regulations 2000 and 2001 in England and Wales.

A list of chemicals is published at www.dwi.gov.uk/cpp/pdf/sos2005.pdf

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2.3.1 WHAT ARE THE LEGAL REQUIREMENTS FOR WATER SUPPLY?

The following sections set out the water supply requirements of the regulations that apply to slaughter, dressing and the further processing of meat.

A. WATER SUPPLY

A1. There is to be an adequate supply of potable water, which is to be used whenever necessary to ensure that foodstuffs are not contaminated.

852/2004 Annex II ***Water Supply:*** *Chapter VII point 1(a)*

A2 The design and construction, … of food premises are to permit good food hygiene practices, including protection against contamination.

A3. Food premises are to be kept clean and maintained in good repair.

A4. Washbasins for cleaning hands are to be provided with hot & cold running water.

852/2004 Annex II ***Food premises:*** *Chapter I points 2(c), 1 & 4*

	Supply of Potable Water
• **Provide an adequate and reliable supply of potable water for food processing, cleaning and other procedures where food contact is possible.** ***A1*** • **Make sure that the design and construction of the premises permits good food hygiene practices.** ***A2***	***Potable water*** *must meet the minimum requirements of Directive 98/83/EC. It may be drawn from the public mains supply network operated by a water company, or from a private supply, such as a borehole. See relevant topics below.* ***Supply*** *- consider the need for adequate water supplies for food processing, cleaning and other requirements in the design and construction of premises or when buildings are rebuilt, altered or refurbished. See Chapter 1 (Design & Facilities) Sections A10 (Toilets), A11/D9/H4 (Hand Washing Basins), A15 (Drainage), B3 (Food Washing), D8/H5 (Disinfecting Tools) and E5/F2 (Cleaning Livestock Vehicles/Crates).* ***Private supplies*** *– where water is drawn from a private supply it may require disinfection treatment (e.g. filtration, ultra-violet light chlorination). Consult a water treatment specialist to help identify the most effective method.* ***Capacity*** *– make sure that the water distribution system has sufficient capacity to meet demand at peak times (e.g. during*

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	cleaning). ***Water storage tanks** - should be made of inert material to avoid chemical contamination of water and corrosion. Keep tanks covered and secured to prevent contamination.* ***Plans** - water distribution systems can be complex, especially in larger premises. Detailed plans will help to identify any redundant pipe work that could act as a reservoir of microbiological contamination and to define an area to be isolated if contamination occurs. Keep an accurate and dated plan of the potable and any non-potable system, including pipe work, point of entry of water into the premises and numbered outlets (see monitoring below). Update the plan if alterations are made. Plans should be submitted with applications for approval of new premises.*
	Water Temperature
• **Provide hand washbasins with hot and cold running water.** ***A4***	*Supply tap water at suitable temperatures for effective hand washing without risk of scalding. See Chapter 1 (Design & Facilities) Section A11.*
	Cleaning & Maintenance
• **Keep food premises clean and maintained in good repair.** ***A3***	***Cleaning** - clean tanks regularly to prevent any build up of organic or mineral material that could act as a source of microbial growth and contamination and when a contamination incident occurs. Even well maintained water distribution systems may suffer from a build up of organic matter, so it is good practice to schedule the draining and cleaning of the entire system at a frequency that prevents this from affecting water quality.* ***Maintenance** - keep water distribution systems in good condition and maintained so that water does not become contaminated. Carry out regular inspections of the water distribution systems for signs of damage, corrosion, leaks etc. The frequency of inspection will depend on the likelihood of a*

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	problem being found (once a month may be sufficient for well-designed premises that are kept in good order). Keep an accurate, dated account (e.g. in a maintenance notebook) of the date and result of each inspection and of any corrective action taken. ***Disinfection systems** - if used, treat filtration and other disinfection systems with ultra-violet light. They require maintenance e.g. filter systems need to be cleaned and/or changed regularly to maintain performance. Have the system checked periodically to confirm it is functioning correctly.* ***Chlorine** – if added to disinfect private supplies, seek specialist advice.* ***Water softening** - in hard water areas water softening may be applied to prevent the build up of scale and reduce the use of detergents. If used, keep water softeners in good condition so that they do not become sources of contamination.*

A5. Food business operators ensure that food handlers are supervised and instructed and/or trained in food hygiene matters commensurate with their work activity. *852/2004 Annex II **Training:** Chapter XII point 1*	
	Training, Instruction & Supervision
• **Make sure that food handlers are supervised and instructed and/or trained in food hygiene matters commensurate with their work activity.** ***A5***	*Instruct staff (and any contract cleaners) about the need to use potable water (including ice and steam if appropriate), to use only water from the correct outlets and report problems promptly. Staff who take or test water samples need to be adequately trained so that results are reliable. Supervise as appropriate and issue reminders if lapses occur. See also Chapter 6 (Training) Section A1.* *Keep accurate, dated records to show what instruction/ training individuals have received.*

A6. Where non-potable water is used, e.g. for fire control, steam production, refrigeration and other similar purposes, it is to circulate in a separate, duly identified system. Non-potable water is not to connect with, or allow reflux into, potable water systems.

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852/2004 Annex II ***Water Supply:*** *Chapter VII point 2*	
	Use of Non-potable Water
Make sure that: • **where supplies of non-potable water are used, they are carried in completely separate and clearly identified distribution systems.** • **non-potable water does not connect with, or allow reflux into, potable water systems.** ***A6***	*Non-potable water may be used in food premises for certain purposes e.g. for fire control, non-food contact steam generation, or refrigeration.* *Clearly identify potable and non-potable water systems and particularly water outlets to avoid misuse of non-potable water. See also 'Plans' above.* *Make sure there are no opportunities for non-potable water to enter the potable distribution system, for example, through siphoning back from a drain.*

A7. Recycled water used in processing or as an ingredient is not to present a risk of contamination. It is to be of the same standard as potable water, unless the competent authority is satisfied that the quality of the water cannot affect the wholesomeness of the foodstuff in its finished form. 852/2004 Annex II **Water Supply:** Chapter VII point 3	
	Recycled Water
• **Where water is recycled for use in processing or as an ingredient, make sure that it is the same standard as potable water, unless the competent authority is satisfied that the quality of the water cannot affect the wholesomeness of the foodstuff in its finished form.** ***A7***	*Standards for potable water are set out in the EC Directive (see 2.2 General Information above).* *If recycled or re-circulated water is used, carry out daily tests to check its quality, keeping a record of the results. Take appropriate action if quality standards are not being met.*

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A8. Ice which comes into contact with food or which may contaminate food is to be made from potable water … . It is to be made, handled and stored under conditions that protect it from contamination.

A9. Steam used directly in contact with food is not to contain any substance that presents a hazard to health or is likely to contaminate the food.

852/2004 Annex II ***Water Supply:*** *Chapter VII points 4 & 5*

	Use of Ice
• **Make ice that comes into contact with food or may contaminate food, from potable water, and make sure it is made, handled and stored under conditions that protect it from contamination.** ***A8***	*Keep ice storage containers covered. Clean and periodically disinfect them to be sure that they do not become contaminated.*
	Use of Steam
• **Generate steam used for direct contact with meat, from potable water and make sure it does not contain potentially harmful contaminants.** ***A9***	*Include the potable water outlet used to feed the steam supply in the sampling programme.*

A10. Where heat treatment is applied to foodstuffs in hermetically sealed containers, it is to be ensured that water to cool the containers after heat treatment is not a source of contamination for the foodstuff.

852/2004 Annex II ***Water Supply:*** *Chapter VII point 6*

	Cooling of Containers after Heat Treatment
• **Make sure that water used to cool hermetically sealed containers after heat treatment does not contaminate the product.** ***A10***	*Include the water used to cool hermetically sealed containers in the sampling programme. Check on containers after cooling to establish whether the seals are secure.*

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B. WATER FOR DISINFECTING TOOLS IN MEAT PLANTS

B1. [Meat Plant] Operators must have facilities for disinfecting tools with hot water supplied at not less than 82°C, or an alternative system having an equivalent effect. *853/2004 Annex III: **Slaughterhouses**: Section 1 Chapter II point 3 & Section II Chapter II: point 3 / **Cutting**: Section I Chapter III point 5 & Section II Chapter III point 1e / **Farmed Game**: Section III points 1 & 2; / **Production Establishments**: Section V Chapter I point 5 / **Meat Products:** Section VI point 2.*	
	Water for Disinfecting Tools
• **Water used for disinfecting tools has a minimum temperature of 82°C.** ***B1***	*Facilities for Disinfecting Tools/Approval of alternatives – see Chapter 1 (Design and Facilities) Section D8*

C. REMOVAL OF SURFACE CONTAMINATION

C1. Food business operators shall not use any substance other than potable water - … - to remove surface contamination from products of animal origin, unless the substance's use has been approved … . *853/2004 Article 3 point 2*	
	Removal of Surface Contamination
• **Only potable water or EU approved substances may be used for the removal of surface contamination from meat or other products of animal origin.** ***C1***	*See Chapter 10 (Dressing of Carcases) Section A15 for information about decontaminants.*

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2.3.2 WHAT ARE THE OFFICIAL CONTROL REQUIREMENTS?

Audits by officials of good hygiene practices shall verify that meat plant operators' water quality procedures are applied continuously and properly.

854/2004 Article 4 point 4g

2.3.3 APPLYING PROCEDURES CONTINUOUSLY AND PROPERLY

The operator is responsible for food safety in the food business.

852/2004 Article1 point 1a

Food business operators shall put in place, implement and maintain a permanent procedure or procedures based on the HACCP principles.

852/2004 Article 5 point 1

Food … business operators at all stages of production, processing, and distribution within the businesses under their control shall ensure that foods … satisfy the requirements of food law which are relevant to their activities and shall verify that such requirements are met.

178/2002 Article 17

	Operator Responsibilities for Water
• **Operator responsibility includes applying and verifying the company's water supply and taking corrective action if those procedures fail.** • **Implement and maintain a permanent procedure or procedures based on the HACCP principles.**	***Operator Responsibility*** *includes maintaining and monitoring water control procedures and taking corrective action if there is a failure.* ***These procedures should be based on HACCP principles -*** *see PART THREE Chapter 1 (Application of HACCP Principles).* ***Delegation*** *– responsibility for applying and verifying the company's water supply procedures may be delegated to a nominated person who knows the layout of the water distribution system, to whom problems are reported, and has sufficient authority to ensure that corrective action is taken when necessary.* ***Verification*** *– check periodically if company procedures are being followed by staff regarding the supply and use of potable water, inspections and maintenance of the water distribution system, reporting of problems, results of microbiological testing and corrective actions -* ***see 'Water***

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	testing' below. ***Frequency of verification*** *– this will depend on the likelihood of a problem being found. Once a month may be sufficient for checking experienced staff who are following well-known procedures and if water test results are satisfactory. More frequent checks may be needed where water test results are unsatisfactory or if there are new staff or procedures.* ***Records*** *– keep an accurate, dated account (e.g. in a Food Safety Management Diary) of the date and result of the periodic verification checks, test results and of any corrective action taken.*
	Water Testing – Mains Supply
	Mains supply - *water suppliers are required to monitor the microbiological and physio-chemical quality of mains water entering the premises to demonstrate that it meets the standards in Directive 98/83/EC. A copy of their test results can be obtained but consider carrying out your own independent verification tests.* ***Mains supply with intermediate storage tanks -*** *if mains water is stored in tanks before use and/or if the water distribution system is complex and/or the system is old, the water can become contaminated after entering the premises.* *Regular testing of water samples from cold or mixed hot/cold water outlets where the water could come into direct contact with food, food processing equipment, or food handlers, will indicate whether contamination is occurring on site or whether the water is potable.* ***See 'Water testing parameters' below.***
	Water Testing – Private Supplies
	Local councils monitor the quality of private supplies, but this may not happen often. A copy of their test results can be obtained. These should cover both microbiological and physio-chemical analysis. However, such tests can only

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	indicate the quality of the water at the time of those tests. The quality of the water may change at different times. Extra tests or tests on a new supply may be arranged with the council for a charge or can be arranged using a private laboratory. *Testing samples at least once a month will indicate whether there is microbiological contamination or whether the water is potable. Further investigation may be required to determine whether contamination is occurring at point of supply or on site.* ***See 'Water testing parameters' below.***
	Water Testing – Microbiological Parameters
	▪ *Total viable count (TVC) at 22 ^{o}C after 72 hours* ▪ *Total viable count (TVC) at 37 ^{o}C after 48 hours* ▪ *Coliform bacteria (total coliforms)* ▪ *E.coli* ▪ *Enterococci* ▪ *Clostridrum perfringens (including spores) - if water originates from, or is influenced by, surface water.* ***Private supplies or Mains Supplies with Intermediate Storage*** *- in these cases microbiological parameters should be monitored to check that the water being used is of potable quality and that contamination is not occurring after the water enters the premises:* ***Testing Frequency*** *– TVCs and Coliforms should be measured monthly (see note) and used to indicate when further investigation is required. All microbiological parameters should be checked at least annually and as part of any follow-up investigation when the TVCs and / or Coliform levels exceed the guidelines.* *<u>Note</u> that historically, European Commission guidance on meat plant inspections has expected monthly testing.*
	Water Testing – Physio-chemical Parameters
	Mains water suppliers should provide annual summary of

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	the physio-chemical analysis of the water. A copy of these results can be obtained from the supplier for the previous year. ***British Standards BS EN for Chemicals used for Treatment of Water*** *–see 2.2 (General Information) above.*
	Taking Water Samples
	Water samples need to be taken carefully so that no contamination is introduced when the sample is taken. Staff should receive training to ensure that results are accurate and consistent. Label all samples with the correct sample point as inaccurate labelling will delay the identification of the source of any contaminated samples. ***Chlorine*** *- If the water has been chlorinated, the sample bottle should contain sodium thiosulphate to neutralise the effect of any remaining chlorine.* ***For further information*** *on sampling see 'The Microbiology of Drinking Water (2002) - Part 2 – Practices and procedures for sampling' obtainable at www.environment-agency.gov.uk*
	Laboratories
	Ideally use laboratories that are accredited by a recognised body for the relevant test methods in water samples or at least participate in proficiency testing schemes such as LEAP (e-mail leap@csl.gov.uk), Health Protection Agency WEQA scheme (www.hpaweqa.org.uk) or Quality Management (www.qualitymanagement.co.uk).
	Interpretation of Results
	Total viable count (TVCs) *– the results of TVC tests can be used to assess the water quality around the plant.* *Guideline figures for acceptable TVC values are:* ▪ *TVC at 22 ^{o}C after 72h – up to 100 per ml.* ▪ *TVC at 37 ^{o}C after 48h – up to 20 per ml.* *Regular samples from the same points on the system can*

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	indicate a developing contamination problem. Any increase in counts above these guideline figures should be classified as a ***low level positive.***
	Coliform bacteria (total coliforms) *- expected levels are less than 1 per 100ml. Presence should be considered as a low level positive and must be re-sampled – see 'Follow up Actions - Low Level Positives' below. If coliform bacteria are found at levels above 3 per 100 ml of water, in two consecutive samples, or in more than 5% of samples taken within a year, this may indicate contamination in the water distribution system, and* ***urgent action must be taken*** *– see 'Follow Up Action - High Level Positives' below.*
	E.coli *- If E.coli is detected in water, this is evidence of contamination by animal or human faeces.* ***This is a serious food safety risk and urgent action must be taken*** *– see 'Follow up Actions - High Level Positives' below.*
	Enterococci *and* ***Clostridium perfringens*** *are also indicative of faecal contamination and* ***urgent action must be taken*** *– see 'Follow up Actions - High Level Positives' below.*
	Chlorine *– British Standards 12671: 2000 Chlorine dioxide - the combined concentration of chlorine dioxide, chlorite and chlorate should not exceed 0.5mg litre^{-1} as chlorine dioxide in the water entering supply see 2.2 (General Information).*
	Follow up Actions – Low Level Positives
	Re-sample and test for all faecal indicators. If a further low level positive result is obtained, but there is no evidence of faecal contamination, investigate the source of the problem.
	Follow up Actions – High Level Positives
	Do not use *the water outlet or tank from which the sample was taken (and associated outlets if necessary) until the contamination has been investigated and eliminated and satisfactory microbiological results have been obtained from*

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	contamination has been investigated and eliminated and satisfactory microbiological results have been obtained from further samples taken at the point of entry, the outlet from which the contaminated sample was taken and any other associated outlets. *Take the appropriate corrective action – see below.*
	Corrective Action – Water Supply Entering Premises
	If the water supply entering the premises becomes contaminated, it is the water supplier's or local authority's responsibility to restore potable water quality. Follow their directions concerning water use and product safety.
	Corrective Action – Contamination Within Premises
	*If the water supply becomes contaminated after entering the premises or non-potable water comes into contact with food, take **urgent corrective action** to ensure food safety.* *Corrective action may include:* ▪ *Isolating appropriate water outlets/tanks until satisfactory microbiological test results are obtained (see 'Follow up Actions' above);* ▪ *Stopping production where no potable supply can be provided;* ▪ *Dealing with any product that has been contaminated, including removing it from the market if necessary;* ▪ *Establishing the underlying cause and what needs to be done to prevent similar contamination incidents in the future;* ▪ *Reviewing sampling and testing procedures;* ▪ *Improving staff instructions and training.*

PART TWO

3. MAINTENANCE

3.1 WHY IS MAINTENANCE IMPORTANT?

Food premises and equipment that are not kept in good repair and condition are a significant potential source of microbiological and physical contamination of food. Poorly maintained premises and equipment cannot be effectively cleaned. Poor maintenance may also allow the entry of other sources of physical, microbiological and chemical contamination such as water, pests and dust. (Poor maintenance also has health and safety implications for workers). Procedures are needed to minimise the risk of such hazards causing illness to consumers.

For example:

- If the fabric of the building (walls, floors, roofing etc.) is not maintained in good repair, foreign material such as fragments of masonry and mortar, pieces of wall or roof tile, paint flakes, rust, insulation etc. may contaminate the product.
- Deteriorating surfaces create pits and crevices that are more difficult and in some cases impossible to keep clean.
- If the roof or windows leak, rainwater may enter the premises. This is a potential source of microbiological contamination.
- Inadequate building maintenance may allow pests to enter the premises. Pests are a significant source of microbiological and physical contamination.
- Plumbing fixtures and drains that are not regularly maintained could allow non-potable, or waste water containing microbiological contamination to enter food-handling areas and contaminate the product.
- Ventilation systems that are not maintained in good condition may be a source of air-borne microbiological and physical contamination (e.g. dust and dirt particles).
- Poorly maintained equipment may be a source of physical contamination such as nuts and bolts, washers, small metal or plastic components, metal shavings (swarf), non food-grade lubricants etc. It may also lead to breakdowns, production delays and product deterioration, if for example, chillers are out of action.

3.2 GENERAL INFORMATION

- **Maintenance Inspection Routine**

  All premises require maintenance to keep them in a suitable and safe condition for handling food. Food business operators need to establish routines for inspecting buildings, water distributions systems, vehicles, equipment etc. to determine their condition, whether maintenance is necessary and how soon repairs must be carried out or replacements obtained.

- **Maintenance Checklist & Plan Examples**

  A maintenance checklist is recommended to make sure that no area or piece of equipment is left uninspected for too long. A maintenance plan will demonstrate that the need for action has been considered and indicate when it is to be carried out.

MAINTENANCE CHECKLIST EXAMPLE		[Month/Year]
INSPECTION OF:	OK OR PROBLEM DETAILS	ADDED TO M / PLAN?
Area: [A]		
Walls, doors	***OK***	***N/a***
Ceilings, light fixtures, ventilation system	***OK***	***N/a***
Floors, drains	***Hole in flooring by basin***	***Repaired 11/12***
Equipment [Item 1]	***OK***	***N/a***
Equipment [Item 2]	***Xxxxxx***	***Item 1 2007 Plan AS***
Vehicle [1]	***OK (Do pre MOT Check)***	***Item 2 2007 Plan AS***
Area: [Z]		
Checklist completed: Alan Smith ***A.Smith***	*Verified by:[signature]*	*[Date]*

MAINTENANCE PLAN EXAMPLE				[Year]
Area/Item/Vehicle	Work required	Planned date	Date completed	Signed
Area [A] Item [2]	**Xxxxx (c/forward from 12/06)**	**3/1/2007**	***3 Jan 07***	***J Bull***
Vehicle [1]	**Check pre MOT on 1/2/07**	**27/1/2007**		

OPERATOR'S OBLIGATIONS	*ADVICE*

3.3.1 WHAT ARE THE LEGAL REQUIREMENTS FOR MAINTENANCE?

The following section sets out the maintenance requirements of the regulations that apply to slaughter, dressing and the further processing of meat.

A. MAINTENANCE

A1. Food premises are to be kept clean and maintained in good repair and condition.

A2. The layout, design, construction, siting and size of food premises are to permit adequate maintenance … and to allow for hygienic performance of all operations.

*852/2004 Annex II **Premises:** Chapter I points 1 and 2*

A3. In rooms where food is prepared, treated or processed (excluding dining areas and those premises specified in Chapter III …), the design and layout are to permit good hygiene practices, including protection against contamination between and during operations. In particular, floor surfaces … wall surfaces … and surfaces (including surfaces of equipment) in areas where foods are handled and in particular those in contact with food are to be maintained in a sound condition.

*852/2004 Annex II **Rooms:** Chapter II point 1 (a)(b) and (f)*

A4. Conveyances and/or containers used for transporting foodstuffs are to be … maintained in good repair and condition to protect foodstuffs from contamination.

*852/2004 Annex II **Transport:** Chapter IV point 1*

A5. All articles, fittings and equipment with which food comes into contact are to be so constructed, be of such materials and be kept in such good order, repair and condition as to minimise any risk of contamination. With the exception of non-returnable containers and packaging, be so constructed, be of such materials and be kept in such good order, repair and condition as to enable them to be kept clean.

*852/2004 Annex II **Equipment:** Chapter V points 1(b) and (c)*

A6. At all stages of production, processing and distribution, food is to be protected against any contamination likely to render the food unfit for human consumption, injurious to health or contaminated in such a way that it would be unreasonable to expect it to be consumed in that state.

*852/2004 Annex II **Foodstuffs:** Chapter IX point 3*

	Design & Layout for Maintenance
• **Take maintenance requirements into account in the design and construction of food premises and rooms where food is prepared, treated or processed or when**	***Quality** - consider the quality of construction materials, finishes, and of fittings and equipment to be used as this will affect their durability and need for future maintenance.* ***Space and access** - consider the need to allow sufficient space and access to all parts of buildings, fittings and equipment so that maintenance can be carried out, as well as*

OPERATOR'S OBLIGATIONS	ADVICE
buildings are rebuilt, altered or refurbished. ***A2, A3***	*health and safety considerations.* *See relevant topics below and also Chapter 1 (Design & Facilities), particularly Section A (General), B (Rooms), C (Equipment).*
	Maintenance Inspections
• **Make sure that:** ▪ **food premises,** ▪ **surfaces in food handling areas and all surfaces, articles, fittings and equipment that come in contact with food,** ▪ **vehicles and containers used to transport food,** **are maintained in good repair and condition.** ***A1, A4, A5*** • **Protect food against contamination at all stages of production, processing and distribution.** ***A6***	*Inspections can give early warning of potential maintenance problems so that action can be taken to prevent contamination, an accident or more serious deterioration. Staff who carry out inspections need to understand what standard is acceptable and what constitutes significant damage.* ***Routine** - establish a routine for inspecting all parts of the premises and particularly those areas where food is handled, as well as vehicles and containers used for transporting food (see below).* ***Model checklist** – see 3.2 General Information above.* ***Buildings** - inspections should include external and internal parts of the premises, such as fencing, yards, stores, loading/unloading areas, lairages/animal holding areas, roofs, roof spaces, guttering, damp courses, drain pipes, drains, ventilation systems, plumbing, light fittings etc.* ***Surfaces** - inspections should include floors, walls, ceilings, doors, windows and screens as well as food-contact surfaces and food containers. Exterior damage may allow damp to penetrate the building and lead to mould growth on interior surfaces.* ***Articles, fittings and equipment** - inspections should include conveyors, cutting surfaces, control systems, processing equipment, cooking, chilling and freezing equipment, metal detectors, shackles, dolavs, filters, components, bearings and lubrication points. Manufacturer's maintenance manuals are helpful in identifying components that need regular inspection or adjustment.*

OPERATOR'S OBLIGATIONS	ADVICE
	Frequency of maintenance inspections *- this will depend on the likelihood of wear or damage being found. For example, tiled floors in high traffic areas are much more likely to be damaged than coated concrete floors in storerooms. Pay particular attention to food handling areas. Specialist equipment, particularly those with temperature controls (e.g. chillers, freezers or heat treatment equipment) is likely to need regular attention from competent engineers.*
	Maintenance Plans
Make sure that: • **premises and surfaces in food handling areas and all surfaces, articles, fittings and equipment that come in contact with food are maintained in good repair and condition;** ***A1, A3, A5*** • **food preparation, treatment or processing rooms permit good hygiene practices, including protection against contamination between and during operations;** ***A3*** • **at all stages of production, processing and distribution, food is to be protected against contamination.** ***A6***	*A maintenance plan (see simple example at 3.2 above) should be established to carry out work before emergency repairs are needed and perhaps provide an opportunity to make improvements that could reduce future maintenance costs.* *Prioritise repair work so that problems with the greatest impact on food safety are tackled in a timely way.* *Repair or replace damaged or worn surfaces or items, as soon as is practicably possible, to keep all areas but particularly food handling areas in good condition. Make sure that temperature control equipment (e.g. chillers) is repaired without delay as storage or processing of foods at incorrect temperatures can allow the growth or survival of food poisoning bacteria. If a temporary repair has been made to prevent contamination, make sure that the need for a permanent repair is added to the maintenance plan.* *Repairs in food handling areas should normally be carried out during breaks in production. If it is necessary to repair items while production is in progress, the food must be properly protected from contamination while the work is being carried out.* ***Spare parts and maintenance materials*** *- make sure that all parts and materials used in repair work are compatible with food safety. Store parts and materials so that they do not act*

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	as sources of contamination. ***Personal hygiene** - make sure that in-house staff or contractors carrying out maintenance checks and repairs are aware of the food safety implications of their work and follow the company's personal hygiene rules. See Chapter 7 (Personal Hygiene).*

A7. Food business operators ensure that food handlers are supervised and instructed and/or trained in food hygiene matters commensurate with their work activity. *852/2004 Annex II **Training:** Chapter XII point 1*	
	Training, Instruction & Supervision
• **Make sure that food handlers are supervised and instructed and/or trained in food hygiene matters commensurate with their work activity.** ***A7***	*Instruct staff (and any contract maintenance workers) about the need to avoid contamination of food during maintenance work, to use correct maintenance materials and storage of materials, equipment and spares safely and to report problems promptly. Supervise as appropriate and issue reminders if lapses occur.* *Keep accurate, dated records to show what instruction/ training individuals have received. See also Chapter 6 (Training) Section A1.*

OPERATOR'S OBLIGATIONS	*ADVICE*

3.3.2 WHAT ARE THE OFFICIAL CONTROL REQUIREMENTS?

Audits by officials of good hygiene practices shall verify that meat plant operators apply procedures concerning at least the maintenance of premises and equipment continuously and properly.

854/2004 Article 4 point 4b

3.3.3 APPLYING PROCEDURES CONTINUOUSLY AND PROPERLY

The operator is responsible for food safety in the food business.

852/2004 Article 1 point 1a

Food business operators shall put in place, implement and maintain a permanent procedure or procedures based on the HACCP principles.

852/2004 Article 5 point 1

Food … business operators at all stages of production, processing, and distribution within the businesses under their control shall ensure that foods … satisfy the requirements of food law which are relevant to their activities and shall verify that such requirements are met.

178/2002 Article 17

	Operator Responsibilities for Maintenance
• **Operator responsibility includes applying and verifying the company's maintenance procedures and taking corrective action if those procedures fail.** • **Implement and maintain a permanent procedure or procedures based on the HACCP principles.**	***Operator Responsibility*** *includes maintaining and monitoring maintenance procedures and taking corrective action if there is a failure.* ***These procedures should be based on HACCP principles -*** *see PART THREE Chapter 1 (Application of HACCP Principles).* ***Delegation*** *- responsibility for applying and verifying the company's maintenance procedures may be delegated to a nominated person to whom problems are reported, and who has sufficient authority to ensure that corrective action is taken when necessary.* ***Verification*** *- check periodically if company maintenance procedures are being followed by staff regarding reporting of problems, routine inspections, repairs, food safety during maintenance work, storage of maintenance materials and equipment, spares, as well as contract management, if*

OPERATOR'S OBLIGATIONS	*ADVICE*
	relevant. ***Frequency of verification*** *- this will depend on the likelihood of a problem being found. Once a month may be sufficient for checking experienced staff/contractors who are following well-known maintenance procedures. More frequent checks may be needed if there are new staff or procedures.* ***Records*** *- keep an accurate, dated account (e.g. on a maintenance checklist) of the date and result of each periodic verification check, work carried out and of any corrective action taken.* ***Corrective action*** *- take action when evidence of damage or wear to the building, or to equipment is identified. Corrective action may include:* ▪ *Dealing with any product that may be contaminated;* ▪ *Establishing the underlying cause and what needs to be done to prevent similar contamination incidents in the future;* ▪ *Scheduling repairs etc. within a reasonable period depending on the nature and location of the problem and undertaking the work using appropriate materials;* ▪ *Ending the maintenance service contract; and* ▪ *Improving staff instructions and training.*

PART TWO

4. CLEANING

4.1 WHY IS CLEANING IMPORTANT?

Dirt, food waste and other debris are a significant potential source of microbiological and physical hazards and will attract pests that can contaminate the production environment. Effective cleaning on a regular basis is essential to remove dirt and debris from the food premises. Effective disinfection of clean food contact surfaces is necessary to reduce bacteria to an acceptable level. Poorly executed cleaning programmes and careless storage and use of cleaning materials may also give rise to chemical hazards. Procedures are needed to prevent or minimise the risk of such hazards causing illness or injury to consumers.

For example:

- Poor cleaning allows food to be contaminated by dirt from the working environment such as dust, rust flakes, lubricating oil and animal residues. It increases the chances of cross contamination of food products by food poisoning micro-organisms.
- Micro-organisms such as *Salmonella* can grow rapidly on organic material such as meat, blood and other edible and inedible tissues.
- Pests are attracted to organic material. Many pest species are carriers of micro-organisms that can cause food poisoning.
- Careless use of cleaning agents may lead to chemical contamination of food.
- Cleaning implements are themselves contaminated during the cleaning process, and poor cleaning will lead to cross contamination when they are next used.

4.2 GENERAL INFORMATION

- **What Does 'Clean' Mean?**

  Clean means: free from dirt, marking, or soiling. Visibly clean surfaces look, smell and feel clean. Dirt and soil can be organic e.g. fat, blood; or inorganic e.g. rust, limescale.

  Surfaces in contact with food should be:

  - **Physically clean** - all visible dirt/soil/residues have been removed.
  - **Chemically clean** - all cleaning material residues have been removed.
  - **Microbiologically clean** - the number of micro-organisms has been reduced to a level acceptable for human health. This usually involves the use of disinfectants.

- **Effective cleaning**

  Effective cleaning depends on: removal of gross physical contamination followed by the correct use of chemical agents. This means using the right chemicals, applying them correctly using the right equipment, and allowing them time to work.

  Cleaning chemicals may be:

  Detergents: Chemicals used to dissolve grease and remove dirt and soil.

  - **Disinfectants:** Chemicals that reduce bacteria to an acceptable level and may kill them. Products may be called ***germicides, bactericides or biocides***. Surfaces need to be clean of grease, dirt and soil before a disinfectant is used - there is no point in disinfecting a dirty surface. Disinfectant formulations may include:
    - ***Surfactants*** *to improve the wetting properties of the product and to control foam production.*
    - ***Sequesterants*** *to improve suspension of any remaining inorganic soils from the surfaces, to prevent scale forming on contact surfaces and to improve the biocidal activity of the disinfectant.*
    - ***Stabilisers*** *to prevent disassociation of the disinfectant when used.*
    - ***Alcohols*** *to decrease drying time by evaporating off the surface and leaving it dry.*
  - **Sanitisers:** Two-in-one products that act as both a detergent and a disinfectant. Do not attempt to mix cleaning chemicals yourself.

  Dilution rate is the quantity of water to use with a concentrated chemical before it can be used. Follow the label instructions.

  Contact time is the time that the cleaning chemical needs to be left on the surface to work effectively. This is particularly difficult for vertical surfaces. Foams, gels etc. may be used in the formulation to extend contact time.

Temperature may be critical for a cleaning chemical to work effectively. In general, higher temperatures are more effective but may give rise to condensation. Products that work at lower temperatures may be available.

Advice: Manufacturers and suppliers can advise on the best chemicals to use in specific situations and on the safe and effective use of cleaning chemicals.

- **Cleaning Schedule & Checklist Examples**

  Operators need to establish cleaning and disinfection routines. Cleaning work schedules will demonstrate when and how cleaning is to be carried out. A cleaning checklist will help to make sure that no area or piece of equipment is missed and can be used to record problems and action taken.

CLEANING SCHEDULE EXAMPLE			Issued by [Name] [Date]		
CLEANING OF:	*Method, Chemical, Time*	*Equipment*	*PPE*	*Frequency*	*Notes*
Room/Area [A]	***Xxxxx + disinfection***			***Daily***	
Machine [1]	***Yyyy***			***D +breaks***	
Vehicle [1]	***Zzzz***			***D***	***+ deep clean***

CLEANING CHECKLIST EXAMPLE				[Week 1 2006]				
AREA/ITEM/VEHICLE	*Initialled by Cleaner*							*NOTES/ACTION*
	M	*T*	*W*	*T*	*F*	*S*	*S*	
Area [A]								
Machine [1]								
Vehicle [1]								
Verified by:[signature] *[Date]*								

- **Training for Cleaners**

  Courses for cleaners can lead to qualifications, such as:

  - *NVQ/SVQ Levels 1 and 2 in Cleaning and Support Services, Level 2 in Cleaning Food Premises;*
  - *City and Guilds awards in Cleaning Science;*
  - *BICS Cleaning Operators' Proficiency Certificate; Food Premises Cleaning Certificate.*

  Suppliers of cleaning chemicals may provide training on the correct use of their chemicals.

  For further information:

  Contact:: British Institute of Cleaning Science (BICS) (www.bics.org.uk)
  9 Premier Court, Boarden Close, Moulton Park, Northampton, Northants NN3 6LF.
  Tel: 01604 678710, Fax: 01604 645988, Email: info@bics.org.uk

OPERATOR'S OBLIGATIONS	*ADVICE*

4.3.1 WHAT ARE THE LEGAL OBLIGATIONS OF A MEAT PLANT OPERATOR?

The following sections set out the cleaning requirements of the regulations that apply to slaughter, dressing and further processing of meat.

A. CLEANING IN ALL FOOD PREMISES

A1. Food premises are to be kept clean.

A2. The layout, design, construction, siting and size of food premises are to: (a) permit adequate maintenance, cleaning and/or disinfection, avoid or minimise air-borne contamination … to allow for the hygienic performance of all operations.

852/2004 Annex II ***Food Premises:*** *Chapter I points 1, 2(a)*

A3. In rooms where food is prepared, treated or processed … the design and layout are to permit good food hygiene practices, including protection against contamination between and during operations. In particular:

(a) floor surfaces … (b) wall surfaces … (e) doors are to be easy to clean and, where necessary, disinfect. (d) windows and other openings … fitted with insect-proof screens which can be easily removed for cleaning. (f) surfaces (including surfaces of equipment) in areas where food is handled and in particular those in contact with food are to be maintained in sound condition and be easy to clean and, where necessary, to disinfect.

852/2004 Annex II ***Rooms:*** *Chapter II point 1*

A4. Conveyances and/or containers used for transporting foodstuffs are to be kept clean.

852/2004 Annex II ***Transport:*** *Chapter IV point 1*

A5. All articles, fittings and equipment with which food comes into contact are to: (a) be effectively cleaned, and where necessary, disinfected. Cleaning and disinfection are to take place at a frequency sufficient to avoid any risk of contamination. (b) be so constructed, … and be kept in such good order repair and condition …

852/2004 Annex II ***Equipment:*** *Chapter V point 1(a & (b))*

A6. These containers [food waste, non-edible by-products and other refuse] are to be of an appropriate construction, kept in sound condition, be easy to clean and, where necessary, to disinfect.

A7. Refuse stores are to be … managed in such a way as to enable them to be kept clean.

852/2004 Annex II ***Food Waste:*** *Chapter VI points 2 & 3*

	Design & Layout for Cleaning
Make sure that: • **food preparation, treatment and processing rooms are designed and laid out so as**	*Consider the 'cleanability' of premises, rooms, equipment, fixtures and fittings (e.g. accessibility, durability, nature and quality of surfaces) in the design and construction of new food premises, and when existing premises are rebuilt, altered or refurbished.*

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to permit good food hygiene practices. ***A3*** • **the layout, design, construction, siting and size of food premises, including facilities for cleaning and storing working utensils and equipment and refuse stores, allow for adequate cleaning.** ***A2, A7, A9***	*Cramped conditions in equipment wash rooms will compromise the ability to carry out good hygienic practices and increase the risk of spreading contamination between cleaned and dirty tools and equipment.* *See relevant topics below and also Chapter 1 (Design & Facilities) particularly Sections A (General), B (Rooms), C (Equipment).*
	Maintenance
• **Maintain buildings, fittings, equipment and surfaces in a good state of repair to minimise the opportunity for build up of dirt, food and other debris.** ***A2, A3, A5, A6***	*Cleaning can only be as effective as the condition of the surfaces and equipment being cleaned permits. Damaged, heavily worn or porous surfaces are difficult to clean properly. When choosing materials for maintenance work, take account of their ability to be cleaned.* *See Chapter 3 (Maintenance).*
	Cleaning Schedules
• **Keep food premises clean, including:** ▪ **surfaces where food is handled,** ▪ **all articles, fittings and equipment with which food comes into contact,** ▪ **containers for waste, by products and other refuse,** ▪ **refuse stores,** ▪ **as well as vehicles and**	*Set out working instructions – cleaning schedules – for the entire premises. This includes facilities and equipment such as chillers, by-product rooms, stores, packing and loading areas; animal unloading bays, lairage pens, shackling areas; overhead structures, drains, locker/changing rooms, water storage tanks, toilets, rest rooms and outside areas.* *The cleaning schedule should set out:* ▪ *What areas/items are to be cleaned;* ▪ *Who is responsible for cleaning them;* ▪ *How often each area/item is to be cleaned, including whether more thorough cleaning (deep clean) is required periodically;*

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containers used to transport foodstuffs. ***A1, A3, A4, A5, A6, A7, A9***	▪ *Chemicals, materials and equipment to be used for different areas/items;* ▪ *How the cleaning is to be done;* ▪ *How long the cleaning procedure for each area/item should usually take;* ▪ *Safety precautions to be taken, including use of protective clothing and safe use, storage and disposal of chemicals;* ▪ *Who is to check that the required cleaning has been carried out;* ▪ *Action to be taken if the person checking the cleaning finds something wrong.* *See example schedule and simple checklist at 4.2 (General Information) above.*
	Cleaning Procedures
• **Keep food premises, as well as vehicles and containers used to transport foodstuffs, clean.** ***A1, A3, A4, A5, A6, A7, A9***	*Make sure that cleaning procedures are effective in removing dirt, debris and where necessary in reduction or destruction of micro-organisms through disinfection. See 4.2 (Effective Cleaning) above.* *Follow these steps (unless using an alternative regime e.g. as set out in the chemical manufacturers instructions) to clean effectively:* 1. ***Pre-clean*** *- remove any obvious food and dirt by sweeping, wiping or scraping off loose debris, followed by a* ***pre-rinse****.* 2. ***Main clean*** *- use diluted detergent to remove grease and any remaining food and dirt by scrubbing off the main body of adhered soil. 'Elbow grease' is the most important part of a cleaning programme.* 3. ***Intermediate rinse*** *- rinse with clean water to remove detergent and loosened food and dirt.* 4. ***Disinfection*** *- use a disinfectant to reduce or kill micro-organisms.* 5. ***Final rinse*** *- rinse with potable water to remove disinfectant (if rinsing is included in the instructions on the label).*

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	Frequency of Cleaning
• **Clean and disinfect at a frequency sufficient to avoid any risk of contamination.** ***A5***	*Surfaces that come into contact with food may need to be cleaned and disinfected more than once a day. The frequency of cleaning of other surfaces and areas may be any period from daily to annually depending on the level of soiling.* *Consider instructing production staff to adopt a **clean-as-you-go** policy for routine removal of excessive dirt/debris to minimise the risk of contamination during the working day.* ***Deep cleaning** – periodically (perhaps once or twice a year) equipment and fixtures that are difficult to access (e.g. extractor fans) should be stripped down and thoroughly cleaned to remove built up dirt/debris. This is also an opportunity for maintenance work to be carried out.*
	Cleaning Practices
• **Protect food preparation, treatment and processing rooms against contamination between and during operations.** ***A3***	*During food production the cleaning procedure must not risk contamination of the food.* *If cleaning while production is in progress is unavoidable food must be protected from splashing, aerosol spray or other contamination. Do not use high-pressure hoses, disinfectants and other cleaning chemicals on equipment, structure and fittings while food is present. Use shovels, squeegees and other tools in place of water sprays to move debris away from the working environment.* *Take special care when cleaning areas such as around electrical installations, extractor vents, rubber door seals.*
	Cleaning Chemicals
• **Use cleaning chemicals that are specifically approved for the intended situation and use them safely. Follow label directions** ***The Control of Substances***	*The chemicals used need to be appropriate for the area or equipment to be cleaned. See 4.2 (General Information) above.* *Cleaning chemicals are potentially dangerous and can harm people and may contaminate food if used incorrectly. They*

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Hazardous to Health Regulations (COSHH) 2002 (for GB) *www.opsi.gov.uk/si/si2002/20022677.htm* ***COSHH 2003 as amended (for NI)*** *www.opsi.gov.uk/sr/sr2003/20030034.htm*	*may also damage surfaces and equipment. The COSHH Regulations apply to a wide range of cleaning chemicals used at work. Chemical suppliers provide safety data.* ***For further information** contact the Health and Safety Executive (www.hse.gov.uk) about the safe use of cleaning chemicals telephone: 0151 951 3535 or the HSE's Infoline on 08701 545500 for general information, including COSHH.* ***For NI enquiries** contact the Health and Safety Executive NI (www.hseni.gov.uk) or the helpline on 0800 0320121.*
	Disinfection
• **Disinfect all articles, fittings and equipment with which food comes into contact where necessary and frequently enough to avoid any risk of contamination.** ***A5*** • **Make sure that food preparation, treatment and processing room floors, walls, doors, surfaces (including equipment surfaces) especially those in contact with food, as well as food waste, inedible by-products and other refuse containers, are easy to disinfect.** ***A3, A6***	*Make sure that at least the following surfaces and equipment are disinfected:* ▪ *Food contact surfaces* ▪ *Hand contact surfaces* ▪ *Cleaning equipment and materials* *Provide instructions to make sure that disinfectant use is effective by avoiding common situations such as:* ▪ *Lack of cleaning before disinfection* ▪ *Use of incorrect disinfectants* ▪ *Incorrect use of disinfectants* ▪ *Biofilm build up preventing penetration by chemical disinfectants* ▪ *Poor rinsing or non-rinsing of disinfectants.*
	Fittings & Equipment
Make sure that: • **all articles, fittings and equipment with which food**	*Include all article, fittings and equipment in the cleaning schedule. Pay particular attention to high level areas and the undersides of equipment that may allow the accumulation of*

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comes into contact are effectively cleaned, and where necessary, disinfected. ***A5*** • **surfaces of equipment in areas where food is handled and in particular those in contact with food are easy to clean and, where necessary, to disinfect.** ***A3***	*dirt, food debris and other soil. For example, the undersides of trimming tables and equipment where there may be a narrow gap between the equipment and the floor.* ***Easy to clean surfaces** – equipment, including food containers (e.g. dolavs), needs to be in reasonable condition (i.e. intact, not scored or heavily worn or ridged) so that it can be cleaned effectively.* ***Cleaning-in-Place** - CIP systems may be useful in larger poultry plants where processing equipment is difficult or dangerous to reach for routine cleaning. Install such systems only after consultation with the manufacturers of both the equipment and of the cleaning chemicals.*

A8 Cleaning agents and disinfectants are not to be stored in areas where food is handled. *852/2004 Annex II **Food Premises:** Chapter I point 10* **A9 Adequate facilities are to be provided, where necessary, for the cleaning, disinfecting and storage of working utensils and equipment. These facilities are to be … easy to clean and have an adequate supply of hot and cold water.** *852/2004 Annex II **Rooms:** Chapter II point 2*	
	Chemical Storage
• **Do not store cleaning agents and disinfectants in food handling areas.** ***A8***	*Store cleaning chemicals safely and securely so that there is no risk to the safety of food or to human health.*
	Cleaning Facilities & Clean Equipment Storage
• **Provide adequate facilities for the cleaning, disinfecting and storage of working utensils and equipment. These facilities are to be … easy to clean and have an adequate supply of hot & cold water.**	*Where cleaning equipment could itself be a source of cross contamination it should be cleaned and disinfected before re-use. Provide suitable storage for cleaning equipment. Colour coding of cleaning equipment will help to avoid the spread of contamination e.g. so a mop for cleaning toilet floors is not used in the food production area. Advice on colour coding is available from BICS see 4.2 (General Information) above.* *Once cleaned, move tools and equipment away from where*

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A9	*other equipment is being washed to avoid splashing with dirt, dirty water or cleaning chemicals and protect them from other contamination before use.*

A10. Food business operators ensure that food handlers are supervised and instructed and/or trained in food hygiene matters commensurate with their work activity. *852/2004 Annex II* ***Training:*** *Chapter XII point 1*	
	Training, Instruction & Supervision
• **Make sure that food handlers are supervised and instructed and/or trained in food hygiene matters commensurate with their work activity.** ***A10***	*Instruct staff about the food safety hazards associated with inadequate cleaning and the need to report problems promptly. See 4.2 General Information 'Training' above.* *Training/instruction should cover chemical safety; the use of protective clothing and equipment; proper use, the storage and disposal of cleaning chemicals as well as the correct use and cleaning of equipment and how to choose the chemicals and equipment suitable for the task. Supervise as necessary and issue reminders if lapses occur.* *Making production staff responsible for keeping their own working area as clean as possible throughout the day (**'clean-as-you-go'**) will reduce the accumulation of waste and make post-production cleaning easier.* *Everyone with cleaning responsibilities, including production staff, in-house cleaners and any contract staff, needs to know and follow the company's cleaning procedures so that cleaning operations do not contaminate food.* *Keep accurate individual training records to show what instruction/training has been given. See also Chapter 6 (Training).* ***Cleaning contractors** – if using contract cleaners, choose carefully. Ask for evidence of competence e.g. training certificates or references. Agree how many cleaners and the level of service and supervision to be provided.*

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B. CLEANING OF LIVESTOCK FACILITIES (RED MEAT)

B1. Slaughterhouses must have adequate and hygienic lairage facilities or, climate permitting, waiting pens that are easy to clean and disinfect.

B2. There must be a separate place with appropriate facilities for the cleaning, washing and disinfection of means of transport for livestock. However, slaughterhouses need not have these places and facilities if the competent authority so permits and official authorised places and facilities exist nearby.

853/2004 Annex III ***Slaughterhouses:*** *Section I Chapter II points 1 & 6*

	Cleaning of Lairages
• **Clean lairages or waiting pens.** ***B1***	*Include areas used for keeping livestock in the company's cleaning schedule. See Chapter (Design & Facilities) Section E1.*
	Cleaning of Livestock Transport Vehicles
• **Provide facilities to clean, wash and disinfect livestock transport.** ***B2*** **Make sure that:** • **vehicles used to deliver livestock to a slaughterhouse are cleaned and disinfected as soon as is practicable after unloading, and always within 24 hours or before next being used to carry livestock, whichever is the sooner.** • **<u>in England & Wales:</u> except where otherwise permitted, if a vehicle delivering animals (except horses) is to leave the site without being cleaned and disinfected, the**	*Cleansing and disinfection of livestock transport vehicles may take place at the slaughterhouse or elsewhere. See Chapter 1 (Design & Facilities) E5.* ***In England and Wales:*** *The cleaning and disinfection of farmed animal transport is regulated by The Transport of Animals (Cleansing and Disinfection) (England) (Wales) Orders.* ***For further information see*** *www.defra.gov.uk/animalh/diseases/control/biosecurity/candd.htm* *The Orders provide for the cleansing and disinfection of means of transport before and after carrying specified animals, cleansing and disinfection of the wheels, mudguards and wheel arches of a means of transport, but does not require driver's cabs to be disinfected.* *Drivers are required to give written declarations specifying where cleansing and disinfection will take place when means of transport (not carrying animals) leave slaughterhouses or sales premises. Local authorities enforce these orders.* *FM/AW 27 declaration forms are available free of charge from the local Animal Health Divisional Office.*

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slaughterhouse operator issues the driver with form FM/AW 27 for completion and signature, declaring where cleaning and disinfection will take place. • **the slaughterhouse operator keeps the completed, signed top copy for 3 months and makes it available for inspection on request. The operator sends a copy of the completed declarations to his local authority by fax (or other means agreed method) on the day of receipt.** • **<u>in Scotland & Northern Ireland:</u> there is no requirement for the driver to complete a declaration.** ***Transport of Animals legislation***	***In Scotland:*** *The cleaning and disinfection of farmed animal transport is regulated by The Transport of Animals (Cleansing and Disinfection) (Scotland) Regulations 2005.* www.opsi.gov.uk/legislation/scotland/ssi2005/ssi_20050653_en.pdf ***In Northern Ireland:*** *The cleaning and disinfection of farmed animal transport is regulated by The Transport of Animals & Poultry (Cleansing and Disinfection) Order (Northern Ireland) 2000. (SR 2000 No. 293).* www.opsi.gov.uk/sr/sr2000/nisr_20000293_en.pdf *These are similar to the English Order, except for the disinfection of driver's cabs (which could be required) and the non-requirement of driver declarations.*
	Approved Disinfectants
• **Use only disinfectants approved under animal disease legislation for disinfecting livestock vehicles.** ***Diseases of Animals legislation***	*For up-to-date lists and information of disinfectants approved under The Diseases of Animals (Approved Disinfectants) Orders for England, Scotland and Wales: contact **Defra** at 1A Page Street, London SW1P 4PQ, Tel: 020 7904 6135 (www.defra.gov.uk/animalh/diseases/control/testing_disinfectants.htm).* *For Northern Ireland: contact **DARD** at Dundonald House, Upper Newtownards Road, Belfast BT4 3SB, Tel: 028 9052 0100 (www.dardni.gov.uk/vetservice/aspdisinfectants/disinfectantsintro.asp)*

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	Disposal of Material after Cleaning
• **The person responsible for cleaning the vehicle and any equipment must ensure that all contaminants removed are destroyed; treated so as to remove the risk of transmission of disease; or disposed of so that animals have no access to it.** ***Diseases of Animals legislation***	*The Transport of Animals (Cleansing and Disinfection) (England) (Wales) Orders and the Transport of Animals (Cleansing & Disinfection) (Scotland) Regulations 2005 (see above) specify how the material removed from the means of transport must be disposed of after cleansing. Similar directions are given in the Transport of Animals & Poultry (Cleansing and Disinfection) Order (Northern Ireland).* ***Manure and digestive tract content** is Category 2 Animal By-product and must be disposed of accordingly. See Edible Co-Products Guide Chapter 5 (Animal By-Products) available at www.food.gov.uk/foodindustry/guidancenotes/meatregsguid/coproductbyproductguide*

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C. CLEANING OF VEHICLES AND CRATES (WHITE MEAT)

C1. Crates for delivering animals to the slaughterhouse and modules, where used, must be made of non-corrodible material and be easy to clean and disinfect. Immediately after emptying and, if necessary, before re-use, all equipment used for collecting and delivering live animals, must be cleaned, washed and disinfected.

853/2004 Annex III ***Slaughterhouses:*** *Section II Chapter I point 3*

C2. There must be a separate place with appropriate facilities for the cleaning, washing and disinfection of (a) transport equipment such as crates; and (b) means of transport. These places and facilities are not compulsory for (b) if officially authorised places and facilities exist nearby.

853/2004 Annex III ***Slaughterhouses:*** *Section II Chapter II point 6*

	Facilities for Cleaning Vehicles & Crates
• **Provide facilities to clean, wash and disinfect the means of transport and delivery crates/modules.** ***C2***	***Facilities for cleaning poultry transport vehicles*** *– see Chapter (Design & Facilities) Section F2* ***Facilities for cleaning crates*** *– these must be provided on site. See Chapter (Design & Facilities) Section F2*
	Poultry Crates
• **Use crates (and modules if used) made of a suitable corrosion-resistant material and designed to allow easy cleaning and disinfection.** ***C1***	*Durable plastics are suitable materials for poultry crates. They should not include crevices or inaccessible corners that make cleaning difficult.* *See Chapter 1 (Design & Facilities) Section C (Equipment).*
	Crate Washing
• **Make sure that immediately after emptying and, if necessary, before re-use, all equipment used for collecting and delivering live animals, is cleaned, washed and disinfected.** ***C1***	*Follow six stages to achieve visually and microbiologically clean crates:* ▪ *Initial removal of large amounts of solid debris* ▪ *Pre-wash* ▪ *Soaking to loosen adherent dirt* ▪ *Main wash to remove dirt* ▪ *Rinse* ▪ *Disinfection.* ***Stage 1****: Collect all loosened debris into bins, floor spillage is*

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	unacceptable as it is likely to contaminate cleaned crates. ***Stage 2**: Avoid spilling, splashing or spraying wash water on to the floor, through use of guards, shields, and direct the overflow into a drain. Consider making one person responsible for checking and cleaning run-off screens and water jet nozzles regularly during the day. Change wash water frequently, especially if crates are particularly dirty.* ***Stage 3**: Use recommended detergents and follow manufacturer's instructions. Added quantifies of water should include extra detergent.* ***Stage 4**: As Stage 2. Remove as much residual water from crates leaving the main wash as possible.* ***Stage 5**: Ideally, separate the main wash and rinse sections e.g. using plastic flaps. To avoid diluting the disinfectant at the next stage, remove as much residual water from crates leaving the rinse stage as possible.* ***Stage 6**: Use recommended amounts of disinfectant. Check regularly for nozzle blockage. Locate jets to spray all surfaces of passing crates. A minimum of 3 seconds contact time will help ensure good wetting of all surfaces. To avoid contamination of cleaned, disinfected crates, separate the rinse and disinfection sections as much as possible, e.g. using plastic flaps if sharing the same booth.* *(www.ukmeat.org./pdf/PoultryCrates.pdf)* ***Approved Disinfectants** – see Section B above.* ***Disposal of material after cleaning** – see Section B above.*

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D. CLEANING OF MEAT PRODUCTION TOOLS

D1. Operators must have facilities for disinfecting tools with hot water supplied at not less than 82°C, or an alternative system having an equivalent effect.

*853/2004 Annex III **Slaughterhouses:** Section I Chapter II point 3 & Section II Chapter II point 3 / **Cutting:**: Section I Chapter III point 5 & Section II Chapter III point 5 / **On Farm Poultry:**: Section II Chapter IV point 4 / **Farmed Game:** Section III points 1 & 2 / **Production establishments:** Section V Chapter I point 5*

*Note: **Wild game**: no specific requirement but will need to sterilise knives under A5*

	Knives & Other Implements
• **Cleanse and disinfect all equipment and implements that come into contact with fresh meat in water at a temperature of not less than 82°C or an alternative method having the equivalent effect.** ***D1***	*Clean and disinfect knives and other implements that come into contact with meat before the start of work, after every break, and whenever the implements become soiled.* *See also Chapter 9 (Acceptance & Slaughter of Animals) Section G11/H6.* *Unless alternative systems are in use, water should be at 82°C.* *Facilities for Disinfecting Tools/Approval of alternatives – see Chapter 1 (Design and Facilities) Section D8*

OPERATOR'S OBLIGATIONS	*ADVICE*

4.3.2 WHAT ARE THE OFFICIAL CONTROL REQUIREMENTS?

Audits by officials of good hygiene practices shall verify that meat plant operators apply pre-operational, operational and post-operational hygiene procedures continuously and properly.

854/2004 Article 4 point 4c

Audits by officials of HACCP- based procedures shall verify that meat plant operators apply such procedures continuously and properly ... .

854/2004 Article 4 point 5

4.3.3 APPLYING PROCEDURES CONTINUOUSLY AND PROPERLY

The operator is responsible for food safety in the food business.

852/2004 Article 1 point 1(a)

Food business operators shall put in place, implement and maintain a permanent procedure or procedures based on the HACCP principles.

852/2004 Article 5 point 1

Food … business operators at all stages of production, processing, and distribution within the businesses under their control shall ensure that foods … satisfy the requirements of food law which are relevant to their activities and shall verify that such requirements are met.

178/2002 Article 17

	Operator Responsibilities for Cleaning
• **Operator responsibility includes applying and verifying company's cleaning procedures and taking corrective action if those procedures fail.** • **Implement and maintain a permanent procedure or procedures based on the HACCP principles.**	***Operator Responsibility*** *includes maintaining and monitoring cleaning procedures and taking corrective action if there is a failure.* ***These procedures should be based on HACCP principles -*** *see PART THREE Chapter 1 (Application of HACCP Principles).* ***Delegation*** *– responsibility for applying and verifying the company's cleaning procedures may be delegated to a nominated person, to whom problems are reported and who has sufficient authority to ensure that corrective action is taken when necessary.* ***Verification*** *-* ***carry out a daily pre-operational hygiene inspection*** *of food handling areas to check that cleaning*

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	has been carried out properly and thoroughly before work starts. Pay particular attention to equipment and work surfaces that come into contact with food material, or are known to be difficult to clean or are easily contaminated. *Inspect other areas for evidence of build up of dirt/debris and other soiling, as well as other issues that may lead to cleaning problems, including damaged surfaces, poor maintenance, restricted access, poor storage or signs of pest presence.* *Check periodically that the cleaning schedule and instructions are being followed by staff and/or contractors, that cleaning chemicals, equipment and procedures are effective particularly in areas known to present problems and that corrective actions are taken if necessary.* ***Frequency of verification** - other than the daily pre-op inspection (see above) this will depend on the area/item and the likelihood of a problem being found. Once a month may be sufficient for management checks on experienced staff/contractors who are following long-standing cleaning and disinfection procedures in easy-to-clean premises. More frequent checks may be needed if there are new staff or procedures.* ***Microbiological testing** - using microbiological or rapid hygiene monitoring to test cleaned surfaces will assess the effectiveness of cleaning and disinfection. See PART THREE Chapter 2 (Microbiological Testing).* ***Records** - keep an accurate, dated account (e.g. on a cleaning checklist that cleaners can refer to and use) of the result of each periodic verification check, notes about areas requiring special attention, and of any corrective action taken.* ***Corrective action** – Take action when failures of the company's cleaning procedures are identified to ensure that control is restored. Corrective action may include:*

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	▪ *Dealing with any product that has been contaminated.* ▪ *Establishing the underlying cause and what needs to be done to prevent similar incidents in the future.* ▪ *Ending the service contract.* ▪ *Amending the cleaning schedule.* ▪ *Improving staff training.*

PART TWO

5. PEST CONTROL

5.1 WHY IS PEST CONTROL IMPORTANT?

Pests (insects, rodents, birds, as well as domestic animals) entering or infesting food plants are a significant potential source of microbiological and physical hazards. Poorly executed pest control programmes and careless storage and use of pesticides may also give rise to chemical hazards. Procedures are needed to prevent or minimise the risk of such hazards causing illness or injury to consumers.

For example:

- Many pest species are carriers of micro-organisms that can cause food poisoning. For instance, many birds carry *Campylobacter*, the commonest cause of food poisoning in the UK, and both rodents and insects are known to carry *Salmonella*.
- Pests may carry germs around a food plant. Flies in particular can transfer contamination from dirty to clean areas.
- Pests are significant sources of foreign objects and materials such as animal hair, feathers, droppings, urine, nesting material, insect eggs and larvae, and the bodies of the pest species themselves.
- Pests can cause physical damage to food products and packaging, or to fixtures and equipment (e.g. gnawing electrical cables), and in some cases to the fabric of the building. Such damage can lead to physical contamination of food and to health and safety hazards.
- Careless storage and use of insecticides and rodenticides may lead to accidents and chemical contamination of food products.
- Persistent pest infestations often indicate serious underlying hygiene failures, such as inadequate cleaning and maintenance.

5.2 GENERAL INFORMATION

- **Pest Control Checklist Example**

  Food business operators have the responsibility to control pests. This may be carried out by company staff or by contractors. If carried out by staff a pest control checklist will help to make sure that areas are not missed out from inspection, provides a place to record whether infestations have been found and the action that is then taken.

PEST CONTROL CHECKLIST EXAMPLE								[Week 1 2007]
AREA	*Check initialled*							*NOTES/ACTION*
	M	*T*	*W*	*T*	*F*	*S*	*S*	
Area [A]								
Area [B]								
Bait Point [1]								
Bait Point [2]								
Note: ***Indicate the frequency of checks (daily, weekly etc.) to be carried out***								
Verified by:[signature] [Date]								

OPERATOR'S OBLIGATIONS	*ADVICE*

5.3.1 WHAT ARE THE LEGAL REQUIREMENTS FOR PEST CONTROL?

The following section sets out the pest control requirements of the regulations that apply to slaughter, dressing and further processing of meat.

A. PEST CONTROL

A1. Food premises are to be kept clean and maintained in good repair and condition.

A2. The layout, design, construction, siting and size of food premises are to permit good food hygiene practices, including protection against contamination and, in particular, pest control.

852/2004 Annex II ***Food premises:*** *Chapter I points 1 and 2(c)*

A3. Adequate procedures are also to be in place to prevent domestic animals from having access to places where food is prepared, handled, or stored (or, where the competent authority so permits in special cases, to prevent such access from resulting in contamination).

852/2004 Annex II ***Foodstuffs:*** *Chapter IX point 4*

A4. Food business operators are to ensure that food handlers are supervised and instructed and/or trained in food hygiene matters commensurate with their work activity.

852/2004 Annex II ***Training:*** *Chapter XII point 1*

	Design & Layout for Pest Control
• **Take pest control into account in the layout, design and construction of premises.** ***A2*** • **Prevent domestic animals from having access to food handling areas.** ***A3*** • **Design refuse stores in such a way as to enable them to be kept clean and free of animals and pests.** ***A6***	*Consider the need to prevent the entry of pest, domestic and feral animals onto the premises in the design, layout and construction of new or altered premises, including refuse stores.* *Take account of all potential entry points; for example doors, windows, ventilation inlets / outlets, drains, by-product chutes, lairage/slaughter hall interface and consider ways of minimising the risks such as self-closing door mechanisms, fly screens, drain traps, chute end flaps, air curtains etc.* *See relevant topics below and also Chapter 1 (Design & Facilities).*

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	Maintenance & Cleaning
• **Keep premises clean and maintained in good repair and condition.** ***A1***	***Maintenance*** *- keep buildings in a good state of repair to minimise the opportunity for pest infestation. Take steps to seal or proof holes, cracks and other likely points of pest entry (e.g. air bricks and ventilation panels; open ends of drains to the outside of the premises; gaps around drains, pipes and girders where these pass through walls; openings in the apex or eaves of roofs). Rats in particular require drinking water to survive so eliminate permanent pools of water, and repair dripping taps and leaks.* ***Cleaning*** *- any build up of food and waste can attract pests. Keep all food production and storage areas as well as outside areas clean and tidy (e.g. remove vegetation, pallet stacks and disused equipment) to minimise the possibility of providing food and a refuge to pests.*

A4. Food business operators are to ensure that food handlers are supervised and instructed and/or trained in food hygiene matters commensurate with their work activity. *852/2004 Annex II* ***Training:*** *Chapter XII point 1*	
	Training, Instruction & Supervision
• **Make sure that food handlers are supervised and instructed and/or trained in food hygiene matters commensurate with their work activity.** ***A4***	*Instruct staff about the food safety hazards associated with pest infestation, the need to follow instructions and to report pest sightings and failing control measures promptly to a manager. Supervise as appropriate and issue reminders to staff if lapses occur.* *Keep accurate individual training records to show what instruction/training has been given. See also Chapter 6 (Training).* ***Pest control contractors*** *– if using contractors, choose carefully. Ask for evidence of competence e.g. training certificates or references. Agree the service that will be provided, reporting procedures and record keeping. A specialist contractor can advise on good housekeeping*

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	measures to prevent pest infestation. ***Advice** may be obtained from the British Pest Control Association (*www.bpca.org.uk*) Telephone: 01332 294288.*

A5. Raw materials and all ingredients stored in a food business are to be kept in appropriate conditions designed to prevent harmful deterioration and protect them from contamination.

*852/2004 Annex II **Foodstuffs:** Chapter IX point 2*

A6. Adequate provision is to be made for the storage and disposal of food waste, non-edible by-products and other refuse. Refuse stores are to be designed and managed in such a way as to enable them to be kept clean, and where necessary, free of animals and pests.

*852/2004 Annex II **Food Waste:** Chapter VI point 3*

	Incoming Goods & Storage
• **Keep raw materials and all ingredients stored in appropriate conditions designed to prevent harmful deterioration and protect them from contamination.** ***A5*** • **Make adequate provision for the storage and disposal of food waste inedible by-products and other refuse. Manage refuse stores in such a way as to enable them to be kept clean, and free of animals and pests.** ***A6***	***Incoming goods** - check incoming raw materials and packaging for signs of infestation by insects and small rodents before storing.* ***Storage of edible materials** - store raw ingredients, spices etc. in rodent-proof containers. Stack stored materials in a way that avoids creating hiding places where pests may escape detection, e.g. clear of walls, corners, windows and ventilators. Store materials above floor level to allow access for cleaning.* ***Stock rotation** - rotate stocks of materials e.g. packaging, in store to minimise the opportunities for pest infestations to become established in them.* ***Storage of inedible materials** - store waste materials, inedible by-products and other refuse in covered, marked containers. Dispose of animal by-products in accordance with the Animal By-product Regulations. See Guide to Edible Co-Products Chapter 5 (Animal By Products) at www.food.gov.uk/foodindustry/guidancenotes/meatregsguid/*

A7. Windows and other openings … which can be opened to the outside environment are, where necessary, to be fitted with insect-proof screens which can be easily removed

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for cleaning. *852/2004 Annex II* ***Rooms:*** *Chapter II point 1(d)* **A8. Adequate procedures are to be in place to control pests.** **A3. Adequate procedures are also to be in place to prevent domestic animals from having access to places where food is prepared, handled, or stored (or, where the competent authority so permits in special cases, to prevent such access from resulting in contamination).** *852/2004 Annex II* ***Foodstuffs:*** *Chapter IX point 4*	
	Pest Proofing
• **Make sure that windows and other openings that can be opened to the outside environment are, where necessary, fitted with insect-proof screens that can be easily removed for cleaning.** ***A7***	***Windows*** *- make sure that external windows are tight fitting and are only left open if fitted with separate cleanable fly screens. Fly screens should have a maximum mesh size of 2mm.* ***Doors*** *- make sure that external doors are tight fitting (i.e. light is not visible around the frame when closed). Operate a 'closed door policy' whereby doors are shut when not in use. Where external doors are in frequent use (e.g. loading bays) additional measures (e.g. overlapping plastic strips) will help to exclude pests but must not be allowed to compromise hygiene through lack of cleaning and maintenance or contact with exposed meat. Self-closing door mechanisms can also be effective, particularly for personnel doors.* *Other measures that may deter rodents include metal kick plates and rubber or bristle strips under doors and drain traps, chute end flaps, for drains and vents etc. Use a mesh size of less than 6mm to exclude small rodents.*
	Access by Domestic Animals
• **Put adequate procedures in place to prevent domestic animals from having access to places where food is prepared, handled, or stored (or, where the competent authority so permits in**	*Take steps to prevent cats, dogs and other domestic animals accessing the premises. Guard dogs or sheep dogs may be permitted in the lairage and surrounds as long as their presence does not contaminate food.* *Denying access to sources of food, water and shelter for pests, particularly to stores of refuse, food (or feed) will remove such attractions for other animals too.*

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special cases, to prevent such access from resulting in contamination). ***A3***	
	Pest Eradication
• **Put adequate procedures in place to control pests.** ***A8*** • **Use pesticides that are specifically approved for the intended situation and use them safely. Follow label directions** ***The Control of Substances Hazardous to Health Regulations (COSHH) 2002 as amended (for GB)*** *www.opsi.gov.uk/si/si2002/20022677.htm* ***COSHH 2003 as amended (for NI)*** *www.opsi.gov.uk/sr/sr2003/20030034.htm*	*Company's procedures need to cover action to be taken to destroy and eradicate pests if found.* ***Pesticides*** *- ensure insecticides, rodenticides etc. are specifically approved for the intended use and situation, and that label directions for use are followed, including requirements for food to be removed or equipment to be covered before the treatment is applied. Store chemicals safely and securely so that there is no risk of food contamination. Each chemical should be supplied with health and safety data sheets.* ***'Professional Use' pesticides*** *- only appropriately trained persons may apply such chemical products. Where in-house expertise is not available, use a suitably trained pest control contractor.* ***For further information*** *– contact the Health and Safety Executive (www.hse.gov.uk) about the safe use of pesticides on 0151 951 3535 or the HSE's Infoline on 08701 545500 for general information, including on the COSHH Regulations.* ***In NI*** *– contact the Health and Safety Executive NI (www.hseni.gov.uk) or the HSENI's helpline on 0800 0320121.*
	Insects, Rodents & Birds
• **Put adequate procedures in place to control pests.** ***A8***	***Insects*** *- install suitable devices for the destruction of flying insects in low light areas, close to entrances, but not above food, equipment or packaging. Clean and service units regularly (e.g. clean out catch trays, replace bulbs) to ensure their efficacy. High numbers of insects found when catch trays are cleaned out will indicate a pest control failure, and*

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	identification of the species may help to trace the source of the problem. *If an insect infestation is indicated, take immediate action to eradicate it, if it is serious, it may be necessary to use insecticides, but unless there is sufficient expertise in-house, this is best left to an approved pest control contractor.* ***Rodents** - these are a common problem in or around food premises. Live capture traps may be used to deal with very small infestations, or where there is a high risk of food becoming contaminated by rodenticides. Otherwise, a programme of rodenticidal bait laying may be necessary.* ***Rodent bait laying** - unless there is sufficient in-house expertise, bait laying should be carried out by an approved pest control contractor. Establish baiting points at intervals around the perimeter of the premises and at strategic points in the buildings, with regular inspection of baiting points for signs of bait uptake. Mark all baiting points on a site plan. Prevent contamination by placing bait in secure bait boxes and do not place them in areas where food is exposed. Remove bodies promptly and dispose of them safely.* ***Birds** - using anti-perching wires, repellent gels, and acoustic or visual scarers if needed to deter birds. Wild birds are protected and poisoning birds is illegal in all circumstances. Where serious bird problems are present that cannot be prevented by proofing and removal of food sources and nesting and roosting sites, it may be necessary to introduce culling as a last resort. Only authorised persons may carry out culling of certain pest species.*
	Pest Inspection
• **Put adequate procedures in place to control pests.** ***A8***	*Establish an inspection routine. A checklist will help to make sure that no area is missed, and can be used to record whether infestations have been found and the action taken.* Check periodically for:

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	▪ *Likely routes of pest entry, including unscreened external doors and windows;* ▪ *Possible sources of food and water and places of shelter for pests.* ▪ *Signs of pest infestation, including rodent or bird droppings, dead insects, or nest holes, and uptake of bait at baiting points and efficacy of insect killing devices.*

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5.3.2 WHAT ARE THE OFFICIAL CONTROL REQUIREMENTS?

Audits by officials of good hygiene practices shall verify that meat plant operators apply pest control procedures continuously and properly.

854/2004 Article 4 point 4(f)

Audits by officials of HACCP - based procedures shall verify that meat plant operators apply such procedures continuously and properly ... .

854/2004 Article 4 point 5

5.3.3 APPLYING PROCEDURES CONTINUOUSLY AND PROPERLY

The operator is responsible for food safety in the food business.

852/2004 Article1 point 1a

Food business operators shall put in place, implement and maintain a permanent procedure or procedures based on the HACCP principles.

852/2004 Article 5 point 1

Food … business operators at all stages of production, processing, and distribution within the businesses under their control shall ensure that foods … satisfy the requirements of food law which are relevant to their activities and shall verify that such requirements are met.

178/2002 Article 17

	Operator Responsibilities for Pest Control
• **Operator responsibility includes applying and verifying company's pest control procedures and taking corrective action if those procedures fail.** • **Implement and maintain a permanent procedure or procedures based on the HACCP principles.**	***Operator Responsibility*** *includes maintaining and monitoring pest control procedures and taking corrective action if there is a failure.* ***These procedures should be based on HACCP principles -*** *see PART THREE Chapter 1 (Application of HACCP Principles).* ***Delegation*** *– responsibility for applying and verifying pest control procedures may be delegated to a nominated person to whom problems are reported, and who has sufficient authority to ensure that corrective action is taken when necessary.* ***Verification*** *–check periodically to see if company pest control procedures are being followed by staff regarding maintenance, cleaning, storage and reporting as well as*

OPERATOR'S OBLIGATIONS	*ADVICE*
	contract management, if relevant. ***Frequency of verification*** *- this will depend on the likelihood of a pest control problem being found. Once a month may be sufficient for checking experienced staff/contractors in well-designed premises that are kept in good order and where procedures are unchanged. More frequent checks may be needed if there are new staff or procedures. A specialist contractor can advise on inspection frequency.* ***Records*** *- keep an accurate, dated account (e.g. in a pest control notebook or Food Safety Management diary) of sightings, of periodic verification checks, and of any corrective action taken.* ***Corrective action*** *- take action when failures of the company's pest control procedures or evidence of pest presence or infestation are identified to ensure that control is restored. Corrective action may include:* ▪ *Dealing with any product that has been contaminated;* ▪ *Establishing the underlying cause and what needs to be done to prevent similar incidents in the future;* ▪ *Ending the service contract;* ▪ *Improving staff instructions and training.*

PART TWO

6. TRAINING

6.1 WHY IS STAFF TRAINING IMPORTANT?

Staff involved in food production are a significant potential source of microbiological and physical hazards through poor personal hygiene or behaviour. Poor work practices or failures to follow instructions may also give rise to microbiological, physical and chemical hazards. Staff at all levels need sufficient training and instruction to know and understand the consequences of their actions. Staff need clear work instructions so that they can perform their duty to handle food safely.

For example:

- Poor personal hygiene by food handlers, resulting from inadequate instruction, may allow food to become contaminated with food poisoning bacteria, such as *Salmonella*.
- Insufficient instruction, training or supervision can result in unhygienic work practices. It is important to check that work instructions are understood and followed.
- Lack of awareness of the importance of hygiene measures, such as pest control or effective cleaning, may mean that problems go unreported and corrective action to prevent food safety hazards is delayed.
- Lack of knowledge of HACCP principles may lead to an ineffective food safety management system that does not control significant food safety hazards in the business.

6.2 GENERAL INFORMATION

- **Terms used in this chapter may be defined as follows:**
  - ***'Food Handler'*** – 'any person who directly handles packaged or unpackaged food, food equipment and utensils or food contact surfaces.' [Codex General Principles of Food Hygiene]
  - ***'Training'*** – the learning process, by which staff develop the knowledge, skills and attitude necessary to perform their work effectively and to meet the standards required.
  - ***'Instruction'*** – information and/or direction provided to staff so that they know exactly what they are required to do in relation to a specific task or tasks.
  - ***'Supervision'*** – the process of overseeing the performing of tasks and procedures to ensure that they are carried out effectively and that required standards are met.

- **Delivery of Instruction & Training**

  Attendance on a formal course is not a requirement. The methods of instruction and/or training are for the food business to decide. Structured training should be to a standard that is equivalent to the appropriate level of the National Occupational Standard in Food Safety for the sector. Instruction is normally delivered in-house as the information needs to reflect company practices and procedures. Operators may deliver training in-house or use external resources.
  - **In-house:** training material may be developed in-house, or by external advisors, while training may be delivered in-house by appropriately qualified staff or by external trainers.
  - **External:** Many further education centres run food hygiene courses, and there are organisations and consultants that will run on- or off-site training courses for meat plant operators. Computer-based distance learning packages for food hygiene training are also available.

  Whichever option is chosen, the trainer should be qualified to deliver the type of training that is required.

- **Language**

  For training and instruction to be effective, workers need to comprehend the material used in training and understand the instructions they are given. For this reason, consideration must be given to staff who do not speak English as a first language, or who have learning or reading difficulties. Hygiene training course materials are available in a range of languages, and some contain extensive use of visual aids to help overcome such problems. More information can be obtained from the organisations listed below.

- **Qualifications**

  Attainment of a qualification is not necessary to achieve compliance, but food safety and technical qualifications provide recognised standards of achievement, reassurance to the authorities and to customers and may benefit the individual's professional status. Scottish/National Vocational Qualifications (S/NVQs) are available for all meat and poultry functions at every occupational level:

  Level 1 Entry Level for new staff or those with little individual responsibility
  Level 2 Operative or craft level
  Level 3 Supervisory Management for team leaders, section leaders and technical staff
  Level 4 Management

- **'Improve', Meat Training Council (MTC), Other Bodies**

  Improve is the Sector Skills Council that sets training standards for the food and drink sector.

  - Improve Ltd (*www.improveltd.co.uk*) (the website is currently under construction).
    Ground Floor, Providence House, 2 Innovation Close, Heslington, York YO10 52F
    Tel: 0845 644 0448 E.mail: info@improveltd.co.ltd

  The **Meat Training Council** (MTC) can provide guidance on trainers and courses for the meat sector. The MTC administers the Foundation Certificate in Meat and Poultry Hygiene (including HACCP awareness), a Vocational Related Qualification (VRQ) for meat handlers. The MTC offers the Meat Safety Certificate, a Vocational Related Qualification (VRQ) for meat handlers whose first language is not English. The Intermediate Certificate in HACCP Practice (Meat Plant) is a QCA level 2 qualification awarded on the successful completion of a 2-day course and a short written project.

  - Meat Training Council (*www.meattraining.org.uk*)
    PO Box 141, Winterhill House, Snowdon Drive, Milton Keynes, MK6 1YY
    Tel: 01908 231062 E.mail: info@meattraining.org.uk

  Information on hygiene training courses can also be obtained from:

  - The Chartered Institute of Environmental Health (**www.cieh.org**) 020 7827 5800
  - The Royal Environmental Health Institute for Scotland (**www.rehis.org**) 0131 225 5444
  - The Royal Institute of Public Health (**www.riph.org.uk**) 020 7580 2731
  - The Royal Society for the Promotion of Health (**www.rsph.org**) 020 7630 0121
  - The Society of Food Hygiene Technology (**www. sofht.co.uk**) 01590 671979

- **Training Records & Staff Training Matrix**

  Operators need to keep records showing what instruction and training staff need and have received so they are competent to carry out their duties without supervision.

  Individual staff records can be used to keep training details for each employee. A staff training matrix will give an overview of which staff need or who have received induction, job-specific, HACCP or refresher training, who can supervise and who needs supervision.

Examples

INDIVIDUAL TRAINING RECORD	[NAME] [Staff Record No]			
Date(s)	*Type/level of instruction/training*	*Subjects covered*	*Confirmation of attendance*	*Results, etc. if applicable.*

STAFF TRAINING MATRIX	[Date]					
Training Requirements *Staff Name:*	*NAME AB*	*NAME CD*				*NOTES*
Position held:	*Post*	*Post*				
Staff Record No:	*01*	*02*				
Induction Training						
[*Part 1*]	*Date*	*Date*				
[*Part 2*]	*Date*	*Date*				
Job-specific Training						
Xxxxx		*Date*				
Specialist Training						
Yyyyy		*Date*				
Training in HACCP Principles	*Date*					
Zzzzz						
Refresher Training						

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6.3.1 WHAT ARE THE LEGAL REQUIREMENTS FOR TRAINING?

The following sections set out the training requirements of the regulations that apply to slaughter, dressing and further processing of meat.

A. TRAINING OF FOOD HANDLERS

Food business operators are to ensure: **A1. That food handlers are supervised and instructed and/or trained in food hygiene matters commensurate with their work activity;** *852/2004 Annex II* ***Training:*** *Chapter XII point 1*	
	Competence Levels
• **Instruct and/or train food handlers food hygiene matters commensurate with their work activity.** ***A1***	*Identify the requirements for food safety and hygiene training for each position in the company and how that training will be delivered (see 6.3.1 above).* *Make sure that new and transferred employee's responsibilities do not exceed their level of food safety competence by assessing their skills against the requirements for their new position and arrange to meet the training need. Previous training and experience can be taken into account, but it is good practice to treat new staff as untrained unless they can provide evidence of previous training (see 'Training records' below).*
	Basic Training & Instruction
	Before *starting to handle food, give all food handlers (including temporary staff) sufficient induction training and instruction to achieve a basic understanding and awareness of food safety principles and the company's personal hygiene and health procedures.* *Soon after starting food handling work staff should be made aware of:* ▪ *Procedures to keep chemical hazards, such as cleaning materials, from contaminating food;* ▪ *Precautions and checks to avoid physical hazards such as glass or metal from contaminating food;* ▪ *Sources of microbiological contamination and practices that*

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	minimise the spread and growth of bacteria, including cleaning, disinfection and temperature controls. ▪ *Checks for signs of pest presence.* ***Other staff** - staff who may not handle food but need to enter food handling areas, and everyone with hygiene responsibilities, such as quality controllers, storekeepers and production managers, cleaners, site engineers and maintenance staff, should also receive hygiene training and/or instruction.*
	Job-specific Training
	Provide adequate training and/or instruction on the specific tasks that staff are required to perform, as soon as it is practicable to do so. It is recommended that informal training is given within four weeks and any formal training within three months of starting work. Staff must achieve the required standard of hygiene before being left to handle food unsupervised (see Supervision below). ***On-the-job tuition** by an experienced member of staff may be most effective method of teaching staff the correct hygienic and safe procedures and how to use equipment in such a way as to avoid contamination of meat.* ***Staff working in storage, packaging or food dispatch areas** are likely to need additional training in:* ▪ *Good housekeeping practices* ▪ *Temperature controls* ▪ *Packaging controls* ▪ *Pest control procedures* ▪ *Vehicle hygiene* ***Staff working with animals** will need animal handling and welfare training.* *Staff responsible for certain tasks must have specific training and certification e.g.* ▪ ***Licensed slaughterer***

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	See Chapter 9 (Acceptance & Slaughter of Animals) A11 ▪ ***Application of industrial pesticides*** *See Chapter 5 (Pest Control) A4, A8* ***Supervisors and/or managers** should have a sufficient level of training to enable them to provide appropriate instruction and supervision of food-handlers and to make decisions based on sound knowledge of food safety principles and practices.*
	Supervision
• **Supervise food handlers in food hygiene matters.** ***A1***	*New and inexperienced staff must be supervised until it is clear that they are competent to handle food safely. Ask staff to demonstrate their knowledge and understanding and observe their behaviour and working practices over a period of time.* *The level of supervision required will depend on the nature of the work and the level of staff training and competence. Staff undertaking complex or technical tasks may require constant oversight while learning new skills, while others performing simple, perhaps repetitive, tasks may only need a regular check in case there are queries or problems.*
	Follow-up/Refresher Training
• **Instruct and/or train food handlers in food hygiene matters commensurate with their work activity.** ***A1***	*Training/instruction may be needed when there are significant changes in working practices, procedures, equipment or legislation, or if current practices are found to be inadequate. The company food safety training programme may need to be amended.* *Refresher training is likely to be necessary at least every two or three years depending on job function.*
	Training Records
	Keep a record of each individual's training to show they have received appropriate instruction/training in food hygiene matters commensurate with their work activity. *Include information on:* ▪ *Trainee's name*

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	▪ *Date(s)/duration of training/instruction* ▪ *Type/level of training* ▪ *Subjects covered* ▪ *Confirmation of attendance* ▪ *Any formal outcome (e.g. test results, certificate/qualification awarded)* ***Skills/Training Matrix** – it can be helpful to keep an up-to-date staff list noting who has received induction/job specific/ HACCP/refresher training and when, so that this information can be seen at a glance. See example formats at 6.2 above*

B. TRAINING IN APPLICATION OF HACCP PRINCIPLES

B1. That those responsible for the development and maintenance of the required procedures based on HACCP principles, or for the operation of relevant guides, have received adequate training in the application of the HACCP principles. *852/2004 Annex II **Training:** Chapter XII point 2*	
	HACCP Training
• **Make sure that the staff responsible for the development and maintenance of the required procedures based on HACCP principles, or for the operation of relevant guides, have received adequate training in the application of the HACCP principles.** ***B1***	*Make sure that at least one person in the business has sufficient training in the application of HACCP principles to develop and maintain the HACCP-based procedures in the plant. See PART THREE Chapter 1 (Application of HACCP Principles) Section A.* *Make sure that other staff (e.g. supervisors or managers) with responsibility for maintaining the plant's HACCP-based food safety procedures also have appropriate training.* *All food handlers may benefit from HACCP awareness training to help them understand the food safety hazards and the need to operate the plant's HACCP-based procedures effectively.* ***For further information:** the Meat Plant HACCP Manual provides guidance for operators and trainers and supports a recognised qualification (see 6.2):* www.food.gov.uk/foodindustry/meat/haccpmeatplants/ *For a CD-rom version of the HACCP Manual call:* *020 7276 8384*

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6.3.2 WHAT ARE THE OFFICIAL CONTROL REQUIREMENTS?

Audits of good hygiene practices shall verify that meat plant operators apply procedures concerning training in hygiene and in work procedures continuously and properly.

854/2004 Article 4 point 4(e)

Audits by officials of HACCP- based procedures shall verify that meat plant operators apply such procedures continuously and properly ... .

854/2004 Article 4 point 5

6.3.3 APPLYING PROCEDURES CONTINUOUSLY AND PROPERLY

The operator is responsible for food safety in the food business.

852/2004 Article 1 point 1(a)

Food business operators shall put in place, implement and maintain a permanent procedure or procedures based on the HACCP principles.

852/2004 Article 5 point 1

Food … business operators at all stages of production, processing, and distribution within the businesses under their control shall ensure that foods … satisfy the requirements of food law which are relevant to their activities and shall verify that such requirements are met.

178/2002 Article 17

	Operator Responsibilities for Training
• **Operator responsibility includes applying and verifying company's staff training procedures and taking corrective action if those procedures fail.** • **Implement and maintain a permanent procedure or procedures based on the HACCP principles.**	***Operator Responsibility*** *includes maintaining and monitoring staff training procedures and taking corrective action if there is a failure.* ***These procedures should be based on HACCP principles*** *– see PART THREE Chapter 1 (Application of HACCP Principles).* ***Delegation*** *– responsibility for applying and verifying staff training procedures may be delegated to a nominated person to whom problems are reported and who has sufficient authority to ensure that corrective action is taken when necessary.* ***Verification*** *– observe staff behaviour and working practices to check that the required standard is being achieved or whether further instruction and/or training or refresher training is needed. Also check periodically that trainees are being properly*

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	supervised, are not being taught bad habits, or being given incorrect information or inadequate explanations and that training records are adequate. ***Records** – In addition to staff training records (see above), keep an accurate, dated account (e.g. in a Food Safety Management diary) of the result of each periodic verification check and observations, and any corrective action taken.* ***Corrective action** - Take action when failures of the company's training procedures are identified. Breakdowns in the company's food safety management procedures may be wholly or partly due to inadequate instruction, training and/or supervision and action may include:* ▪ *Establishing the underlying cause and whether training or supervision is needed to prevent similar incidents in the future;* ▪ *Providing additional or refresher training, instruction or supervision.* ▪ *Bringing management information records up to date.*

PART TWO

7. PERSONAL HYGIENE

7.1 WHY IS PERSONAL HYGIENE IMPORTANT?

People employed in, or visiting, food plants are an important potential source of microbiological and physical hazards. Procedures are needed to minimise the risk of such hazards causing illness or injury to consumers.

For example:

- Bacteria (germs) may be transferred from people to food through handling food, by coughing over food or from contact with dirty clothing.
- People who are sick may be suffering from an infection that can be transmitted by food, such as *Salmonella* food poisoning, viral gastro-enteritis, bacterial skin infections, even typhoid or dysentery.
- Foreign objects such as hair, pieces of jewellery, pencils, buttons, fibres from clothing etc. may fall onto food.
- People may also cause cross contamination as they move around a food plant, by transferring dirt and bacteria on clothing or footwear, especially if they pass from dirty to clean areas

7.2 GENERAL INFORMATION[1]

- **Fitness to Work Questionnaire**

  Take steps to prevent the introduction of infection into the workplace and subsequently into food by food handlers. The questionnaire below can be used at recruitment.

PRE-EMPLOYMENT QUESTIONNAIRE		
1. Have you now, or have you over the last seven days, suffered from diarrhoea and/or vomiting?	YES	NO
2. At present, are you suffering from:		
i) skin trouble affecting hands, arms or face?	YES	NO
ii) boils, styes or septic fingers?	YES	NO
iii) discharge from eye, ear or gums/mouth?	YES	NO
3. Do you suffer from:		
i) recurring skin or ear trouble?	YES	NO
ii) a recurring bowel disorder?	YES	NO
4. Have you ever had, or are you now known to be a carrier of, typhoid or paratyphoid	YES	NO
5. In the last 21 days have you been in contact with anyone, at home or abroad, who may have been suffering from typhoid or paratyphoid?	YES	NO
If the answer to any question is "yes" the individual should not be employed as a food handler until medical advice has been obtained.		

- **Risk Factors & Preventative Measures**
  1. Food business managers must encourage prompt reporting of diarrhoea and vomiting and anyone with these symptoms should report to their manager and leave the food handling area immediately. Clean and disinfect all surfaces with which the person has had contact (e.g. work areas, toilets). If symptoms persist the person should seek medical advice.
  2. Infections – Enteric fever, VTEC, Hepatitis A - seek medical advice.
  3. Food handlers with lesions on exposed skin (hands, face, neck, or scalp) that are actively weeping or discharging must be excluded from work until the lesions have healed.
  4. Any food handler whose eyes, ears or mouth or gums are weeping or discharging must be excluded from food handling until they are better.

[1] Advice from Department of Health's 'Food Handlers - Fitness to Work' publication currently under review

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7.3.1 WHAT ARE THE LEGAL REQUIREMENTS FOR PERSONAL HYGIENE?

The following sections set out the training requirements of the regulations that apply to slaughter, dressing and further processing of meat.

A. PERSONAL CLEANLINESS & BEHAVIOUR

A1. Every person working in a food-handling area is to maintain a high degree of personal cleanliness and is to wear suitable, clean and, where necessary, protective clothing.

852/2004 Annex II ***Personal Hygiene:*** *Chapter VIII point 1*

A2. FBOs are to ensure that food handlers are supervised and instructed and/or trained in food hygiene matters commensurate with their work activity.

852/2004 Annex II ***Training:*** *Chapter XII point 1*

	Training, Instruction & Supervision
• **Make sure that food handling staff are supervised and receive instruction or training on food hygiene matters commensurate with their work activity.** ***A2***	*Give clear and simple written instructions to all staff (in various languages if necessary) before they start to handle food or to work in food-handling areas on the company's requirements for personal behaviour, particularly handwashing and including the use of protective clothing and the reasons for them. Supervise as appropriate and issue reminders if lapses occur.* *Keep accurate individual training records to show what instruction has been given. See also Chapter 6 (Training).* *Consider asking staff to sign a statement that they have read and understood the instructions.*
	Cleanliness & Behaviour
• **Make sure that every person working in a food-handling area maintains a high degree of personal cleanliness.** ***A1***	*Make sure that everyone, including managers, supervisors, engineers, cleaners, quality control and maintenance staff, working around a plant complies with appropriate personal hygiene procedures wherever they are working.* *Visitors and enforcement officials should comply with the same personal hygiene procedures as company staff.* ***Reminders*** *- try displaying signs and notices (e.g. 'now wash your hands') in appropriate languages in key areas to remind staff of the company's rules.*

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	Handwashing *– see topic below* ***Personal items*** *– prohibit the wearing of jewellery (except plain wedding rings and sleeper earrings), watches, badges, false nails, nail varnish, perfumed hand cream and strong perfume/aftershave, mobile phones or other items that may contaminate the product, in food production areas.* ***Personal hygiene*** *– prohibit smoking, chewing gum, eating and drinking except in designated areas (prohibit spitting entirely). Discourage other practices likely to spread contamination (e.g. licking fingers, chewing fingernails, scratching) and consider moving staff with heavy coughs and colds to other tasks.* ***Movement between 'clean' and 'dirty' areas*** *– if movement between different work areas is necessary it should be from 'clean' to 'dirty' areas to minimise the risk of cross contamination e.g. by soiled protective clothing and footwear. Where movement from 'dirty' to 'clean' is unavoidable, staff should change coats and headgear if necessary, wash or change boots and wash hands. This applies if staff that remove SRM or other by-products are to handle food.* ***Drinking Water*** *- if drinking water is supplied, provide drinking fountains or single-use disposable cups.*
	Protective Clothing – Suitability
• **Make sure that all personnel in food-handling areas wear suitable protective clothing.** ***A1***	*The main purpose of protective clothing is to protect food from contamination from people. It also keeps people and their clothing clean and dry.* ***'Protective clothing'*** *– when used below this is taken to mean coats, overalls, gloves, aprons, headgear and footwear e.g. rubber boots or shoe covers.* *In food handling areas coats/overalls should completely cover all personal clothing. Headgear should completely contain and cover hair and snoods should cover beards and moustaches. Staff who lift beef quarters etc. should wear*

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	clean protective neck shields, or hooded overalls. ***Design** - use protective clothing designed to avoid contamination of the product (e.g. coats with press-studs rather than buttons and with no external pockets) and is preferably light coloured so that contamination is easily seen – except that staff handling livestock should wear suitably dark clothing to prevent animals being distracted.* ***Fit** – protective clothing should fit reasonably well e.g. coats that are too small may not cover outer clothing properly, and clothing or footwear that is the wrong size may limit movement and lead to accidents.* ***Quality** - non-disposable protective clothing needs to be made of durable material that is able to stand frequent washing at high temperatures. Disposable protective clothing must be sufficiently robust to afford the required level of protection.* ***Defects** – inspect protective clothing regularly for damage or wear and have defective items repaired or replaced when necessary as they could fail to prevent contamination.*
	Protective Clothing – Cleanliness
• **Make sure that protective clothing worn in food-handling areas is clean.** ***A1***	*Protective clothing/headgear/footwear needs to be cleanable or disposable.* *All personnel, including visitors should wear clean protective clothing when entering food-handling areas and change that clothing if it becomes excessively soiled and change or wash protective footwear. Where possible, install apron washers close to workstations to encourage frequent use.* ***Dirty tasks** – protective clothing worn in 'dirty areas' (e.g. a lairage) needs to be clearly differentiated from that worn in food-handling areas. Rubber gloves used for cleaning jobs need to be clearly differentiated from food-handlers gloves so that they are not used for that purpose.* ***Colour coding** – this is an effective way of differentiating*

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	between clothing/footwear intended for use in different work areas. ***Supplies** – arrange to have adequate supplies of protective clothing available so that staff have clean clothing every day and can change if items become excessively soiled. The supply of protective clothing, footwear and the provision of laundry services may be contracted out.* ***Storage** – store protective items in suitable facilities where they are kept clean and protected from outdoor clothing and other potential sources of contamination.*
	Additional Protective Wear
• **Make sure that all personnel in food-handling areas wear suitable protective clothing.** ***A1***	*Make sure that, where worn, other protective items (e.g. heavy-duty rubber gloves, chain-mail gloves, wrist guards, visors etc.) are clean and suitable for the intended purpose. They should be clean when first worn, and be cleaned during shifts to remove excessive soiling. Difficult to clean items, such as chain mail gloves, may be protected in use by covering with a disposable glove. Earplugs should be clean and linked.*

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B. HANDWASHING FACILITIES

B1. An adequate number of washbasins is to be available, suitably located and designated for cleaning hands. Washbasins for cleaning hands are to be provided with hot and cold running water, materials for cleaning hands and for hygienic drying.

852/2004 Annex II ***Food Premises:*** *Chapter I point 4*

B2. The equipment for washing hands used by staff engaged in handling exposed meat must have taps designed to prevent the spread of contamination

853/2004 ***Annex III****:* ***Slaughterhouses****: Section I Chapter II point 4 & Section II Chapter II point 4 /* ***Cutting****: Section I Chapter III point 4 & Section II Chapter III point 1(d) /* ***Farmed Game****: Section III points 1 & 2 /* ***Production Establishments:*** *Section V Chapter I point 4 & Section VI point 2*

	Facilities
• **Provide designated washbasins for cleaning hands.** ***B1*** • **Install taps designed to prevent the spread of contamination for use by staff who handle exposed meat.** ***B2***	*Where possible, combine hand washing facilities with tool washing equipment to encourage frequent use.* *See Chapter 1 (Design & Facilities) A11 and D9.*
	Handwashing
• **Make sure that hand cleaning and drying materials and hot running water are supplied and used.** ***B1***	*Instruct staff in effective hand washing. This includes:* ▪ *Washing and drying hands thoroughly using an effective procedure.* ▪ *Washing hands at the start of work and on entering a production area, after a visit to the toilet, after handling waste, after handling dirty equipment or utensils, after a contamination incident and after cleaning.* ▪ *The above applies whether or not gloves are worn.* ▪ *Wash gloves with the same frequency as hands.* ***Cleaning Materials*** *– bactericidal soaps and hand sanitising products, such as alcohol-based gels and bactericidal wipes, can be used at hand washing stations. These may reduce*

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	microbial contamination on hands but will not compensate for inadequate hand washing. ***Nailbrushes** – nailbrushes can harbour bacteria and if provided should be replaced or cleaned regularly**.*** ***Hand drying** – disposable paper towels are recommended (with bins for their disposal) rather than hot air dryers, which can create aerosols that may contaminate surfaces. Where used, launder multiple use fabric towels before re-use.* ***Barrier Creams** – food-safe, unperfumed barrier creams to protect the skin may be supplied.*

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C. ILLNESS

C1. No person suffering from, or being a carrier of a disease likely to be transmitted through food or afflicted, for example, with infected wounds, skin infections, sores or diarrhoea is to be permitted to handle food or enter any food handling area in any capacity if there is any likelihood of direct or indirect contamination. Any person so affected and employed in a food business and who is likely to come into contact with food is to report immediately the illness or symptoms to the food business operator.

852/2004 Annex II ***Personal Hygiene:*** *Chapter VIII point 2*

	Health Status
• **Do not knowingly allow staff to handle food or to work in food processing areas if suffering from or being a carrier of a foodborne disease or if suffering from, e.g. infected wounds, skin infections, sores or diarrhoea.** ***C1***	***Health declarations*** *– ask prospective employees to complete a pre-employment health questionnaire and sign a declaration stating that there is no medical reason why they should not be permitted to handle food or to work in food processing areas.* ***Model document*** *- see 7.2 (General Information).* ***Medical examinations*** *– carriers of foodborne disease (e.g. Salmonella) may show no symptoms. Examinations may identify health concerns but cannot guarantee to identify such carriers.* ***Visitors*** *– ask visitors entering food handling areas to sign a health declaration stating that they are not suffering from sickness or a foodborne disease and whether they have recently been abroad.* ***Foreign travel*** *- travel abroad can increase the likelihood of suffering from gastroenteritis or other foodborne diseases. Staff working in food-handling areas can be asked to complete a brief medical questionnaire on their return to work, and should be excluded if there is reason to think that they are carrying an infection.* ***Injuries*** *- any non-infected cuts, sores, or abrasions are covered with a waterproof, brightly coloured (preferably metal-detectable) dressing.*
	Illness
• **Instruct staff likely to be in**	*Set out clear written instructions (which may be given in*

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contact with food to report any illness or infection immediately to management, especially any symptoms that are a health risk in a food-handling environment e.g.: ▪ **diarrhoea;** ▪ **vomiting;** ▪ **fever;** ▪ **jaundice;** ▪ **infected boils, cuts or wounds;** ▪ **discharges from eyes, nose or ears.** • **Exclude staff reporting or showing these from food handling areas.** ***C1***	*appropriate languages) for staff and managers on what they are to do about reporting illnesses or symptoms and possible exclusion from working with or near food until they have been either medically treated and cleared, or have been completely free of symptoms for at least 48 hours. (See General Information at 7.2).* *Staff can be asked to sign an agreement to report illness and close contact with others suffering from these symptoms.* ***Exclusion** - local authorities have powers to formally exclude individuals suffering from food poisoning, typhoid, paratyphoid, or dysentery from working with food. Anyone formally excluded in this way cannot return to work before the same authority has given clearance.* ***Sickness Records** - the health of employees (as far as it may affect food safety) should be monitored and records, such as health declarations, medical certificates and reports of illness, kept to show that the required actions have been followed.*

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7.3.2 WHAT ARE THE OFFICIAL CONTROL REQUIREMENTS?

Audits by officials of good hygiene practices shall verify that meat plant operators apply personal hygiene procedures continuously and properly.

854/2004 Article 4 point 4(d)

Audits by officials of HACCP- based procedures shall verify that meat plant operators apply such procedures continuously and properly.

854/2004 Article 4 point 5

7.3.3 APPLYING PROCEDURES CONTINUOUSLY AND PROPERLY

The operator is responsible for food safety in the food business.

852/2004 Article 1 point 1(a)

Food business operators shall put in place, implement and maintain a permanent procedure or procedures based on the HACCP principles.

852/2004 Article 5 point 1

Food … business operators at all stages of production, processing, and distribution within the businesses under their control shall ensure that foods … satisfy the requirements of food law which are relevant to their activities and shall verify that such requirements are met.

178/2002 Article 17

	Operator Responsibilities for Personal Hygiene
• **Operator responsibility includes applying and verifying company's personal hygiene procedures and taking corrective action if those procedures fail.** • **Implement and maintain a permanent procedure or procedures based on the HACCP principles.**	***Operator Responsibility*** *- includes maintaining and monitoring personal hygiene procedures and taking corrective action if there is a failure.* ***These procedures should be based on HACCP principles*** *– see PART THREE Chapter 1 (Application of HACCP Principles).* ***Delegation*** *– responsibility for applying and verifying the company's personal hygiene procedures may be delegated to a nominated person to whom problems are reported, and who has sufficient authority to ensure that corrective action is taken when necessary.* ***Verification*** *– observe throughout the day if staff are following handwashing and other personal hygiene procedures. Check periodically that procedures for instructing*

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	staff, reporting illness etc. are being followed. ***Records** – keep an accurate, dated account (e.g. in a food safety management diary) of each periodic verification check on personal hygiene procedures and any action taken.* ***Corrective action** - take action when failures of the company's personal hygiene procedures are identified to ensure that control is restored. Such action may include:* ▪ *Dealing with any product that has been contaminated;* ▪ *Establishing the underlying cause and what needs to be done to prevent similar incidents in the future;* ▪ *Disciplinary action;* ▪ *Improving staff instructions and training.*

PART TWO

8. TEMPERATURE CONTROLS

8.1 WHY ARE TEMPERATURE CONTROLS IMPORTANT?

Warm and wet meat provides the ideal conditions for growth of food poisoning and spoilage bacteria. A combination of low temperatures and dry surfaces will inhibit the growth of bacteria and extend shelf life. Bacteria can multiply quickly if meat is stored or transported at too high a temperature or if heat treatment is inadequate. Procedures are needed to minimise the risk of this hazard causing illness to consumers.

For example:

- Failure to maintain the cold chain will encourage the growth of bacteria on meat. The higher the temperature, the faster bacteria can multiply, resulting in a potentially serious food safety hazard.
- Inadequate chilling is the greatest source of food poisoning due to cooked meat.
- Inadequate heat treatment, for example, failure to maintain high enough temperatures for a sufficient time, will not destroy heat-resistant food-poisoning or spoilage organisms.

8.2 GENERAL INFORMATION

- **Temperature Requirements for Meat in Approved Premises**

  The specific temperature requirements of Regulation 853/2004 for raw and processed meat are included in the relevant chapters of this Guide.

  - **Chapter 10 (Dressing of carcases)**
  - **Chapter 11 (Cutting of Meat)**
  - **Chapter 12 (Further Processing)**

- **Temperature Requirements outside Approved Premises**

  Operators exempt from Regulation 853/2004 are generally subject to Regulation 852/2004. Those regulations include:

  - **Article 4.2,** which requires operators carrying out any stage of production, processing and distribution of food after primary production, to comply with the general hygiene requirements laid down in Annex II (of Regulation 852/2004) …
  - **Article 4.3,** which requires operators, as appropriate, to adopt the following specific hygiene measures:
    (c) Compliance with temperature control requirements for foodstuffs;
    (d) Maintenance of the cold chain.
  - **The Food Hygiene (England, Scotland, Wales, Northern Ireland) Regulations 2006,** which set temperature control requirements for operations to which Regulation 853/2004 does not apply, but where food is kept which is likely to support the growth of pathogenic micro-organisms or the formation of toxins.

  These requirements should be reflected in relevant operators' HACCP-based procedures.

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8.3.1 WHAT ARE THE LEGAL REQUIREMENTS FOR TEMPERATURE CONTROLS?

The following sections set out the general temperature control requirements of the regulations that apply to slaughter, dressing and further processing of meat.

A. GENERAL REQUIREMENTS

A1. The layout, design, construction, siting and size of food premises ... where necessary, provide suitable temperature-controlled handling and storage conditions of sufficient capacity for maintaining foodstuffs at appropriate temperatures and designed to allow those temperatures to be monitored and, where necessary, recorded.

*852/2004 Annex II **Food Premises:** Chapter I point 2(d)*

A2. … Food businesses manufacturing, handling and wrapping processed foodstuffs are to have suitable rooms; large enough for the separate storage of raw materials from processed material and sufficient separate refrigerated storage.

*852/2004 Annex II **Foodstuffs:** Chapter IX point 5*

A3. [Slaughterhouses have] lockable facilities for the refrigerated storage of detained meat.

*853/2004 Annex III Section I **Red meat slaughterhouses:** Chapter II point 5*

A4. Cutting plants/production establishments are equipped to ensure compliance with the [temperature] requirements laid down in Chapter V [for red and white meat] Chapter III [for production establishments).

*853/2004 Annex III Section I **Red meat cutting plants:** Chapter III point 3; Section II **White meat slaughterhouses:** Chapter III point 1(c).Section V **Production Establishments:** Chapter I point 3*

	Temperature Control Facilities
• **Provide sufficient temperature controlled handling and storage capacity.** ***A1*** • **Provide suitable rooms, large enough for the separate storage of raw materials from processed material and sufficient separate refrigerated storage, if manufacturing, handling and wrapping processed foodstuffs.**	*Maintenance of the cold chain is essential to minimise the growth of bacteria on meat - see Section B below.* *Consider the need for sufficient temperature controlled handling and refrigerated storage facilities to prevent overloading, particularly for anticipated throughput at peak periods. Consider the implications of equipment failure and other emergency situations, and the need to monitor temperatures (see below).* *Consider the requirements for handling meat of different species, detained meat, separation of raw materials from processed material and exposed meat from packaged meat in slaughterhouses, cutting plants and processing*

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A2 • **Slaughterhouses are to have lockable facilities for the refrigerated storage of detained meat.** ***A3*** • **Cutting/preparation rooms are equipped to comply with temperature requirements for meat.** ***A4***	*plants, as appropriate.* ***Food Premises*** *- see Chapter 1 (Design and Facilities) A9 including free-standing chillers.* ***Detained meat*** *- see Chapter 1 (Design and Facilities) D10* ***Cutting rooms*** *- see Chapter 11 (Cutting of Meat) Section C*

A5. ... where necessary, provide suitable temperature-controlled handling and storage conditions …designed to allow those temperatures to be monitored and, where necessary, recorded.

852/2004 Annex II ***Food Premises:*** *Chapter I point 2(d)*

A6. Where necessary, equipment is to be fitted with any appropriate control device to guarantee fulfilment of this Regulation's objectives.

852/2004 Annex II ***Equipment:*** *Chapter V point 2*

	Temperature Monitoring
• **Temperature controlled handling and storage allows temperatures to be monitored and if necessary recorded.** ***A5*** • **Where necessary, equipment is fitted with an appropriate control device to guarantee fulfilment of the objectives of Regulation 852/2004.** ***A6***	*While controlling the temperature of the surface of meat is most important for food safety as microbiological contamination is generally confined to the surface of carcases, the legal requirements for meat apply to the whole product, whether carcase meat, mince etc.* *Set limits and tolerances for the operation of chillers, freezers or thermal processing equipment that will achieve and maintain the required temperatures for the product. These may include:* ▪ *chiller /freezer/cooker air temperature* ▪ *relative humidity, airflow or other parameters* ▪ *temperature of product entering/leaving* ▪ *loading levels and spacing between product* ▪ *loading and unloading times/frequency.*

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	Check, at the frequency set out in the company's HACCP plan, that the established limits and procedures are being adhered to and are effective. *Automatic monitoring devices can activate audible and visible alarms when temperature limits are close to being breached so corrective action can be taken. Such equipment also produces records of temperature control. Alternatively, physically check and then record temperatures at the frequencies determined in the company HACCP plan. Record any corrective action taken. See Annex A - Example weekly temperature log.* ***Internal Temperature Measurement** – the internal temperature of meat can be measured using a suitable hand-held probe thermometer. This should be of hygienic design and construction and cleaned and disinfected after each use so that it does not contaminate the food.* ***Calibration –** make sure that thermometers/control devices are working accurately by checking each one regularly (and at any time there is reason to think there may be a defect) against a recognised standard. Keep a record of the equipment/individual thermometer number and the date and outcome of the check.*

A7. The layout, design, construction, siting and size of food premises are to:
b) be such as to protect against … the formation of condensation or undesirable mould on surfaces;

A8. There is to be suitable and sufficient means of natural or mechanical ventilation.

*852/2004 Annex II **Food Premises:** Chapter I points 2b & 5*

A9. During the chilling operations, there must be adequate ventilation to prevent condensation on the surface of the meat.

*853/2004 Annex III Section I **Storage and Transport:** Chapter VII point 2*

	Condensation
• **Prevent condensation on surfaces, including the surface**	*Condensation needs to be controlled as moisture encourages the growth of microbiological organisms on the*

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of meat. ***A7, A8, A9***	*surfaces of the meat. It can be minimised by having adequate insulation and increasing air circulation rates in chilling rooms to lower the relative humidity.* *See Chapter 1 (Design & Facilities) A12*

A10. Where necessary, conveyances and/or containers used for transporting foodstuffs are to be capable of maintaining foodstuffs at appropriate temperatures and allow those temperatures to be monitored. *852/2004 Annex II **Transport:** Chapter IV point 7*	
	Temperature-controlled transport
• **Use vehicles and containers for transporting foodstuffs that are, where necessary, capable of maintaining foodstuffs at appropriate temperatures and allowing those temperatures to be monitored.** ***A10***	*As there are specific temperature requirements for transport of meat, vehicles and/or containers used for transporting meat need to be capable of maintaining the cold chain, unless specific exemptions apply – see Chapter 11 (Cutting of Meat) Section CR4.* *Transport vehicles should be used to maintain the cold chain not to reduce the temperature of the meat to the required level.* *Set limits and tolerances for the transport of meat that will maintain the required temperatures for the product. These may include:* ▪ *vehicle air temperature* ▪ *relative humidity, airflow or other parameters* ▪ *temperature of product entering / leaving* ▪ *loading levels and spacing between product.* ▪ *loading and unloading times / frequency.* *Check, at the frequency set out in the company's HACCP plan, that the established limits and procedures are being adhered to and are effective.* *A well designed refrigerated vehicle should have a high standard of insulation, good internal lining, air-tight door seals, water-tight flooring, efficient refrigeration unit,*

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	temperature indicators in the driver's cab so that the temperature can be continuously monitored and recorded during transport. Purpose built vehicles will have a thermometer fitted, which will generally give a reading of the air temperature rather than the product temperature. Product temperature can be monitored with a hand-held thermometer and recorded at the frequencies set out in the HACCP plan. Record any corrective action taken.

A11. Food business operators are to ensure that food handlers are supervised and instructed and/or trained in food hygiene matters commensurate with their work activity.

852/2004 Annex II ***Training:*** *Chapter XII point 1*

	Training, Instruction & Supervision
• **Make sure that food handlers are instructed and/or trained in food hygiene matters commensurate with their work activity.** ***A11***	*Instruct all food handlers (including temporary staff) in the importance of temperature controls, the need to follow instructions and to report failing controls promptly. Supervise as appropriate and issue reminders if lapses occur.* *Keep accurate individual training records to show what instruction/training has been given. See Chapter 6 (Training).*

A12. Food premises are to be kept clean and maintained in good repair and condition.

852/2004 Annex II ***Premises:*** *Chapter I point 1*

A13. Conveyances and/or containers used for transporting foodstuffs are to be kept clean and maintained in good repair and condition to protect foodstuffs from contamination.

852/2004 Annex II ***Transport:*** *Chapter IV point 1*

	Maintenance and Cleaning
• **Make sure that premises as well as vehicles and/or containers used for transporting foodstuffs are**	*Surfaces need to be smooth, durable, and watertight.* ***Maintenance*** *- include temperature controlled areas and company vehicles and food containers in the company's maintenance regime so they are inspected, maintained*

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kept clean and maintained in good repair and condition. ***A12, A13***	*and repaired as necessary.* *Refrigeration and heat treatment equipment may need maintenance by specialist engineers. Defrost as often as necessary to prevent loss of refrigeration efficiency.* *See Chapter 3 (Maintenance).* ***Cleaning** – include all temperature-controlled areas, company vehicles and transport containers in the company's cleaning regime so they are cleaned regularly and / or whenever they become soiled. See Chapter 4 (Cleaning).*

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B. MAINTAINING THE COLD CHAIN

B1. Food business operators shall put in place, implement and maintain a permanent procedure or procedures based on the HACCP principles.

852/2004 Article 5 point 1

B2. At all stages of production, processing and distribution, food is to be protected against any contamination likely to render food unfit for human consumption, injurious to health or contaminated in such a way that it would be unreasonable to be consumed in that state.

852/2004 Annex II ***Foodstuffs:*** *Chapter IX point 3*

B3. Raw materials, ingredients, intermediate products and finished products likely to support the reproduction of pathogenic micro-organisms or the formation of toxins are not to be kept at temperatures that might result in a risk to health. The cold chain is not to be interrupted.

However, limited periods outside temperature control are permitted, to accommodate the practicalities of handling during preparation, transport, storage, display and service of food, provided that it does not result in a risk to health.

852/2004 Annex II ***Foodstuffs:*** *Chapter IX point 5*

	HACCP-based Procedures
• **Implement and maintain a permanent procedure or procedures based on the HACCP principles.** ***B1*** • **Protect food against any contamination likely to render food unfit for human consumption.** ***B2***	*In many cases, temperature control may be regarded as a prerequisite requirement. However, there are specific temperature requirements for raw and processed meat in Regulation 853/2004. As a result, operators of approved establishments (slaughterhouses, cutting plants, game handling establishments and meat processing plants) need to ensure that food safety hazards, notably the growth of bacteria through inadequate temperature control, are minimised. This is done by setting and applying operational limits and procedures for chilling and subsequent maintenance of the cold chain (e.g. during storage and transport) and, where appropriate, freezing, thawing, and thermal processing.* *Set out in the HACCP plan, the procedures for controlling temperature, the limits that are to be monitored, the checks to be carried out, the corrective actions to be taken to ensure the safety of the meat and the records to be kept of those checks and actions.*

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	See 8.3.3 and PART THREE Chapter 1 (Application of HACCP principles). ***Microbiological testing** – can help confirm (validate/ verify) the effectiveness of HACCP-based procedures – see process hygiene criteria. See PART THREE Chapter 2 (Microbiological Criteria).*
	Chilling and the Cooling Curve
• **Chill meat and maintain the temperature of meat at or below legal limits** ▪ **Chapter 10 (Dressing of carcases)** ***- see Section C for red meat, including large game*** ***- see Section D for white meat including small game*** ▪ **Chapter 11 (Cutting of meat)** ***- see Section CR for red meat*** ***- see Section CW for white meat*** ***- see Section CP for production establishments*** ▪ **Chapter 12 (Further processing)** ***- see Section C for minced meat*** ***- see Section D for meat preparations*** ***- see Section E for MSM*** ***- see Section G for meat products***	*After slaughter and dressing the internal temperature of an animal carcase will generally be between 30°C and 39°C. This warm and wet surface provides ideal conditions for growth of food poisoning organisms. Chilling and drying restricts microbiological activity as well as chemical and physical changes that cause deterioration and spoilage. The reduction of internal carcase temperature to below 7°C for red meat, 3°C for offal and 4°C for white meat occurs along a 'cooling curve'.* *Different time/temperature regimes may be followed for the progressive chilling of meat for different species/products as long as food safety is not prejudiced. Beef carcases, for example, may take 48 hours to fall below 7°C. The rate at which meat will chill to these temperatures or below is determined by:* ▪ ***Chiller temperature and efficiency** – determine appropriate settings and tolerances for temperature, air speed, air flow and relative humidity. Keep chiller door opening and closing to a minimum. Maintain equipment in good condition. Allow adequate space for air to circulate.* ▪ ***Chiller capacity** – avoid overloading chilling rooms, freezer rooms or chilled storage rooms beyond their designed capacity. Hang meat or place in corrosion-resistant, easily cleanable trays. Avoid condensation (see A7) and prevent drips from one piece of meat*

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	contaminating another. ▪ ***Relative humidity*** *– surface growth of mould on meat is controlled by temperature and the relative humidity of the atmosphere, both of which must be as low as possible.* ▪ ***Carcase temperature*** *– the higher the temperature the more heat needs to be removed, so initial 'pre-chilling' is recommended.* ▪ ***Carcase size and composition*** *(proportion of meat, external fat and bone, which have different thermophysical properties).* ***Cold shortening*** *- occurs when muscles contract in temperatures of about 10°C as a result of cooling too quickly before rigor has taken place. It can be avoided by delaying the start of chilling until the pH is below 6.2 or by electrical stimulation to bring forward the onset of rigor.* ***Immersion Chilling of Poultry*** *– see Chapter 10 (Dressing of Carcases) Section D9.* ***Vacuum Packing*** *- meat can be packed in gas-permeable plastic laminate bags at 2-4°C and a pH of 5.5-5.8 and stored at between -18°C and 1°C. Residual oxygen is used and carbon dioxide accumulates. Without air and water bacterial growth is significantly reduced. The meat regains its red colour on re-exposure to air.*
	Maintaining the Cold Chain
• **The cold chain is not to be interrupted. However, limited periods outside temperature control are permitted, to accommodate the practicalities of handling during preparation, transport, storage, display and service of food, provided that it**	*Once carcases, cut or processed meat is chilled down to the legal temperatures or below, maintain those temperatures during storage and transport to minimise the opportunity for the growth of spoilage and food poisoning organisms - see PART ONE Chapter 6 (Hazards).* ***Interruptions to the cold chain -*** *keep interruptions to the cold chain to a minimum. Lengthy periods outside temperature control are not covered by the exemption for*

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does not result in a risk to health. ***B3***	*'limited periods, to accommodate the practicalities of handling' (see B2).* ***Dispatch** - keep interruptions to the cold chain to a minimum by, for example, having refrigerated dispatch areas, or by avoiding the accumulation of meat in ambient temperature dispatch areas and arranging rapid loading. Transfer meat to vehicles hygienically.* ***Transport** - transport vehicles should be used to maintain the cold chain not to reduce the temperature of the meat to the required level. Keep interruptions to the cold chain to a minimum by, for example, opening vehicle doors as little as possible to help maintain the correct temperature, especially during hot weather. Transfer meat to chilled storage immediately on arrival. See also A10 above.* ***Cutting/processing** – maintain meat at or below the required temperatures during cutting, boning, trimming, slicing, dicing, processing, wrapping and packaging – see Chapter 11. Meat can be kept at or below the required temperatures by maintaining a low ambient temperature in the cutting room or by using other methods.* *Keep interruptions to the cold chain to a minimum by, for example, keeping meat packed and in chilled storage until it is to be worked on in the cutting room. Once it is cut, transfer meat promptly to refrigerated storage. Particular care is needed where the rate of accumulation of can compromise temperature control, e.g. where trim is gathered from the processing of larger cuts but it may take several hours for containers to be filled and moved to chilled storage.* ***Temperature checks** – check at intervals that the meat is cooling and then stays at or below the required temperatures during storage and before (and if the journey is long) during transport. It may be sufficient to check the air temperature during transport. see A5 above.*

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	Temperature records *– keep a written note of the temperatures found when checking, unless there is an automatic recording system (e.g. vehicle thermograph charts).*

B4. Meat intended for freezing must be frozen without undue delay, taking into account where necessary a stabilisation period before freezing. *853/2004 Annex III Section I* ***Storage and Transport:*** *Chapter VII point 4*	
	Freezing of meat
• **Meat intended for freezing must be frozen without undue delay, taking into account where necessary a stabilisation period before freezing.** ***B4***	*Allow meat to cool before it is placed in a freezer to minimise condensation and temperature fluctuations in the freezer.* *The freezing point of meat lies between -1 and -1.5°C. Microbiological organisms stop growing at -8°C as available water forms ice crystals, but they are not destroyed. At -10°C 94% of the muscle water is ice. Spores are generally resistant to freezing. Maintain a constant storage temperature in the freezer as far as possible to minimise ice recrystallisation.* *Previous legislation set a freezing temperature of -12°C for fresh meat, but there is no longer a specific temperature requirement (but see Quick-freezing below and Chapter 12 for specific requirements for mince, meat preparations, MSM and meat products).* ***Frozen Storage*** *- the determination of the storage period for frozen meat is largely a quality issue. Set limits and tolerances for the frozen storage. Frozen meat stored for too long can become dry and rancid. Species, storage temperature, fluctuation in temperature and type of wrapping/packaging will affect frozen storage life. Meat stored at -18°C or lower will keep longer than for meat stored at -12°C.* ***Quick-Freezing*** *- food that is specifically labelled or*

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	described as 'quick-frozen' is to be kept at or below -18°C. (see www.opsi.gov.uk/si/si1990/Uksi_19902615_en_1.htm and www.food.gov.uk/Consultations/consulteng/2006/gffengland2006)

B5. The thawing of foodstuffs is to be undertaken in such a way as to minimise the risk of growth of pathogenic micro-organisms or the formation of toxins in the foods. During thawing, foods are to be subjected to temperatures that would not result in a risk to health.
Where run-off liquid from the thawing process may present a risk to health it is to be adequately drained. Following thawing, food is to be handled in such a manner as to minimise the risk of growth of pathogenic micro-organisms or the formation of toxins.

852/2004 Annex II ***Foodstuffs:*** *Chapter IX point 7*

	Thawing
• **Make sure that:** ▪ **thawing is undertaken in a way that minimises the risk of growth of bacteria or the formation of toxins.** ▪ **during thawing, foods are subjected to temperatures that would not result in a risk to health.** ▪ **following thawing, food is handled in such a manner as to minimise the risk of growth bacteria or the formation of toxins.** ▪ **where run-off liquid from the thawing process may present a risk to health it is adequately drained.** ***B5***	*Microbiological organisms stop growing at - 8°C as available water turns to ice, but they are not destroyed. Thawing of meat releases some liquid or 'drip' and provides the conditions for bacterial growth. Take care when opening and removing any packaging that contains such liquid to prevent it leaking on to other meat, packaging or surfaces.* *The most damaging effect on meat products is due to ice re-crystallisation as a result of temperature fluctuation, so thawing should take place under controlled conditions.* *Establish time/temperature limits and conditions for thawing meat. Do not allow the legal maximum temperatures for meat to be exceeded. Check, at the frequency set out in the company's HACCP plan, that the established limits and procedures are being adhered to and are effective.* ***Re-freezing** – products with a high bacterial load should not be refrozen after thawing in an attempt to improve food safety. (See Chapter 12 for specific requirements for mince, meat preparations, MSM and meat product).*

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C. HEAT TREATMENT: HERMETICALLY SEALED CONTAINERS

The following requirements apply only to food placed on the market in hermetically sealed containers:

C1. Any heat treatment process used to process an unprocessed product or to process further a processed product is: (a) to raise every part of the product treated to a given temperature for a given period of time; and (b) to prevent the product from becoming contaminated during the process;

C2. To ensure that the process employed achieves the desired objectives, food business operators are to check regularly the main relevant parameters (particularly temperature, pressure, sealing and microbiology), including by the use of automatic devices;

C3. The process used should conform to an internationally recognised standard (for example, pasteurisation, ultra high temperature or sterilisation).

852/2004 Annex II ***Heat Treatment:*** *Chapter XI points 1-3*

	Heat Treatment: Hermetically Sealed Containers
• **Make sure that for food sold in hermetically sealed containers:** ▪ **any heat treatment process used to process an unprocessed product or to process further a processed product (a) raises every part of the product treated to a given temperature for a given period of time; and (b) prevents the product from becoming contaminated during the process;** ▪ **the process conforms to an internationally recognised standard (for example, pasteurisation, ultra high temperature or sterilisation).**	*Canning of food in a permanently sealed container and subject to heat for a specific period of time and cooled will destroy nearly all organisms and the seals will prevent re-infection.* *Heat treatment should not be undertaken without careful consideration of:* ▪ *the main factors affecting growth and destruction of micro-organisms and inactivation of enzymes;* ▪ *variables affecting heat penetration, such as viscosity, solid/liquid ratio, and meat type and composition;* ▪ *individual product formulation and preparation procedure.* ***Standards*** *– internationally recognised standards have for example been developed by Codex Alimentarius, www.codexalimentarius.net/search* *Guidance is available from, for example:* ▪ *Campden & Chorleywood Food Research Association (CCFRA)* *Chipping Campden, Gloucestershire GL55 6LD* *Tel: 01386 842000 Fax: 01386 842100* *(www.campden.co.uk)*

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C1, C3	▪ *Leatherhead Food International* *Randalls Road, Leatherhead, Surrey KT22 7RY* *Tel: 01372 376761 Fax:01372 386228* *Emails: help@leatherheadfood.com* *(www.lfra.co.uk)* *CCFRA Technical Manual No. 6 (1984) on the heat processing of uncured canned meat products is a guide to the selection and maintenance of the correct conditions for the heat processing of canned meat products to assure safety and to prevent spoilage.*
	Process Parameters
• **Confirm that the process achieves the desired objectives, by checking regularly the main parameters (particularly temperature, pressure, sealing and microbiology), including the use of automatic devices.** C2	*Precise heat processing conditions may need to be determined experimentally (validated) for each product before being described in the HACCP plan. Key criteria for must be monitored regularly either visually or, where appropriate, by automatic equipment fitted with alarms.* *Set out in the HACCP plan, the procedures for controlling heat treatment, the limits that are to be monitored, the checks to be carried out, the corrective actions to be taken to ensure the safety of the meat and the records to be kept of those checks and actions.*

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8.3.2 WHAT ARE THE OFFICIAL CONTROL REQUIREMENTS?

Audits by officials of good hygiene practices shall verify that meat plant operators apply temperature controls continuously and properly.

854/2004 Article 4 point 4h

Audits by officials of HACCP-based procedures shall verify that food business operators apply such procedures continuously and properly.

854/2004 Article 4 point 5

8.3.3 APPLYING PROCEDURES CONTINUOUSLY AND PROPERLY

The operator is responsible for food safety in the food business.

853/2004 Article 1 point 1a

Food business operators shall put in place, implement and maintain a permanent procedure or procedures based on the HACCP principles.

852/2004 Article 5 point 1

Food…..business operators at all stages of production, processing, and distribution within the businesses under their control shall ensure that foods [ ] satisfy the requirements of food law which are relevant to their activities and shall verify that such requirements are met.

178/2002 Article 17

	Operator Responsibilities for Temperature Control
• **Operator responsibility includes applying and verifying the company's temperature control procedures and taking corrective action if those procedures fail.** • **Implement and maintain a permanent procedure or procedures based on the HACCP principles.**	***Operator Responsibility*** *- includes maintaining and monitoring temperature control procedures and taking corrective action if there is a failure.* ***These procedures should be based on HACCP principles*** *– see Section B1 above and PART THREE Chapter 1 (Application of HACCP Principles).* ***Delegation*** *- responsibility for applying and verifying the company's temperature control procedures may be delegated to a nominated person to whom problems are reported, and who has sufficient authority to ensure that corrective action is taken when necessary.* ***Verification*** *- check at least daily that staff are following the company's temperature control procedures (including heat*

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	treatment if appropriate). Work of new or temporary people who are less familiar with the procedures and premises may need to be monitored more frequently. ***Records** - keep an accurate, dated account (e.g. in a Food Safety Management diary/daybook) of each periodic check and of any corrective action taken.* ***Corrective action** - Take action when failures of the company's temperature control procedures are identified. Such action may include:* ▪ *Dealing with any product that has been outside the cold chain;* ▪ *Dealing with equipment failures;* ▪ *Establishing the underlying cause and what needs to be done to prevent similar incidents in the future;* ▪ *Improving staff instructions and training.*

Weekly Temperature Log:

Week commencing..... Doc Number .....

(Insert location/operations at which temperatures are to be taken e.g. room/sterilizer/chiller/product at intake/stages of production/ storage/dispatch – two or more forms may be needed)

	Time									Signed
MONDAY										
TUESDAY										
WEDNESDAY										
THURSDAY										
FRIDAY										
SATURDAY										
SUNDAY										

Meat temperatures should be 4-7ºC or below
Mince temperatures during processing should be 4-5ºC or below
Mince temperature at despatch should be 2ºC or below
Sausage temperature at despatch should be 4ºC or below
Sterilizer temperatures should be 82ºC or above
Cutting room air temperature should be _____ºC or below
Fridge temperatures should be _____ºC or below

If temperatures are elevated, take the following action :.....

PART TWO

9. ACCEPTANCE & SLAUGHTER OF ANIMALS

9.1 WHY ARE REQUIREMENTS FOR LIVE ANIMALS IMPORTANT?

Hygiene

Healthy animals produce safer food. Animals should be clean and free from clinical symptoms of disease. However, even healthy animals may not be free from microbiological, chemical and physical hazards. Bacteria (e.g. *E.coli* O157, *Salmonella*, *Campylobacter*, *Yersinia and Listeria*) are present in the guts of animals and on animal skins, hides, fleeces, fur and feathers. Bacteria may be transferred between animals during transport and in the lairage. Vehicles, crates and pens also need to be clean and as far as possible, free from microbiological as well as other hazards. Such hazards could cause illness or injury to consumers and so must be prevented or minimised.

For example:

- Healthy animals entering the slaughterhouse may carry bacteria that can contaminate meat during dressing and cause food poisoning. Fresh meat is at risk from microbiological contamination with food poisoning bacteria through contact with skin or gut contents during dressing. Poor working practices will increase the risk.
- Veterinary medicine and other chemical residues (e.g. heavy metals) can cause illness.
- Objects such as needles or tags can cause harm to food handlers and consumers. Small items can be swallowed, larger items can cause physical injury.
- Inadequate training of staff responsible for transport, handling and slaughter of animals increases the risk of contamination of meat due to poor working practices.

Animal welfare

Animal welfare at slaughter/killing is also important. Throughout the production process from farm to the point of death, we have an obligation to treat animals in ways that do not cause them avoidable suffering, excitement or distress, and to provide environments that, as far as possible, enable the animals to behave in a natural way.

Slaughterhouses present busy, noisy and unfamiliar environments to animals. Calm and efficient handling, taking into account the animals' natural behaviour, reduces stress for animals and handlers and improves safety for slaughterhouse operatives. Short and long term stress have been proved to have an adverse affect on meat quality.

Procedures used to slaughter or kill animals must be practised in a way that minimises any pain or distress. Stunning before slaughter, when carried out correctly, is a painless procedure that renders an animal insensible to pain and distress, and enables the slaughtering process to proceed to the point of death whilst the animal is still unconscious.

9.2 GENERAL INFORMATION

- **Note on species**

  - **Domestic ungulates** - cattle, sheep, goats, pigs, bison, water buffalo and *solipeds* (horses, asses and mules)
  - **Poultry** – farmed birds, (e.g. chickens, turkeys, ducks, geese, guinea fowl, quail) but excluding *ratites* (flightless birds e.g. ostriches, rheas, emus)
  - **Farmed Game** - farmed deer *(cervidae),* farmed wild boar *(suidae)* and flightless birds *(ratites)*
  - **Wild game (large)** - wild deer *(cervidae)* and feral wild boar *(suidae)*
  - **Wild game (small)** - game birds (e.g. pheasants, partridges, pigeons, grouse) and *lagomorphs* (rabbits, hares and rodents).

- **Application of requirements to farmed game**

  Mammals - the provisions of 853/2004 Annex III Section I [meat of domestic ungulates] apply to the production and placing on the market of meat from even-toed farmed game mammals (Cervidae and Suidae) unless the competent authority considers them inappropriate.

  Ratites - the provisions of 853/2004 Annex III Section II [meat from poultry and lagomorphs] apply to the production and placing on the market of meat from ratites. However, those of Section I apply where the competent authority considers them appropriate. Appropriate facilities must be provided, adapted to the size of the animals.

  853/2004 Annex III Section III: Farmed Game: points 1 and 2

- **Approval of meat plants -** see PART ONE Chapter 7

- **Food chain information (FCI)**

  The requirement for providing food chain information is being extended from poultry to other animals as a development of the farm-to-fork approach. The information is intended to assist the slaughterhouse operator to organise slaughter operations and the official veterinarian to determine the required inspection procedures -see Section D. However, it is recognised that time is required to introduce new arrangements and so a phased approach has been agreed:

  - **Timetable:** Regulation 2076/2005 sets a timetable for statutory implementation of FCI, i.e.
    From 1.1.06 - Poultry
    From 1.1.08 - Pigs
    From 1.1.09 - Horses and veal calves
    From 1.1.10 - Other animals, such as cattle and sheep

  Note however that FCI is required for all animals that are injured or show signs of abnormality – see B2e below.

- **Approved Veterinarian (AV)**

  Ante-mortem inspection of pigs, poultry and rabbits that will be slaughtered in slaughterhouses, or game and poultry that are slaughtered on farm and dressed in slaughterhouses, may take place at the holding of provenance. It may be carried out by an Official Veterinarian designated by the Meat Hygiene Service (GB) or DARD (Northern Ireland), or by an Approved Veterinarian, designated by the Food Standards Agency under Regulation 854/2004 to carry out specific official controls on holdings on its behalf. The inspection tasks for each species comprise:

  - checking records, including food chain information
  - examining the animals
  - issuing the health certificate.

  For information on designation of Approved Veterinarians or a list of designated AVs, contact FSA on 020 7276 8377.

- **Animal Health Legislation**

  This Regulation [853/2004] shall apply without prejudice to relevant animal health requirements.

  853/2004 Article 1 point 6a

  With exceptions, this Guide does **not** include the requirements of animal health legislation. The legislation is the responsibility of Defra (http://defraweb.defra.gsi.gov.uk) and equivalent bodies in Scotland (www.scotland.gov.uk/Topics/Agriculture/animal-welfare); Wales (http://new.wales.gov.uk/topics/environmentcountryside/ahw/?lang=en) and Northern Ireland (www.dardni.gov.uk/index/animal-health.htm).

9.3.1 WHAT ARE THE LEGAL REQUIREMENTS FOR ACCEPTANCE & SLAUGHTER OF ANIMALS?

The following sections set out the requirements of the regulations that apply to the acceptance and slaughter of animals.

- **Animal Welfare Requirements**

> **This Regulation [853/2004] shall apply without prejudice to animal welfare requirements.**
> *853/2004 Article 1 point 6b*

  - **WASK**

    Welfare at slaughter, including the reception, unloading and handling of animals is regulated in GB by The Welfare of Animals (Slaughter or Killing) Regulation 1995 (SI 1995/731) *as amended* (WASK) (www.opsi.gov.uk/si/si1995/Uksi_19950731_en_1.htm#tcon) and in Northern Ireland by The Welfare of Animals (Slaughter or Killing) Regulation (NI) 1996 (SI 1996/558) *as amended (*www.opsi.gov.uk/sr/sr1996/Nisr_19960558_en_1.htm). WASK implements EU Directive 93/119/EC on the protection of animals at the time of slaughter or killing.

    The WASK regulations define **slaughter** as causing the death of an animal by bleeding, and **killing** as causing death by any means other than slaughter. They contain the general requirements that:
    'no person shall engage in the movement, lairaging, restraint, stunning, slaughter or killing of any animal unless he has the knowledge and skill necessary to perform those tasks humanely and efficiently.' and, in carrying out these operations*: 'no person shall cause any avoidable excitement, pain or suffering to any animal.'*

    Schedules to the Regulations cover:

    1. The licensing procedure for slaughtermen (see A4 below).
    2. The construction, equipment and maintenance of all slaughterhouses and knackers' yards and additional requirements for unloading and moving animals (requirements for animals delivered in containers see Sch. 3) horses; lairages and shackle lines for birds.
    3. Animals awaiting slaughter or killing and additional requirements for: inspecting animals; slaughtering or killing animals which have experienced pain or suffering and unweaned animals; emergency slaughtering or killing; as well as the general treatment of animals; lairage animals; handling, slaughtering or killing animals delivered in containers; and birds awaiting slaughter or killing at the place of purchase.

4. Restraining of animals before they are stunned, slaughtered or killed.
5. Permitted methods of stunning or killing animals and any specific requirements for those methods.
6. Requirements for bleeding or pithing animals.
7. Requirements and the gas mixtures permitted to kill pigs, domestic fowls or turkeys.
8. Additional requirements for the slaughtering or killing of horses.
9. Requirements & permitted methods of slaughtering or killing for disease control.
10. Requirements & permitted methods of killing mink and fox.
11. Requirements & permitted methods for killing surplus chicks & embryos in hatchery waste.
12. Additional requirements for slaughtering by the Jewish or Muslim methods.

For more information see: www.defra.gov.uk/animalh/welfare/farmed/slaughter.htm
For an explanatory guide to the Welfare of Animals (Slaughter or Killing) Regulations 1995 see: www.defra.gov.uk/animalh/welfare/farmed/slaughter/pb2594/guidetoc.htm

- **Religious Slaughter**

  Religious slaughter must be carried out only in approved red meat slaughterhouses or, in the case of poultry, in approved or other officially regulated slaughterhouses, by a Jewish or Muslim licensed slaughterman, using methods that meet Jewish and Muslim religious requirements. **Contact:** Defra helpline on 08459 33 55 77.
  See WASK Schedule 12 (www.opsi.gov.uk/si/si1995/Uksi_19950731_en_19.htm).

- **The Humane Slaughter Association** (www.hsa.org.uk) publishes:

  Guidance on humane slaughter, including:
  - Welfare of Sheep and Goats in Abattoirs
  - Welfare of Cattle in Abattoirs
  - Welfare of Pigs in Abattoirs
  - Welfare of Broilers and Hens in Processing Plants
  - Welfare of Turkeys in Processing Plants

  & Training Packages on:
  - Emergency Slaughter - *practical guidance on the humane killing of injured, diseased and non-viable livestock.*
  - Poultry Slaughter – Taking Responsibility - *training package for all involved with the catching, transport and slaughter of poultry (includes DVD and booklet)*.

  Contact: The Humane Slaughter Association, The Old School, Brewhouse Hill, Wheathampstead, Herts AL4 8AN Tel: 01582 831919. Fax: 01582 831414.

- **Animal Identification Requirements**

> **This Regulation [853/2004] shall apply without prejudice to requirements concerning the identification of animals … .**
>
> *853/2004 Article 1 point 6c*

The Identification of animals is regulated by species specific legislation - see Section C and Annex A to this Chapter.

- **Livestock Holding Registration**
  When a holding is registered, Defra/DARD issues a unique herdmark for cattle, pigs, deer and goats or a flock mark for sheep. For further information see: http://defraweb.defra.gsi.gov.uk/animalh/tracing/index.htm or for Northern Ireland: www.dardni.gov.uk/index/animal-health/animal-identification-registration-movements.htm
- **Definition of 'Keeper'**
  The keeper is the person responsible for the animals whether on a permanent or temporary basis. It includes slaughterhouse operators, market operators and, in some cases, transporters. For more information see Section C.

- **Hygiene Requirements**

> ***Red Meat Slaughterhouses - see Chapter 1 (Design and Facilities)***
>
> - *Requirements for Slaughterhouses – Section D*
> - *Red Meat Lairages – Sections E1, E2*
> - *Facilities for sick or suspect animals – Section E3*
> - *Manure – Section E4*
> - *Facilities for Cleaning Livestock Vehicles – Section E5*

> ***White Meat Slaughterhouses – see Chapter 1 (Design and Facilities)***
>
> - *Requirements for Slaughterhouses – Section D*
> - *White Meat Animal Reception Areas – Section F1*
> - *Facilities for Cleaning Poultry Transport Vehicles – Sections F2/E5*
> - *Facilities for Cleaning Poultry Crates – Section F2 & Chapter 4 (Cleaning)Section C*

> ***On Farm Slaughterhouses handling farmed game mammals & poultry***
>
> - *Chapter 1 (Design and Facilities) Section G*

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Hygiene Prerequisites for all establishments

- *Chapter 2 (Water Supply)*
- *Chapter 3 (Maintenance)*
- *Chapter 4 (Cleaning)*
- *Chapter 5 (Pest Control)*
- *Chapter 6 (Training)*
- *Chapter 7 (Personal Hygiene)*

A. TRANSPORT & HANDLING OF LIVE ANIMALS TO SLAUGHTERHOUSE

A1. During collection and transport [to slaughterhouses], animals must be handled carefully without causing unnecessary distress.

853/2004 Annex III ***Slaughterhouses:*** *Section I Chapter I point 1 & Section II Chapter I point 1*

A2. Crates for delivering [poultry & lagomorphs] to the slaughterhouse and modules, where used, must be made of non-corrodible material and be easy to clean and disinfect. Immediately after emptying and, if necessary, before re-use, all equipment used for collecting and delivering live animals, must be cleaned, washed and disinfected.

853/2004 Annex III ***Slaughterhouses****: Section II Chapter I point 3*

A3. Animals showing symptoms of disease or originating in herds/flocks known to be contaminated with agents of public health importance may only be transported to the slaughterhouse when the competent authority so permits.

853/2004 Annex III ***Slaughterhouses:*** *Section I Chapter I point 2 & Section II Chapter I point 2*

	Transport of Live Animals
• **Handle live animals carefully during transport.** ***A1*** • **No animal shall be transported unless it is fit for the intended journey, and all animals shall be transported in conditions guaranteed not to cause them injury or unnecessary suffering.**	***Welfare*** *– farmed animal transport is currently regulated in GB by The Welfare of Animals (Transport) Order 1997 (SI 1997/1480) (WATO '97) www.opsi.gov.uk/si/si1997/19971480.htm and in Northern Ireland by The Welfare of Animals (Transport) (NI) Order 1997 (SI 1997/346) as amended www.opsi.gov.uk/sr/sr1997/Nisr_19970346_en_1.htm.* *Clean healthy livestock should not become injured or stressed during transport and the opportunity for animals to become contaminated should be minimised. Stressed and dirty animals present a food safety risk.*

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Welfare during Transport EC 1/2005 Chapter I point 1	*Chapter 1 of Annex 1 (Technical Rules) to Regulation (EC) 1/2005 on the welfare of animals during transport comes into force on 5 January 2007. This provides some specific circumstances when animals are not fit for transport and provides guidance for other circumstances – see Fitness Requirement below.* *The regulations, which will be implemented by a new Welfare of Animals at Transport Order, makes significant changes to the welfare provisions to protect animals during transport. Readers are advised to consult the relevant Defra website.* ***Information** - leaflets on transporting farm animals, horses, poultry, and other species will be available from Defra at http://www.defra.gov.uk/animalh/welfare/farmed/transport/eu-transportreg.htm (subject to change)* ***Responsibility** - in all cases, the final decision on whether to transport an animal rests with the driver of the vehicle or the keeper of the animal who will accompany the animal during the journey. Where the fitness of an animal is in doubt, the transporter should seek advice and opinions from suitably experienced people or veterinarians.* ***Transport of animals & birds - Fitness Requirements*** ▪ *All animals/birds should be fit for the intended journey* ▪ *Animals/birds should not be transported if they are ill or injured* ▪ *Slightly ill or slightly injured animals/birds can be transported, but only if the transport causes them no additional suffering or pain* ▪ *Young animals can only be transported in specific circumstances* ▪ *Transporters should take all reasonable measures to protect the welfare of animals/birds they are transporting* ▪ *The assessment of fitness should be performed by someone competent to assess the health of the animals – if in doubt consult a vet*

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	▪ *The vehicle or animal compartments or poultry crates should be in a good state of repair and not cause the animals/birds any harm* ▪ *Animals/birds that fall sick or injured during a journey should receive appropriate first aid or other veterinary treatment, or undergo emergency slaughter* ▪ *Drivers should have contingency plans in place to deal with unexpected problems encountered during journeys.*
	Poultry Crates
• **Use clean and disinfected crates (and modules if used) made of a suitable corrosion-resistant material and designed to allow easy cleaning and disinfection.** ***A2***	*Transporters should check that crates are clean and in good condition, with no broken struts or sharp projections that might cause injury to birds. They should also not include crevices or inaccessible corners that make cleaning difficult, see Chapter 1 (Design & Facilities) Section C (Equipment).* ***Crate Washing** - WATO legislation (see above) has provisions relating to the construction and maintenance of containers (including poultry modules) and vehicles in which animals are transported. WATO allows for cleaning as soon as reasonably practicable and not more than 24 hours after the journey is completed. However the hygiene legislation requires cleaning immediately after emptying and if necessary, before re-use - see Chapter 1 (Design & Facilities F2 and Chapter 4 (Cleaning) Section C.* ***Welfare** - birds are particularly prone to developing hypothermia (cold stress) or hyperthermia (heat stress), as they have reduced ability to control their body temperature during transport. Increases of only a few degrees centigrade in body temperature can prove fatal. Temperature, ventilation and stocking density are therefore crucial in transporting poultry safely. Birds should able to stand or crouch in normal position without experiencing discomfort.*
	Unloading & Care of Animals & Birds
• **Move every animal with care and, when necessary, lead**	*Welfare at slaughter, including the reception, unloading and handling of animals is regulated in GB by WASK legislation -*

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animals individually ***WASK Schedule 3 para. 9***	*see Animal Welfare at 9.3.1 above and relevant Slaughter Sections below*

A4. No person shall engage in the movement, lairaging, restraint, stunning, slaughter or killing of any animal unless he has the knowledge and skill necessary to perform those tasks humanely and efficiently. **A5. Schedule 1 shall have effect in relation to the licensing of slaughtermen.** *WASK 1995/731 Regulation 4(2) & (3)*	
	Handling of Animals
• **No person shall engage in the movement, lairaging, restraint, stunning, slaughter or killing of any animal unless he has the knowledge and skill necessary to perform those tasks humanely and efficiently.** ***A4*** • **Slaughtermen must be licensed.** ***A5***	***Animal Welfare Officer*** *(AWO) - nominate an AWO, with the appropriate knowledge and skill, to be responsible for safeguarding animal welfare in the slaughterhouse (including lairage) and with the authority to take immediate action, including stopping production, if necessary.* ***Licensing of Slaughtermen*** *– the WASK Regulations require anyone carrying out the following operations to have a provisional or a registered licence (See 9.3.1 Schedule 1):* ▪ *The restraint of an animal for the purposes of stunning, slaughtering or killing* ▪ *The stunning, slaughter or killing of animals* ▪ *The pithing of stunned animals* ▪ *The assessment of effective stunning, pithing or killing* ▪ *The shackling or hoisting of stunned animals* ▪ *The bleeding of animals which are not dead.* ***A Guidance Note*** *on the Licensing and Training of Slaughtermen can be found at: www.defra.gov.uk/animalh/welfare/farmed/slaughter/guidance.htm.* *See also the MHS Manual of Official Control at www.food.gov.uk/foodindustry/meat/mhservice/mhsmanual2006/ (pages 3-2 to 3-7); or the DARD/VPHU Manual of Official Controls at www.dardni.gov.uk/index/publications/pubs-dard-fisheries-farming-and-food/pubs-ffsq-vphu-moc-chapter02-03-welfare-at-slaughter.htm (page 5).* *Keep accurate individual training records to show what instruction/training has been given. See Chapter 6 (Training).*

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A6. Animals presented to a slaughterhouse for slaughter must as a general rule be slaughtered there. However in exceptional circumstances. such as a serious breakdown of the slaughter facilities, the OV may allow direct movements to another slaughterhouse.

854/2004 Annex I Section II Chapter III point 8

	Movement from slaughterhouses
• **Offloaded animals are, as a general rule, not to be moved from the slaughterhouse.** ***A6, Disease Control Orders***	*Animals presented to a slaughterhouse for slaughter must, as a general rule, be slaughtered there.* *In exceptional circumstances, such as a serious breakdown of the slaughter facilities, animals may be allowed to move to another slaughterhouse for slaughter under a Disease Control Order licence. Animals should not normally return to farm because of biosecurity considerations.* ***In England** - the Disease Control (England) Order 2003 does not allow anyone to receive any animal from a slaughterhouse unless under licence issued by an SVS veterinary inspector.* ***In Wales** - similar arrangements apply under the Disease Control (Wales) Order 2003.* ***In Scotland** - an animal could be returned to the farm of origin but the appropriate standstill periods under the Disease Control (Interim Measures) (Scotland) Order 2002, as amended would apply. These are 13 days in the case of cattle, goats and sheep and 20 days for pigs.* ***In Northern Ireland** - facilities are provided at slaughterhouses for dirty cattle to be clipped so such animals are not returned to farm. If an animal returned under licence to the farm for other reasons, this would trigger a six day whole farm standstill, if on-farm isolation facilities are not used, under the Disease Control (Standstill) (Order) (Northern Ireland) 2004.* ***TSE controls** - specific arrangements apply refer to PART*

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	THREE Chapter 4 (TSE Testing). ***Part loads** – hauliers may wish to deliver part-loads of animals to several slaughterhouses. In these instances, it may be necessary for them to unload then reload some animals for onward transport, in order to allow stock intended for slaughter at particular premises to be taken off the vehicle. The animals to be reloaded must not be mixed with animals already held in the lairage and all relevant animal health and welfare legislative requirements must be observed.*

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B. ACCEPTANCE OF LIVE ANIMALS – CLEANLINESS, HEALTH & WELFARE

B1. Food business operators operating slaughterhouses must ensure that the procedures that they have put in place in accordance with … Article 5 of Regulation 852/2004 meet the requirements that the hazard analysis shows to be necessary and the specific requirements listed in point 2.

B2. The procedures must guarantee that each animal or, where appropriate, each lot of animals accepted onto the slaughterhouse premises

(a) is properly identified;

(b) is accompanied by the relevant information from the holding of provenance …;

(c) does not come from a holding or an area subject to a movement prohibition or other restriction for reasons of animal or public health, except when the competent authority so permits;

(d) is clean;

(e) is healthy, as far as the food business operator can judge; and

(f) is in a satisfactory state as regards welfare on arrival at the slaughterhouse.

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	HACCP-based procedures
• **HACCP-based procedures cover the requirements for acceptance of animals for slaughter for human consumption.** ***B1, B2***	*Acceptance of animals is the first step in the production process and procedures to control the hazards introduced with incoming livestock need to be developed using HACCP principles -see PART THREE Chapter 1 (Application of HACCP Principles).* *These procedures rely to a great extent on receiving and acting on information provided for identified individuals or groups of animals. It is therefore essential to advise producers or third parties supplying livestock for slaughter of your requirements.* *(a)* ***Animal identification*** *- see Section C below* *(b)* ***Food Chain Information*** *– see Section D below* *(c)* ***Restricted area*** *- see Section B2c below* *(d)* ***Cleanliness*** *- see Section B2d below* *(e)* ***Health*** *– see Section B2e below* *(f)* ***Welfare*** *– see Section B2e below*

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CLEANLINESS

B2d. The procedures must guarantee that each animal or, where appropriate, each lot of animals accepted onto the slaughterhouse premises (d) is clean;

B3. In the event of failure to comply with any of the requirements listed under point 2, the food business operator must notify the OV and take appropriate measures.

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B4. Animals must be clean.

853/2004 Annex III Section I ***Slaughter Hygiene:*** *Chapter IV point 4*

	Cleanliness of Animals
• **Check that animals accepted for slaughter are clean.** ***B2d, B4*** • **Take appropriate measures and notify the official veterinarian if the requirements are not complied with.** ***B3***	*Check the hide or skin condition of livestock presented for slaughter and take the necessary steps to avoid contamination of the meat during slaughter. Finished carcases must be free from visible faecal contamination and meet the microbiological criteria in EU regulations. See Chapter 10 (Dressing of Carcases) and PART THREE Chapter 2 (Microbiological Criteria).* ***Note****: Food Business operators rearing… animals… are to take adequate measures, as far as possible to ensure the cleanliness of animals going to slaughter.* ***Regulation 852/2004 Annex I, Primary Production 4(c).*** *The objective may be achieved by:* ▪ *the effective cleaning of animals being sent for slaughter, which may include clipping ante-mortem as a last resort* - *as livestock producers have an ongoing legal obligation to deliver clean animals for slaughter, FBOs may wish to draw their attention to the categories described in the following booklets: 'Clean Beef Cattle for Slaughter – a guide for producers' and 'Red Meat Safety & Clean Livestock' that can be obtained from Food Standards Agency Publications, Tel: 0845 606 0667, e-mail: foodstandards@eclogistics.co.uk .* ▪ *the sorting of animals by cleanliness at the slaughterhouse.* - *guidance on cleanliness and use of 'Clean Livestock'*

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	categories for animals presented for slaughter is available at www.food.gov.uk/foodindustry/farmingfood/cleancattleandmeatsafety/. ▪ *The use of hygienic dressing procedures that protect carcases from unnecessary contamination, which may include reducing line speed, clipping post-mortem;* ▪ *Other appropriate procedures.* *The operator must demonstrate to the satisfaction of the OV that the procedures will ensure hygienic carcase dressing and are being carried out properly.* ***OV decisions** - note that the OV is required to verify the operator's compliance with the duty to ensure that animals that have such hide, skin or fleece conditions that there is an unacceptable risk of contamination of the meat during slaughter are not slaughtered for human consumption unless they are cleaned beforehand.* ***854/2004 Annex I Section II Chapter III point 3.*** *If the OV concludes at ante-mortem inspection that an animal is not clean enough for slaughter, that animal may either be cleaned at the slaughterhouse and re-presented, or may be removed to another place for cleaning, but only if the OV is satisfied that relevant disease control and animal welfare legislation is complied with (refer to A6).*

HEALTH & WELFARE **B2e. The procedures must guarantee that each animal or, where appropriate, each lot of animals accepted onto the slaughterhouse premises** **(e) is healthy, as far as the food business operator can judge; and** **(f) is in a satisfactory state as regards welfare on arrival at the slaughterhouse.** **B3. In the event of failure to comply with any of the requirements listed under point 2, the food business operator must notify the OV and take appropriate measures.** *853/2004 Annex II Section II* ***Objectives of HACCP Based Procedures:*** *Section II*	
	Health & Welfare
• **Check that accepted**	***Check livestock visually on arrival to see that animals***

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animals are healthy as far as the operator can judge and are in a satisfactory state as regards animal welfare. ***B2e*** • **Take appropriate measures and notify the official veterinarian if the requirements are not complied with.** ***B3***	***appear well treated, healthy and free of disease or conditions that could have an impact on welfare. Inform the OV if this is not the case.*** ***Note:*** *the operator is not expected to have the professional expertise necessary to establish that animals are 'healthy' but to screen for obviously unhealthy or injured animals.* *Animal welfare legislation (WATO) defines specific conditions which render the animal unfit to transport, such as being newborn, infirm, ill, injured or fatigued or having given birth within the previous 48 hours or likely to give birth during transport. The transport of sick animals could spread disease. For further information see Animal Welfare at 9.3.1 and Section A (Transport of Animals) above and relevant Slaughter sections below.* ***OV decisions*** *– note that the OV will declare meat unfit for human consumption if it derives from:* *(c) animals which are dead before slaughter, stillborn, unborn or slaughtered under the age of 7 days;* *(e) animals affected by certain diseases,* *(f) animals affected by a generalised disease, such as generalised septicaemia, pyaemia, toxaemia or viraemia;* *(q) emaciated animals; or* *(u) is in the opinion of the OV, not suitable for human consumption.* ***854/2004 Annex I Section II Chapter V*** ***Injured animals*** *- make sure that suppliers consigning animals that are injured or show signs of abnormality provide food chain information about such animals. Information may be provided as a printed document or electronically.* ***Model documents*** *- see examples at* ***Annex B1*** *(Cattle)* ***Annex B2*** *(Pigs) or* ***Annex B3*** *(Sheep).*

OPERATORS' OBLIGATIONS	*ADVICE*

C. ANIMAL IDENTIFICATION

C1. Food Business Operators (FBOs) must have systems and procedures in place to ensure that the traceability of food and food-producing animals can be established at all stages of production, processing and distribution.

178/2002 Article 18

C2. The animals or, where appropriate, each batch of animals sent for slaughter is identified so that their origin can be traced.

853/2004 Annex III Section I Chapter IV point 3

B2a. The procedures must guarantee that each animal or, where appropriate, each lot of animals accepted onto the slaughterhouse premises (a) is properly identified…

B3. In the event of failure to comply with any of the requirements listed under point 2, the FBO must notify the OV and take appropriate measures.

853/2004 Annex II Section II Objectives of HACCP Based Procedures

	Traceability
• **Establish procedures to identify and trace food producing animals to their place of origin.** ***C1, C2***	*Make sure you can identify the animals that have been sent for slaughter by each supplier and can make this information available to the competent authorities on demand.* ***Advise suppliers of the consequences of supplying unidentified stock.***
	Animal Identification
• **Establish procedures that guarantee that each animal or, where appropriate, each lot of animals accepted onto the slaughterhouse premises (a) is properly identified;** ***B2a*** • **Take appropriate measures and notify the OV if the requirements are not complied with.** ***B3***	*Check that animals are identified and that identification correlates with accompanying documents. Inform the OV if this is not the case.* *Livestock suppliers should be complying with national identification legislation for each species. If there is any doubt regarding the validity of tags, markings or passports, advice should be sought from the local Animal Health Divisional Office.* ***OV decisions** - note that the OV is required to verify that animals accepted for slaughter for human consumption are properly identified. Animals whose identify is 'not reasonably ascertainable' are to be killed separately and declared unfit for human consumption* ***854/2004 Annex I Section II Chapter III point 1/2***

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	For more information: see Annex A to this Chapter

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D. FOOD CHAIN INFORMATION

Food business operators operating slaughterhouses must, as appropriate, request, receive, check and act upon food chain information as set out in this Section in respect of all animals, other than wild game, sent or intended to be sent to the slaughterhouse.

D1. Slaughterhouse operators must not accept animals onto the … premises unless they have requested and been provided with relevant food safety information contained in the records kept at the holding of provenance in accordance with Regulation 852/2004.

853/2004 Annex II ***Food Chain Information:*** *Section III point 1*

B2b. The procedures must guarantee that each animal or, where appropriate, each lot of animals accepted onto the slaughterhouse premises (b) is accompanied by the relevant information from the holding of provenance …;

B3. In the event of failure to comply with any of the requirements listed under point 2, the food business operator must notify the OV and take appropriate measures.

853/2004 Annex II ***Objectives of HACCP Based Procedures****: Section II*

	Food Chain Information (FCI)
• **Check that accepted animals are provided with food chain information (FCI).** ***B2b, D1*** • **Take appropriate measures and notify the official veterinarian if the requirements are not complied with.** ***B3***	*Request, receive, check and act upon food chain information (FCI) in respect of animals supplied for slaughter for human consumption. Inform the OV if it has not been provided.* ***See the timetable for implementation of FCI at 9.2 General Information****. FCI is nevertheless required for all animals that are injured or show signs of abnormality – see B2e above.* ***Veterinary certificates*** *- where ante-mortem is carried out on farm, veterinary certificates may be signed by an Official Veterinarian or an Approved Veterinarian (see 9.2 General Information).*

B2c. The procedures must guarantee that each animal or, where appropriate, each lot of animals accepted onto the slaughterhouse premises (c) does not come from a holding or an area subject to a movement prohibition or other restriction for reasons of animal or public health, except when the competent authority so permits;

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C2. The relevant food safety [chain] information … is to cover, in particular:

(a) the status of the holding of provenance or the regional animal health status;

(b) the animals' health status;

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(c) veterinary medicinal products or other treatments administered to the animals within a relevant period and with a withdrawal period greater than zero, together with their dates of administration and withdrawal periods;

(d) the occurrence of diseases that may affect the safety of meat;

(e) the results, if they are relevant to the protection of public health, of any analysis carried out on samples taken from the animals or other samples taken to diagnose diseases that may affect the safety of meat, including samples taken in the framework of the monitoring and control of zoonoses and residues;

(f) relevant reports about previous ante – and post-mortem inspections of animals from the same holding of provenance including, in particular, reports from the official veterinarian;

(g) production data, when this might indicate the presence of disease; and

(h) the name and address of the private veterinarian normally attending the holding of provenance.

C3. (a) However, it is not necessary for the slaughterhouse operator to be provided with:

(i) the information referred to in point 3(a), (b), (f) and (h), if the operator is already aware of this information (e.g. through a standing arrangement or a quality assurance scheme); or

(ii) the information referred to in point 3(a), (b), (f) and (g), if the producer declares that there is no relevant information to report.

(b) The information need not be provided as a verbatim extract from the records of the holding of provenance. It may be provided through electronic data exchange or in the form of a standardised declaration signed by the producer.

853/2004 Annex II ***Food Chain Information:*** *Section III points 3 and 4*

	Contents of Food Chain Information
• **The FCI provided includes the following items:** #Ø **a. the animal health status of the holding of provenance/region;** #Ø **b. the animals' health status;** **c. veterinary treatments;** **d. occurrences of diseases that may affect the safety of meat;** **e. results of relevant analyses or samples;**	*Check food chain information to confirm that it appears complete and accurate. Inform the OV if this is not the case or if the information raises health concerns before ante-mortem inspection.* ***Format*** *- FCI may be provided as a printed document or electronically.* ***Model document*** *- see example at* ***Annex B4*** *setting out minimum FCI requirements for poultry.* ***Disease Restricted Areas*** *- information is necessary if animals have come from holdings under restriction orders e.g. for TB or Brucellosis. See model FCI document at* ***Annex B8****.*

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#∅ **f. relevant reports about previous ante- and post-mortem inspections;** ∅ **g. production data, when this might indicate the presence of disease; and** # **h. name and address of the private veterinarian normally attending the holding of provenance.** # ***Need not be supplied if the operator is already aware of this information (e.g. through a standing arrangement or a quality assurance scheme);*** ∅ ***Need not be supplied if the producer declares that there is no relevant information to report.*** ***D2, D3, B2c***	*The presence of the OV is required during post-mortem inspection for cattle from herds that have not been declared officially free of Tuberculosis or Brucellosis.* ***854/2004 Annex I Section III point 3*** ***Veterinary treatments*** *- the statutory withdrawal periods for any veterinary medicine administered must be observed. Medicines include any prolonged action product administered as a preventative measure, such as anthelmintics, including slow release, intra-ruminal devices. The authorisation of veterinary medicines is the responsibility of the Veterinary Medicines Directorate, see* www.vmd.gov.uk. ***Option*** *# - even if there is a standing arrangement or a quality assurance scheme, information concerning (c) veterinary treatments, (d) occurrence of disease, (e) results of laboratory checks and (g) production data is required.* ***Option*** *∅ - even if there is no relevant information to report in some areas, information concerning (c) veterinary medicines, (d) occurrence of disease, (e) results of laboratory checks and (h) details of the producer's vet is required.*

Food business operators operating slaughterhouses must, as appropriate, request, receive, check and act upon food chain information as set out in this Section in respect of all animals, other than wild game, sent or intended to be sent to the slaughterhouse.

D4. Food business operators deciding to accept animals onto the slaughterhouse premises after evaluating the relevant food chain information must make it available to the official veterinarian without delay and, except in the circumstances mentioned in point 7, no less than 24 hours before the arrival of the animal or lot. The food business operator must notify the OV of any information that gives rise to health concerns before ante-mortem inspection of the animal concerned.

D5. If any animal arrives at the slaughterhouse without food chain information, the operator must immediately notify the OV. Slaughter of the animal may not take place until the official veterinarian so permits.

853/2004 Annex II ***Food Chain Information:*** *Section III points 5 and 6*

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	Decisions on contents of FCI
• **Check and act on relevant food chain information and make it available to the official veterinarian without delay.** ***D5, D6***	*It is the operator's responsibility to check the information provided to decide in the first instance, whether:* ▪ *to present the livestock for ante-mortem inspection before slaughter for human consumption or otherwise dispose of them;* ▪ *to notify the OV of any information that gives rise to health concerns before ante-mortem inspection of the animal concerned;* ▪ *to advise the OV that special attention needs to be paid at ante-mortem inspection;* ▪ *to take special care during slaughter e.g. by slowing the line;* ▪ *to arrange for animals to be slaughtered separately or at a different time than other animals e.g. at the end of a production period.* *The OV will then make a professional evaluation of the information provided.*

D7. Slaughterhouse operators must be provided with the information no less than 24 hours[1] before the arrival of animals at the slaughterhouse, except in the circumstances mentioned in point 7 [C9].

[1] **By way of derogation …the Competent Authority may permit such information to be sent with the animals where this does not jeopardise the objectives of Regulation 853/2004. However any item of FCI, knowledge of which may result in serious disruption of slaughterhouse activity shall be made available to the operator in good time before the animals arrive at the slaughterhouse.**

2076/2005 ***Transitional Arrangements:*** *Article 8 point 2*

D8. If any animal arrives at the slaughterhouse without food chain information, the operator must immediately notify the OV. Slaughter of the animal may not take place until the official veterinarian so permits.

D9. If the competent authority so permits, food chain information may accompany the animals to which it relates to the slaughterhouse, rather than arriving at least 24 hours in advance, in the case of:

(a) porcine animals, poultry or farmed game that have undergone ante-mortem inspection at the holding of provenance, if a certificate that the veterinarian has signed stating that he or she examined the animals at the holding and found

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them to be healthy accompanies them;

(b) domestic solipeds;

(c) animals that have undergone emergency slaughter, if a declaration, that the veterinarian has signed recording the favourable outcome of the ante-mortem inspection accompanies them; and

(d) animals that are not delivered directly from the holding of provenance to the slaughterhouse.

Slaughterhouse operators must evaluate the relevant information. If they accept the animals for slaughter, they must give the documents mentioned in subparagraphs (a) and (c) to the OV. Slaughter or dressing of the animals may not take place until the OV so permits.

853/2004 Annex II ***Food Chain Information:*** *Section III points 2, 6 and 7*

	Timing
• **Request that information is provided at least 24 hours before the animals arrive at the slaughterhouse, except if permitted by the OV or if the following provisions apply…** ***D7, D8, D9***	*Animal producers should be asked to provide food chain information in good time before the animals arrive to permit appropriate action to be taken by both the slaughterhouse operator and the OV. This is particularly the case when the information might result in serious disruption of slaughterhouse activity or the presence of the OV is specifically required.* ***Important Note****: Regulation 2076/2005 sets a timetable for statutory implementation of FCI, i.e.* *From 1.1.06 Poultry* *From 1.1.08 Pigs* *From 1.1.09 Horses and veal calves* *From 1.1.10 Cattle, sheep and other animals* *It also permits FCI to accompany the animals except where advance notice is necessary for special arrangements to be made.*
• **Information may accompany poultry, pigs and farmed game to the slaughterhouse, rather than arriving at least 24 hours in advance if the animals:** ▪ **are subject to ante-mortem inspection at the holding of provenance and are accompanied by a veterinary certificate.** ▪ **are not delivered directly from the holding of provenance to the**	***Poultry*** *– require information to be provided at least 24 hours in advance <u>unless</u> if they have been subject to an ante-mortem inspection on farm and are accompanied by a veterinary certificate. It is strongly recommended that previous arrangements for supply of production information 72 hours in advance are continued.* ***Pigs*** *– require information to be submitted within 24 hours of*

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slaughterhouse (e.g. bought through a market). ▪ **have undergone emergency slaughter and are accompanied by a veterinary certificate.** • **Information may accompany domestic solipeds.** ***D9*** • **If animals arrive without the required information, notify the OV who may permit slaughter and dressing.** ***D9***	*arrival with sufficient time to allow any special arrangements deemed necessary unless they have been subject to an ante-mortem inspection on farm and are accompanied by a veterinary certificate.* ***Cattle/Sheep** – require information to be submitted within 24 hours of arrival with sufficient time to allow any special arrangements deemed necessary unless an animal has come indirectly from the holding of provenance (e.g. via a market) or has undergone emergency slaughter and is accompanied by a veterinary certificate.* ***Farmed Game** – require information to be submitted within 24 hours of arrival with sufficient time to allow any special arrangements deemed necessary unless animals have been slaughtered on farm and are accompanied by a veterinary certificate. See Section E below.* ***Horses** – require information to accompany the animals. See B4 above.* ***Delayed Information** - **OV decisions** - note that 854/2004 obliges the OV to take action if FCI is delayed. If the information is subsequently received within 24 hours, the meat may be approved for human consumption. If slaughter takes place without the required information, the carcase and offal are to be stored separately from that of other animals.* *If information is not received and the animal has not yet been slaughtered, it is to be killed separately from other animals. All meat from the animal is to be declared unfit for human consumption.* ***854/2004 Annex I Section II Chapter II***

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E. ON FARM SLAUGHTER OF FARMED GAME MAMMALS/POULTRY

Farmed Game Mammals

E1. … food business operators may slaughter farmed ratites (flightless birds) and farmed ungulates referred to in point 1 [Cervidae (deer) and Suidae (boar)] [and bison] at the place of origin with the authorisation of the competent authority if:

E2. The competent authority is informed in advance of the date and time of slaughter of the animals;

E3. The holding has facilities suitable for the slaughter, bleeding and, where ratites are to be plucked, plucking of the animals;

E4. Slaughtered and bled animals are transported to the slaughterhouse hygienically and without undue delay. If transport takes more than two hours, the animals are, if necessary, refrigerated. Evisceration may take place on the spot, under the supervision of the veterinarian;

853/2004 Annex III Section III ***Farmed Game:*** *points 3(d) (f) (h)*

E5. During transport to the approved establishment, a certificate issued and signed by the official veterinarian or approved veterinarian, attesting to a favourable result of the ante-mortem inspection, correct slaughter and bleeding and the date and time of slaughter, accompanies the slaughtered animals.

853/2004 Annex III Section III: point 3(j) and point 4 (ref. Bison) ***as amended***

By way of derogation from 3(j)[ ], the certificate referred to in Article 16 [see next], attesting to a favourable result of the ante-mortem inspection, is issued and signed by the veterinary service.

The model certificate in Annex III to 91/495/EEC (OJ L 268, 24.9.1991, p.41) may be used.

2076/2005 ***Transitional Arrangements:*** *Article 9 and Article 16*

Poultry on farm

E6. Food business operators may slaughter poultry referred to in Chapter IV, point 1(b)(i), [foie gras and delayed eviscerated poultry] on the farm only with the authorisation of the competent authority and in compliance with the following requirements.

E7. The food business operator must inform the competent authority in advance of the date and time of slaughter.

E8. The holding must have premises suitable for the hygienic slaughter and further handling of the birds.

E9. The slaughtered birds must be accompanied to the slaughterhouse by a declaration by the food business operator who reared the animal indicating any veterinary products or other treatments administered to the animal, dates of administration and withdrawal periods, and the date and time of slaughter.

E10. The slaughtered animal must be accompanied to the slaughterhouse by a certificate issued by the official veterinarian or approved veterinarian in accordance with Reg. 854/2004.

E11. In the case of poultry reared for the production of 'foie gras', the uneviscerated birds must be transported immediately and, if necessary, refrigerated to a slaughterhouse

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or cutting plant. They must be eviscerated within 24 hours of slaughter under supervision of the competent authority.

E12. Delayed eviscerated poultry obtained at the farm of production may be kept for up to 15 days at a temperature of not more than 4°C. It must then be eviscerated in a slaughterhouse or in a cutting plant located in the same Member State as the farm of production.

853/2004 Annex III Section II ***On farm poultry slaughter:*** *Chapter VI points: 2, 4, 6, 7, 8 and 9*

E13. No person engaged in the movement, lairaging, restraint, stunning, slaughter or killing of animals shall
(a) cause any avoidable excitement, pain or suffering to any animal; or
(b) permit any animal to sustain any avoidable excitement, pain or suffering.

WASK Part 1 Regulations 4(1)

	Welfare at Slaughter/Killing
• **Treat animals humanely and slaughter/kill according to the WASK regulations.** ***E13***	*Animals must be moved and handled calmly and quietly. Staff responsible for handling animals must have the necessary knowledge and skill to treat them humanely at all times - see A4 above.* *Slaughter of animals other than in slaughterhouses must comply with WASK Regulation 14. This requires that the animal must be restrained in accordance with Schedule 4, stunned before slaughter in accordance with Parts I and II of Schedule 5, and bled or pithed in accordance with Schedule 6. See 9.3.1 (Animal Welfare) above.*
	Authorisation & Conditions
• **If authorised by the Competent Authority (CA), farmed deer, boar, bison, flightless birds, foie gras or delayed eviscerated poultry can be slaughtered at the place of origin if certain conditions are met, including:** ***E1, E6*** ▪ **the CA is informed in advance of the date and**	***Authorisation*** *- producers of farmed game may apply for authorisation (approval) of on-farm slaughter if the conditions are met. See PART ONE Chapter 7 (Approvals).* ***Bison*** *- may be slaughtered on farm in exceptional circumstances i.e. where live transport would put at risk human health and safety or animal welfare.* ***Advance notification of slaughter*** *- an Official Veterinarian (OV) or Approved Veterinarian (AV) - see 9.2 above, must be informed not more than 3 days before slaughter in order to carry out an ante-mortem inspection.*

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time of slaughter; *E2, E7* ▪ **the holding has facilities suitable for the slaughter, bleeding and, further handling (e.g. where ratites are to be plucked, plucking);** *E3, E8* ▪ **evisceration of farmed game may take place on the spot, under veterinary supervision;** *E4* ▪ **the OV or AV issues and signs a certificate which accompanies carcases to the slaughterhouse.** *E5, E9, E10* ▪ **slaughtered and bled farmed game animals are transported to the slaughterhouse hygienically and without undue delay.** *E4* ▪ **slaughtered foie gras poultry are transported to the slaughterhouse immediately, and if necessary, refrigerated to a slaughterhouse or cutting plant.** *E1h, E11*	***FARMED GAME*** ***Owner Declarations*** *– a declaration with the following information is with to accompany the carcases:* ▪ *the identity of the animal - see Chapter 10 (Dressing of Carcases) Section C;* ▪ *any veterinary products or other treatments administered; and* ▪ *the dates of administration and withdrawal periods.* ▪ *correct slaughtering and bleeding has taken place; and* ▪ *the date and time that the animal was slaughtered.* ***Veterinary Certificate*** *– a certificate attesting to the favourable result of the ante-mortem inspection is to accompany carcases to an approved premise for dressing.* ***Model document*** *– a document combining an owner declaration and veterinary certificate for farmed game is at* ***Annex B5****. If the correct documentation is not provided the carcases must be disposed of as animal by-product.* ***POULTRY:*** ***Owner Declaration*** *- a declaration with the following information is to accompany the carcases:* ▪ *the identity of the animal;* ▪ *the date and time of slaughter;* ▪ *any veterinary products or other treatments administered; and* ▪ *the dates of administration and withdrawal periods.* ***Veterinary Certificate*** *- a certificate that accords with 854/2004 Annex I Section IV Chapter V(A) point 8. An Official Veterinarian or an Approved Veterinarian (see 9.2 General information) may sign the certificate.* ***Model document*** *- a model document combining an owner declaration and veterinary certificate for on-farm slaughtered poultry is at* ***Annex B6.*** *If the correct documentation is not provided the carcases must be disposed of as animal by-*

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▪ **delayed eviscerated poultry are kept for no more than 15 days at a temperature of not more than 4°C then sent to a UK slaughterhouse or a cutting plant for evisceration.** ***E12***	*product.* ***Rooms*** *– where used, rooms for slaughter and dressing should meet the same hygiene requirements as the equivalent areas in a slaughterhouse – see relevant sections.* ***Maintenance of the cold chain*** *– start to cool carcases after slaughter. Refrigerate if necessary. Transport carcases within two hours unless they are refrigerated - see Chapter 8 (Temperature Controls)**.*** ***Transport hygiene*** *– see Chapter 14 (Wrapping, Packaging & Transport Hygiene)*

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F. EMERGENCY SLAUGHTER

Food business operators must ensure that meat from domestic ungulates that have undergone emergency slaughter outside the slaughterhouse may be used for human consumption only if it complies with all the following requirements.

F1. An otherwise healthy animal must have suffered an accident that prevented its transport to the slaughterhouse for welfare reasons.

F2. A veterinarian must carry out an ante-mortem inspection of the animal.

F3. The slaughtered and bled animal must be transported to the slaughterhouse hygienically and without undue delay. Removal of the stomach and intestines, but no other dressing, may take place on the spot, under the supervision of the veterinarian. Any viscera removed must accompany the slaughtered animal to the slaughterhouse and be identified as belonging to that animal.

F4. If more than two hours elapse between slaughter and arrival at the slaughterhouse, the animal must be refrigerated. Where climactic conditions so permit, active chilling is not necessary.

F5. A declaration by the food business operator who reared the animal, stating the identity of the animal and indicating any veterinary products or other treatments administered to the animal, dates of administration and withdrawal periods, must accompany the slaughtered animal to the slaughterhouse.

F6. A declaration issued by the veterinarian recording the favourable outcome of the ante-mortem inspection, the date and time of, and reason for, emergency slaughter, and the nature of any treatment administered by the veterinarian to the animal, must accompany the slaughtered animal to the slaughterhouse.

853/2004 Annex III Section I Chapter VI: points 1 – 6

F7. No person engaged in the movement, lairaging, restraint, stunning, slaughter or killing of animals shall
(a) cause any avoidable excitement, pain or suffering to any animal; or
(b) permit any animal to sustain any avoidable excitement, pain or suffering.

WASK Part 1 Regulation 4 (1)

	Welfare at Slaughter/Killing
• **Treat animals humanely.** ***F7***	*Animals must be moved and handled calmly and quietly. Staff responsible for handling animals must have the necessary knowledge and skill to treat them humanely at all times - see A4 above.* ***Guidance** - the Humane Slaughter Association (HSA – see 9.2 above) publishes Guidance Notes on Humane Killing of Livestock Using Firearms and has a video on Emergency Slaughter.* ***Licensing of Slaughtermen** - for emergency slaughter there is no requirement to have a slaughter licence provided the*

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	animal has to be slaughtered or killed immediately for welfare reasons. ***WASK Sch.1 Part I(a))***
	Emergency Slaughter
• **Only animals that have suffered an accident that prevented transportation on animal welfare grounds and been subject to ante-mortem inspection are slaughtered for human consumption.** ***F1, F2*** • **The slaughtered and bled animal is transported hygienically and without delay. If the time between slaughter and arrival at the slaughterhouse is more than 2 hours, the animal is refrigerated unless active chilling is unnecessary due to climate.** ***F3, F4*** • **Animals are accompanied by owners' declarations and veterinary certificates.** ***F5, F6***	*Animals that become diseased or injured and are required to be slaughtered or killed on grounds of animal welfare, may not be eligible for slaughter for human consumption. The animals must have a veterinary ante-mortem inspection and be stunned and bled in a hygienic and humane manner. For more information see the British Cattle Veterinary Association (BCVA) booklet obtainable at www.bcva.org.uk or telephone 01452 740816.* ***Chilling** – start to cool the carcase after slaughter. Refrigerate if necessary.* ***Owner Declarations** - an declaration with the following information is to accompany the carcases:* ▪ *the identity of the animal (See Chapter 10 Section C);* ▪ *any veterinary products or other treatments administered; and the dates of administration and withdrawal periods.* ***Veterinary certificate** – a certificate with the following information is to accompany the carcases:* ▪ *favourable result of the ante-mortem inspection;* ▪ *date, time and reason why emergency slaughter was carried out; and* ▪ *any treatment administered to the animal by the veterinarian.* ***Model document** – a model document combining an owner declaration and veterinary certificate is at **Annex B7**.* *If the correct documentation is not provided to the operator the carcase must be disposed of as animal by-product having regard to the need for any statutory testing that is required, for example TSE testing.*

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G. SLAUGHTER OF DOMESTIC UNGULATES

G1. Where establishments are approved for the slaughter of different animal species or for the handling of carcases of farmed game and wild game, precautions must be taken to prevent cross-contamination by separation either in time or in space of operations carried out on the different species.
Separate facilities for the reception and storage of unskinned carcases of farmed game slaughtered at the farm and for wild game must be available.

853/2004 Annex III Section I ***Slaughter Hygiene:*** *Chapter IV: point 5*

	Slaughter Lines
• **Take precautions to prevent cross-contamination by separation either in time or space, if operations are carried out on different species.** ***G1***	*Unless there are separate lines for of different species, clean and disinfect the slaughter and dressing areas between species and between wild and farmed game to prevent cross-contamination and slaughter pigs last.* *Appropriate cleaning and disinfection should be carried out between killing of different species.* *See Chapter 1 (Design and Facilities) Section D and PART ONE Chapter 7 on Approval of premises.*

G2. Any animal which has experienced pain or suffering during transport or following its arrival at the slaughterhouse, or are too young to take solid food must be slaughtered immediately.

G3. Any animal that is unable to walk should not be dragged to its place of slaughter but be slaughtered or killed where it lies.

WASK Schedule 3 paragraphs 4 & 5

G4. If the slaughterhouse does not have lockable facilities reserved for the slaughter of sick or suspect animals, the facilities used to slaughter such animals must be cleaned, washed and disinfected under official supervision before the slaughter of other animals is resumed.

853/2004 Annex III Section I ***Slaughter Hygiene:*** *Chapter IV: point 20*

	Slaughter of Sick or Suspect Animals
• **Animals that have experienced pain or suffering, or are too young to take solid food must be slaughtered immediately.** ***G2***	***For welfare reasons*** *(e.g. injury or an animal unable to walk without pain or unassisted) it may become necessary to slaughter an animal* ***immediately*** *on arrival at a slaughterhouse,* ***without*** *unloading it from the means of transport.* *Where separate facilities, reserved for the slaughter of*

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• **Any animal that is unable to walk must be slaughtered or killed where it lies.** ***G3*** • **Use reserved lockable facilities for the slaughter of sick and suspect animals <u>or</u> clean, wash and disinfect slaughter facilities under official supervision before the slaughter of other animals is resumed.** ***G4***	*animals found or suspected to be suffering from disease, are not available, slaughter sick or suspect animals at the end of the normal slaughter period to minimise the possible spread of infection and follow by thorough cleaning and disinfection so as not to prejudice the hygienic operation of the slaughterhouse.* ***Animal disease control or eradication schemes** - apply the above procedures to animals subject to specific schemes (e.g. Tuberculosis and brucellosis reactor/inconclusive reactor/ direct contact animals)* ***854/2004 Annex I Section II Chapter II point 7*** *WASK Schedule 9 sets out requirements and permitted methods of slaughtering or killing for disease control.*

G5. After arrival in the slaughterhouse the slaughter of animals must not be unduly delayed. However, where required for welfare reasons, animals must be given a resting period before slaughter. *853/2004 Annex III Section I Slaughter Hygiene: Chapter IV: point 1*	
	Unloading and Care of Animals
• **Make suitable provision for the safety of the animals during unloading and their care on arrival.** ***WASK Schedule 3 para.15a*** • **Inspect the condition and state of health of every animal that is held in lairage at least every morning and evening.** ***WASK Schedule 3 para. 3*** • **Slaughter animals without undue delay.**	*Welfare at slaughter, including the reception, unloading and handling of animals is regulated by the WASK legislation – see Animal Welfare at 9.3.1 above.* *Arrange for live animals to be delivered directly to the lairage and* ▪ *unload animals in a calm, unhurried manner, ensuring that unloading facilities are suitable and safe;* ▪ *protect them from adverse weather;* ▪ *take care to ensure that animals are properly and securely penned and cannot escape from the lairage;* ▪ *provide clean drinking water;* ▪ *provide animals which are kept in the lairage overnight with an adequate supply of suitable bedding (bedding is not required on slatted or meshed floors);* ▪ *pen separately animals which might injure each other or*

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G5	*which are vulnerable to injury from others;* ▪ *provide a sufficient quantity of wholesome food for the animals on arrival at the lairage and twice daily thereafter. Food is not required within 12 hours of slaughter. All feed should be provided in such a manner that it is readily accessible to the type and species of animals concerned;* ▪ *ensure that animals are provided with adequate ventilation at all times;* ▪ *regularly check the condition of animals if a field is used as a lairage;* ▪ *slaughter an animal in the lairage if it cannot be moved from there without suffering pain isolate sick or injured animals from all other animals.* *Animals should have no means of escaping from passageways etc, but there should be means by which they may be easily evacuated if necessary.* ***Note:** WASK does not require any resting period for animals prior to slaughter. Unless animals will clearly benefit from a resting period in the lairage, they should be slaughtered without delay.*

G6. Meat from animals that undergo slaughter following an accident in the slaughterhouse may be used for human consumption if, on inspection, no serious lesions other than those due to the accident are found. *853/2004 Annex III Section I **Slaughter Hygiene:** Chapter IV point 1 & 2c* **G7. Slaughterhouse operators must follow the instructions of the veterinarian appointed by the competent authority in accordance with 854/2004 to ensure ante-mortem inspection of every animal to be slaughtered is carried out under suitable conditions.** *853/2004 Annex III Section I **Slaughter Hygiene:** Chapter IV point 5*	
	Ante-mortem Inspection
• **Meat from animals that undergo slaughter following an accident in the slaughterhouse may be used for human**	*Provide adequate lighting, space and access to enable ante-mortem inspection to be properly undertaken. Suitable animal restraint facilities (e.g. a crush) are recommended to allow detailed examination of individual animals. Where this is not the case appropriate procedures and/or assistance will need*

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consumption if, on inspection, no serious lesions other than those due to the accident are found. ***G6*** • **Follow the OV's instructions about ante-mortem inspection.** ***G7***	*to be provided.* ***OV duties** – note that the OV is to inspect all animals before slaughter; within 24 hours of arrival at the slaughterhouse and less than 24 hours before slaughter, to determine in particular whether there is any sign that welfare has been compromised; or of any condition which might adversely affect human or animal health. The OV may also require inspection at any other time.* *The OV is also to inspect all animals that the operator or an official auxiliary may have put aside.* ***854/2004 Annex I Section I Chapter II B*** *See also Section B2e (Health and Welfare) above.*

G8. Animals brought into the slaughter hall must be slaughtered without undue delay.

G9. Stunning, bleeding, … and other dressing must be carried out without undue delay and in a manner that avoids contaminating the meat. In particular:

(a) the trachea and oesophagus must remain intact during bleeding, except in the case of slaughter according to a religious custom;

*853/2004 Annex III Section I **Slaughter Hygiene:** Chapter IV points 6 & 7(a)*

G10. Any person who slaughters by a religious method any animal which has not been stunned before bleeding shall …(b) ensure that each animal is slaughtered by the severance, by rapid, uninterrupted movements of a knife, of both its carotid arteries and both its jugular veins.

WASK Schedule 12 Part II paragraph 6

	Stunning
• **Slaughter the animals brought into the slaughter hall without undue delay.** ***G8*** • **Carry out stunning without delay, in a way that avoids contamination of the meat.** ***G9***	*Bring animals into the stunning area only when the slaughterman is ready.* *Keep the stunning box clean and dry. The use of methods to assist in keeping the landing area dry e.g. raised slats or a metal grid may help to keep the landing area dry so that the animal is as clean and dry as possible and cross contamination is minimised.* ***Methods of stunning & killing** - WASK Schedule 5 sets out permitted methods of stunning or killing animals and any*

	specific requirements for those methods i.e. ***stunning*** *by captive bolt, concussion electronarcosis (electrodes and waterbath stunners),* ***killing*** *by shooting with a free bullet electrocution, exposure to gas mixtures for pigs (see also Schedule 7). Schedule 6 sets out the requirements for bleeding or pithing animals. Schedule 8 sets out additional requirements for the slaughtering or killing of horses in slaughterhouses or knackers' yards.* ***Religious slaughter methods*** *- Schedule 12 sets out additional requirements for slaughtering by the Jewish or Muslim methods - see Religious Slaughter at 9.3.1 above. It includes a requirement concerning the use of a cradle or table, that only permits the use of a v-restrainer when one animal is restrained and slaughtered in the restrainer at any one time.* *Anyone carrying out stunning and sticking must have the knowledge and skill necessary to perform the task humanely and efficiently and must be a licensed slaughterman or be a trainee slaughterman with a provisional licence working under the close supervision of a licensed slaughterman or vet.* *Always* ▪ *ensure that an effective stun is achieved;* ▪ *keep stunning equipment maintained and clean;* ▪ *have available a reserve stunning instrument in good working order for the immediate use in case the first stunning instrument fails to operate effectively;* ▪ *stun injured animals without delay;* ▪ *handle animals in a manner which will allow stunning, hoisting and sticking to take place without delay;* ▪ *complete all operations on one animal before the next is handled if working alone;* ▪ *stun adult cattle in a stunning or restraining pen which is in good working order;* ▪ *always bleed without delay after stunning.* *Never*

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	▪ *leave animals waiting in stunning pens;* ▪ *place an animals in a stunning pen unless the person who is carry out the stunning is ready to do so immediately;* ▪ *Stun an animal unless you are sure you can apply the stunning instrument correctly;* ▪ *stun an animal unless it is possible for it to be stuck without delay;* ▪ *use electrical stunning equipment for the purposes other than stunning animals;* *tie the legs of the animal or suspend it by the legs before stunning.*
	Sticking and Bleeding
• **Carry out bleeding and other operations without undue delay.** ***G9*** • **Carry out sticking and bleeding in a way that avoids contamination of the meat.** ***G9*** • **Make sure the trachea and oesophagus remain intact during bleeding (unless slaughter is carried out according to religious custom where both carotid arteries and both jugular veins must be severed.)** ***G9a, G10***	*Always stick animals without delay after stunning but never carry out electrical stimulation or any dressing procedure on an animal until bleeding has ended and, in any event, not until a period of at least 20 seconds in the case of sheep, goats and pigs, and 30 seconds in the case of cattle, has elapsed following sticking.* *During sticking bacteria can enter the body from the cut through the skin. Knives should always be kept sharp. Rinse and disinfect and/or exchange for a clean knife and place in the 'steriliser' between each animal.* *Regulation 853/2004 requires that the trachea and oesophagus are to remain intact during bleeding, unless slaughter is carried out according to religious custom, where both carotid arteries and both jugular veins must be severed - see WASK Schedule 12. [Note that this requirement, as it applies to non-religious slaughter, is under review.]* ***Cattle** - the HSA recommended method is a chest stick with a very sharp clean knife at least 15cm long. To reduce cross contamination it is good practice to use two knives for bleeding, one to cut through the hide; and the other to cut through soft tissues.*

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	Pigs *- the HSA recommended method is a chest stick with a very sharp clean knife at least 12cm long. A smaller sticking wound will minimise the risk of contamination occurring during scalding.* ***Sheep*** *- the HSA recommended method is a chest stick with a very sharp clean knife at least 12cm long.* ***OV decisions*** *– note that the OV is to declare meat unfit for human consumption if it results from the trimming of sticking points.* ***854/2004 Annex I Section II Chapter V (d)***

G11. [Slaughterhouses] must have facilities for disinfecting tools in hot water supplied at a temperature of not less than 82°C or by an alternative method having an equivalent effect. *853/2004 Annex III Section 1* ***Red meat slaughter:*** *Chapter II point 3*	
	Disinfection of tools
• **Disinfect tools in hot water supplied at a temperature of not less than 82°C or by an alternative method having the equivalent effect.** ***G11***	***[Note: Equivalent methods of disinfection – any agreed alternatives to the requirement for 82°C will be notified by an agreed change to industry guidance.]*** *Facilities for Disinfecting Tools/approval of alternatives – see Chapter 1 (Design and Facilities) Section D8.* *Start each work period with clean and disinfected tools. Rinse tools to remove visible dirt before they are disinfected e.g. in a knife 'steriliser'. Knives and other tools should be rinsed and disinfected often.* ***Knives*** *- it is important to clean knives after cutting through contaminated tissues such as skin. Less frequent cleaning may be acceptable when, for example, exposing kidneys for inspection.* ***Scabbards*** *can be a source of contamination of disinfected knives, but may be used for health and safety reasons (e.g. to carry knives across workrooms, or for use where bovine heads are dressed and handled). Dirty knives must not be*

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	returned to the scabbard. In slaughterhouses, unless the scabbard can be effectively disinfected, knives placed in scabbards are considered dirty and should be treated as such. ***Steels** – disinfect steels after cleaning and do not use in a way that contaminates clean, disinfected knives. Leaving steels in a knife steriliser may damage them.*

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H. SLAUGHTER OF POULTRY AND LAGOMORPHS

H1. Where establishments are approved for the slaughter of different animal species or for the handling of farmed ratites and small wild game, precautions must be taken to prevent cross contamination by separation either in time or in space of the operations carried out on the different species.
Separate facilities for the reception and storage of carcases of farmed ratites slaughtered at the farm and for small wild game must be available.

853/2004 Annex III Section II ***Slaughter Hygiene:*** *Chapter IV point 3*

	Slaughter Lines
• **Take precautions to prevent cross-contamination of operations carried out on the different species by separation either in time or space.** ***H1***	*Ratites can also be handled at red meat premises because of their size. See Chapter 1 (Design and Facilities) Section D and PART ONE Chapter 7 on Approval of Premises.* *Appropriate cleaning and disinfection should be carried out between killing of different species.*

H2. Sick or suspect animals, and animals slaughtered in application of disease eradication or control programmes, must not be slaughtered in the establishment except when permitted by the competent authority. In that event, slaughter must be performed under official supervision and steps taken to prevent contamination; the premises must be cleaned and disinfected before being used again.

853/2004 Annex III Section II ***Slaughter Hygiene:*** *Chapter IV point 10*

	Slaughter of Diseased, Sick or Suspect Animals
• **Animals that have experienced pain or suffering must be slaughtered immediately.** ***WASK Schedule 3 Part II paragraph 4*** • **Slaughter under disease control schemes or sick and suspect animals under OV supervision** • **Clean, wash and disinfect**	***For welfare reasons*** *(e.g. injury or an animal unable to walk) it may become necessary to slaughter an animal* ***immediately*** *on arrival at a slaughterhouse.* ***Animal disease control or eradication schemes –*** *Slaughter and/or dressing of animals under specific scheme for control or eradication of disease (e.g. Salmonella positive/ infected flocks) should be carried out separately to avoid contamination or at the end of the day, subject to welfare considerations.* *After slaughter and dressing, the slaughterhall must be subject to thorough cleaning and disinfection, except where a*

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slaughter facilities under official supervision before the slaughter of other animals is resumed. ***H2***	*separate slaughterhall is used or adequate measures are taken so that the slaughter of such birds does not prejudice the hygienic operation of the slaughterhouse.* ***854/2004 Annex I Section II Chapter II point 7.*** *WASK Schedule 9 sets the requirements and permitted methods of slaughtering or killing for disease control.*
	Unloading and Care of Animals
• **Make suitable provision for the safety of the animals during unloading and their care on arrival.** ***WASK Sch.3 Part IV para.15a***	*Welfare at slaughter, including the reception, unloading and handling of animals is regulated by the WASK legislation – see Animal Welfare at 9.3.1 above.* *Arrange for live animals to be delivered directly to the lairage and* ▪ *ensure there is no undue delay in lairage;* ▪ *check crates/modules and remove trapped or injured birds as soon as possible;* ▪ *kill injured birds immediately on discovery;* ▪ *protect birds from adverse weather conditions;* ▪ *feed and water birds if necessary due to delays before slaughter;* ▪ *avoid making sudden loud noises or movements which disturb the birds;* ▪ *ensure that there is adequate ventilation.* *It is recommended that birds are unloaded in subdued lighting.*

H3. Slaughterhouse operators must follow the instructions of the veterinarian appointed by the competent authority in accordance with 854/2004 to ensure ante-mortem inspection of every animal to be slaughtered is carried out under suitable conditions. *853/2004 Annex III Section II* ***Slaughter Hygiene:*** *Chapter IV point 2*	
	Ante-mortem Inspection of Poultry
• **Follow the OV's instructions about ante-mortem inspection.** ***H3***	*Provide adequate lighting, space and access to enable ante mortem inspection to be properly carried out.* ***OV duties*** *- note that, unless animals are inspected on farm, the OV is to inspect all animals before slaughter; within 24*

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	hours of arrival at the slaughterhouse and less than 24 hours before slaughter to determine in particular whether there is any sign that welfare has been compromised; or of any condition which might adversely affect human or animal health. The OV may also require inspection at any other time. *The OV is also to carry out a clinical inspection of all animals that the operator or an official auxiliary may have put aside.* *See also Section B2e (Health) and B2f (Welfare) above*

H4. Animals brought into the slaughter room must be slaughtered without undue delay. **H5. Stunning, bleeding, … must be carried out without undue delay and in a manner that avoids contaminating the meat.** *853/2004 Annex III Section II* ***Slaughter Hygiene:*** *Chapter IV points 6&7*	
	Shackling, Stunning and Slaughter
• **Do not delay the slaughter of animals brought into the slaughter room.** ***H4***	***Undue delay*** *- animals should be brought into the slaughter room only when the staff are ready to process them.* ***Shackling*** *- always* ▪ *hang birds from the shackle by both legs;* ▪ *use shackles appropriate to the size of birds being hung;* ▪ *take precautions to stop birds escaping during hanging on.* *Never* ▪ *hang birds with broken legs on shackles – kill them immediately with emergency method;* ▪ *suspend turkeys for more than three minutes or other birds more than two minutes before slaughter;* ▪ *use broken or misshapen shackles;* ▪ *never hang birds if to do so may cause them avoidable excitement, pain or suffering.*
• **Carry out stunning and bleeding without delay.** ***H5***	***Methods of stunning & killing*** *- WASK Schedule 5 sets out permitted methods of stunning or killing animals and any specific requirements for those methods i.e.* ***stunning*** *by electronarcosis (electrodes and waterbath stunners),* ***killing***

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	by electrocution, decapitation or dislocation of the neck, exposure to gas mixtures (see also Schedule 7) ***Stunning and slaughter** - lines should run at a pace which avoids injury to birds and allows the operator to be certain that effective stunning and cutting has taken place or to take necessary remedial action. Always:* ▪ *ensure that birds are not receiving pre-stun shocks;* ▪ *ensure that automatic equipment is set correctly so all birds are effectively stunned and bled;* ▪ *check that stunning is effective and one or preferably both carotid arteries are severed;* ▪ *correct faults in stunning and bleeding equipment immediately;* ▪ *provide a manual back-up system for automatic equipment;* ▪ *ensure that when birds are killed by exposure to gas mixtures, the following requirements set out in WASK (Schedule 7 Part III Para 9) are complied with:* *(a) the birds must be exposed to the gas mixture for long enough to ensure that they are killed;* *(b) the chamber is properly maintained;* *(c) every person engaged in the gas killing is properly instructed as to:* ▪ *the method of operation of the chamber;* ▪ *the procedures for any necessary flushing of the chamber with atmospheric air; and* ▪ *the procedures for any necessary evacuation of birds from the chamber.* ***Dressing -** never carry out any dressing procedure until bleeding has ended and in any case not until a period of at least two minutes for turkeys and geese and at least 90 seconds for other birds has elapsed.*

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H6. [Slaughterhouse/] must have facilities for disinfecting tools in hot water supplied at a temperature of not less than 82°C or by an alternative method having an equivalent effect. *853/2004 Annex III Section II* ***White meat slaughter:*** *Chapter II point 3,*	
	Disinfection of tools
• **Disinfect tools in hot water supplied at a temperature of not less than 82°C or by an alternative method having the equivalent effect.** ***H6***	***See Slaughter of Domestic Ungulates – G11 above.***

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9.3.2 WHAT ARE THE OFFICIAL CONTROL REQUIREMENTS?

Audits of good hygiene practices shall verify that food business operators apply procedures continuously and properly concerning at least: (a) checks on food-chain information; (c) pre-operational, operational and post-operational hygiene procedures, (i) controls on food entering and leaving the establishment and any accompanying documentation.

854/2004 Article 4 point 4

Audits by officials of HACCP –based procedures shall verify that meat plant operators apply such procedures continuously and properly.

854/2004 Article 4 point 5

The OV shall carry out inspection tasks in slaughterhouses, game handling establishments and cutting plants placing fresh meat on the market in accordance with the general requirements of Section I, Chapter II, of Annex I, and with the specific requirements of Section IV, …

854/2004 Article 5 point 1

The OV is to verify compliance with relevant Community and national rules on animal welfare, such as rules concerning the protection of animals at the time of slaughter and during transport.

854/2004 Annex I Section I Chapter II C ***Animal welfare***

The OV is to verify compliance with the FBO's duty … to ensure that animals accepted for slaughter for human consumption are properly identified. The OV is to ensure that animals whose identity is not reasonably ascertainable are killed separately and declared unfit for human consumption.

The OV is to verify compliance with the FBO's duty … to ensure that animals that have such hide, skin or fleece conditions that there is an unacceptable risk of contamination of the meat during slaughter are not slaughtered for human consumption unless they are cleaned beforehand.

854/2004 Annex I Section II Chapter III ***Decisions concerning live animals****: points 1 and 3*

9.3.3 APPLYING PROCEDURES CONTINUOUSLY AND PROPERLY

The operator is responsible for food safety in the food business.

852/2004 Article 1 point 1a

Food business operators shall put in place, implement and maintain a permanent procedure or procedures based on the HACCP principles.

852/2004 Article 5 point 1

Food … business operators at all stages of production, processing, and distribution within the businesses under their control shall ensure that foods … satisfy the requirements of food law which are relevant to their activities and shall verify that such requirements are

met. *178/2002 Article 17*	
	Operator Responsibilities for Acceptance & Slaughter of Animals
• **Operator responsibility includes applying and verifying the company's procedures for accepting and handling livestock, and taking corrective action if those procedures fail.** • **Implement and maintain a permanent procedure or procedures based on the HACCP principles.**	***Operator Responsibility*** *includes maintaining and monitoring procedures for acceptance of livestock for slaughter for human consumption, their handling and slaughter and taking corrective action if there is a failure.* ***These procedures should be based on HACCP principles*** *– see B2 above and PART THREE Chapter 1 (Application of HACCP Principles).* ***Delegation -*** *responsibility for applying and verifying the company's procedures for accepting, handling and slaughtering live animals may be delegated to a nominated person to whom problems are reported, and who has sufficient authority to ensure that corrective action is taken when necessary.* ***Verification -*** *check periodically if company procedures for accepting and handling live animals and record keeping are being followed by staff. Check that staff are following the company's procedures for slaughter (or killing, if appropriate) particularly in relation to welfare on every day of operation.* ***Frequency of verification*** *- this will depend on the likelihood of a problem being found. Once a month may be sufficient in premises where staff are experienced and procedures are unchanged.* ***Records*** *- keep an accurate, dated account (e.g. in a diary/daybook) of the result of each periodic verification check, especially issues requiring special attention and of any corrective action taken.* ***Corrective action*** *- take action when evidence of failures of procedures are identified. Such action may include:* ▪ *Informing and, if necessary, changing suppliers;*

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	▪ *Dealing with any animals that cannot be slaughtered for human consumption in liaison with the OV;* ▪ *Establishing the underlying cause and what needs to be done to prevent similar incidents in the future; and* ▪ *Improving staff instructions and training.*

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9.4 ANNEX A1: ANIMAL IDENTIFICATION REQUIREMENTS (GREAT BRITAIN)

- **CATTLE (CC)**
- **SHEEP & GOATS (CS)**
- **PIGS (CP)**
- **HORSES (CH)**
- **FARMED DEER (CD)**

- **Establish procedures to identify and trace food producing animals to their place of origin.**

C1, C2

CATTLE - GB

EARTAGS

Eartags missing at a slaughterhouse

CC1. If the operator of a slaughterhouse discovers that an animal which should have been tagged in accordance with these Regulations has only one eartag he may, under the authority of a licence granted by the appropriate Minister, slaughter the animal for human consumption without replacing the relevant eartag but may not otherwise slaughter the animal for human consumption.

CC2. If the operator of a slaughterhouse discovers that an animal which should have been tagged in accordance with these Regulations has no eartags, he shall not slaughter it for human consumption but may return it to the previous keeper under the authority of a licence granted by the appropriate Minister.

CC3. If the operator of a slaughterhouse discovers that an animal which should have been tagged under one of the cattle tagging Orders does not have an eartag he shall not slaughter it for human consumption except under the authority of a licence granted by the appropriate Minister.

*The **Cattle Identification** Regulations 1998 (SI 871) Regulation 7 points 1 - 3*

CC4. … if an animal without either eartag is slaughtered in contravention of this regulation the operator of the slaughterhouse shall identify the carcase as an animal by-product in accordance with the Animal By-Products (Identification) Regulations 1995 and dispose of it in accordance with the Animal By-Products Order 1992 unless the official veterinary surgeon is satisfied as to the identity of the animal and serves a notice on the operator allowing it to be used for human consumption.

*The **Cattle Identification** Regulations 1998 (SI 871) Regulation 7, point 5*

CC5. Any person who fails to apply eartags to an animal imported from a third country within 20 days of the animal passing the checks specified in Council Directive 91/496/EEC (… veterinary checks on animals entering the Community), and in any

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event before leaving the holding of destination, as specified in Article 4.3 of the Council Regulation, shall be guilty of an offence. **CC6. It shall be a defence for any person charged under this regulation to prove that-** **(a) when the animal was imported, the holding of destination was a slaughterhouse, and (b) the animal was slaughtered within 20 days of undergoing the checks on importation.** *The **Cattle Identification** Regulations 1998 (SI 871) Regulation 9, points 1-2*	
	Cattle Eartags
• **Do not slaughter cattle <u>without eartags</u> for human consumption.** ***CC1, CC2, CC3*** • **Identify and dispose of carcases of cattle slaughtered <u>without either eartag</u> as an animal by-product unless the OV is satisfied as to the identity of the animal and serves a notice allowing it to be used for human consumption.** ***CC4***	***Cattle with no eartags may not go into the human food supply so check that animal identification is adequate and correlates with accompanying documents.*** ***In the case of cattle eartags**, identification should meet the requirements of The Cattle Identification Regulations 1998 (SI 871) <u>www.opsi.gov.uk/si/si1998/19980871.htm</u>.* ***SEE EXAMPLES AT APPENDIX A TO THIS ANNEX.*** *Cattle born between 1.4.1995 and 31.12.1997* *- must be identified with at least one eartag.* *Cattle born on or after 1.1.1998* *- must be identified with an approved eartag in each ear, both with the same official identity. One is considered the primary eartag and the other, the secondary eartag.* *Primary (main) eartag is a distance readable yellow plastic two piece eartag with specific printed information. The Secondary (management) eartag, usually in the other ear to the primary tag, unless that ear is damaged.*
	Cattle from another EU Member State
	Cattle imported from EU member states (including any imported to an EU country from a 3rd country for onward trade with the UK) must have a printed eartag in each ear, both with the same official identity bearing:

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	- the Member State's country logo; *- the country code; and* *- an official identity of not more than 12 digits.*
	Cattle from 3rd countries
• **Cattle imported from a 3rd country for slaughter within 20 days of the animal passing the veterinary checks specified in 91/496/EEC, may be slaughtered with non-UK eartags** ***CC5, CC6***	*Cattle imported from 3rd countries that go direct to slaughter within 20 days of arrival in the UK must have:* ▪ *eartags* ▪ *administrative documents of the country of origin* ▪ *a veterinary certificate.* *Otherwise cattle must be re-tagged with UK tags within 20 days of passing the veterinary checks on imports.*
	Unacceptable Cattle Identification
• **Take appropriate measures and notify the official veterinarian if the requirements are not complied with.** ***B3***	*Unacceptable identification would include:* ▪ *hand written tags,* ▪ *tattoos,* ▪ *printed tags without a country code,* ▪ *tags where the code appears to have been amended or tampered with (except management information on secondary eartags),* ▪ *tags with missing information e.g. missing one number,* ▪ *unreadable eartags.* *In such cases, notify the OV immediately and take steps to identify the animal within 48 hours.* ***Disposal of Unidentified Carcases** – see CC10 below.*

Cattle Passports at Slaughterhouses
CC7. The operator of a licensed slaughterhouse shall ensure that only cattle

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accompanied by a valid cattle passport are slaughtered for human consumption at the slaughterhouse. **CC8. On arrival at a licensed slaughterhouse, the keeper of the animals shall give the cattle passport for each animal to the operator of the slaughterhouse.** **CC9. If an animal arrives at a licensed slaughterhouse without a valid cattle passport or with the wrong cattle passport, it shall not be moved from the slaughterhouse except under the authority of a licence granted by the official veterinary surgeon or his representative.** **CC10. If an animal without a valid cattle passport is slaughtered in a licensed slaughterhouse, the operator of the slaughterhouse shall identify the carcase as an animal by-product in accordance with the Animal By-Products (Identification) Regulations 1995 and dispose of it in accordance with the Animal By-Products Order 1992.** **However, if the cattle passport is not valid only because it has not been signed by the last keeper, the carcase may be sent for human consumption if the keeper or his agent signs the cattle passport within 7 days of slaughter.** **CC11. No person shall slaughter an animal for human consumption outside a licensed slaughterhouse unless the animal has a valid cattle passport.** *The **Cattle Identification** Regulations 1998 (SI 871) Regulation 20 points 1 - 5* **Cattle from other Member States** **CC12. If cattle are brought in from another Member State, the keeper shall, within 15 days of arrival at the holding of destination, surrender the cattle passport (if any) accompanying the animal to the appropriate Minister and apply to him for a cattle passport under these Regulations and failure to do so shall be an offence.** **CC13. It shall be a defence for any person charged under this regulation to prove that –** **(a) when the animal was imported, the holding of destination was a slaughterhouse, and** **(b) the animal was slaughtered within the time limit for applying for a cattle passport, but in this case the keeper shall give any cattle passport accompanying the animal to the official veterinary surgeon or his representative at the time of slaughter, and failure to do so shall be an offence.** *The **Cattle Identification** Regulations 1998 (SI 871) Regulation 17, points 1-2*	
	Cattle Passports
• **Make sure that only cattle with a valid passport are slaughtered for human consumption.** ***CC7 – CC11***	***Check that animal identification is adequate and correlates with accompanying documents.*** ***In the case of cattle passports,** these should meet the requirements of The Cattle Identification Regulations 1998 (SI 871) www.opsi.gov.uk/si/si1998/19980871.htm.*

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	SEE EXAMPLES AT APPENDIX A TO THIS ANNEX *All cattle arriving at a slaughterhouse must be accompanied by a passport that :* ▪ *correlates with the animals eartag number,* ▪ *contains all registration and movement details,* ▪ *entries which have been signed and dated by each keeper of the animal,* ▪ *shows no sign of having been tampered with or amended in any way.* *The original documents must be presented with the animal. Photocopies or faxes of documents are not acceptable.* ***Note**: if the cattle passport is not valid only because it has not been signed by the last keeper, the carcase may be sent for human consumption if the keeper or his agent signs the cattle passport within 7 days of slaughter.*
	Cattle From Another Member State
• **Cattle may be slaughtered without a UK passport if imported for slaughter from another EU country within the time limit for applying for a UK passport and the OV is given the accompanying passport.** ***CC12, CC13***	*Check that all cattle imported from other EU Member States or Northern Ireland and sent direct for slaughter have:* ▪ *an EU passport issued by the Member State,* ▪ *an export health certificate, and* ▪ *a Permit Authorising Movement Of Cattle (MC2L) issued by DARD (animals from Northern Ireland only).* *Cattle imported from EU countries can go direct to slaughter in the UK as long as the farmer applies for a passport within 15 days of the animals' arrival.*
	Age Restrictions
• **Make sure that no cattle born or reared in the UK before 1 August 1996 are slaughtered for human consumption.**	***No bovine animal born or reared in the UK before 1 August 1996 may be slaughtered for human consumption.** Report any that arrive at the slaughterhouse to the OV.*

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TSE Regulations	***OTM Animals*** *- In accordance with an agreed RMOP, cattle over 30 months of age must be clearly identified and separated into batches from bovine animals which are 30 months of age and under.* *For handling of over thirty month (OTM) cattle and 24-30 month cattle, see PART THREE Chapter 4 (TSE Testing).*
	Unacceptable Identification/Documentation
• **Take appropriate measures if the requirements are not complied with and notify the official veterinarian.** *B3* • **Do not move cattle without a valid passport or with the wrong passport from the slaughterhouse except under licence. They may only be slaughtered for human consumption under licence.** *CC9*	*If, during pre-slaughter checks, a bovine is found with:* ▪ *unacceptable identification markings,* ▪ *the passport is incorrect, invalid or missing,* ▪ *the passport is stamped 'NOT FOR HUMAN CONSUMPTION: Animal exposed to mammalian protein'.* ▪ *age rules have been breached;* *the FBO should:* ▪ *immediately notify the OV and present the invalid or incorrect passport to the OV;* ▪ *hold the animal;* ▪ *notify the supplier that the animal has been held, and* ▪ *if appropriate, that he/she has 48 hours to arrange for the animal to be correctly identified.* ***Note:*** *The passport presented with the animal must not be returned to the keeper.*
	Disposal of Unidentified Carcases
• **The carcases of cattle slaughtered without valid passports are to be identified as animal by-products and**	*Where the OV is not satisfied with evidence of a carcase's identity, the carcase, its offal and all other parts of the carcase (except the hide) is to be identified as SRM Category 1 animal by-product in accordance with the Animal*

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disposed of. ***CC10***	*By-Products (Identification) Regulations 1995. Dispose of it in accordance with the Animal By-Products Order 1992.*

Cattle Passports

CC14. If an animal is slaughtered other than in a licensed slaughterhouse and the carcase is then sent to a licensed slaughterhouse to be dressed for human consumption -

(a) the keeper shall send the cattle passport with the carcase to the slaughterhouse;

(b) the operator of the slaughterhouse shall not accept the carcase unless it is accompanied by the cattle passport; and

(c) the operator shall give the cattle passport to the official veterinary surgeon or his representative together with notification that he has accepted the animal for dressing for human consumption.

*The **Cattle Identification** Regulations 1998 (SI 871) Regulation 27, point 2*

	Carcases Sent for Dressing
• **Make sure that the carcase of an animal slaughtered elsewhere is accompanied by its passport. Give the passport to the OV with notification that the carcase has been accepted for dressing.** ***CC14, CC11***	*Cattle are not to be slaughtered for human consumption outside a licensed slaughterhouse (e.g. emergency slaughter animals) unless they have valid passports that then accompany the bodies sent to a slaughterhouse for dressing.*

Cattle Passports

CC15. When cattle are moved on to a licensed slaughterhouse, the operator shall -

(a) record on the passport that the animal has been slaughtered, and the date of slaughter;
(b) mark the passport with the name and address of the slaughterhouse;
(c) sign it; and
(d) give it to the official veterinary surgeon or his representative forthwith.

*The **Cattle Identification** Regulations 1998 (SI 871) Regulation 18, point 3*

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CC16. Following slaughter, the operator of a licensed slaughterhouse shall immediately give the cattle passport for each animal slaughtered to the official veterinary surgeon or his representative, together with notification of the fact that the animal has been slaughtered. *The **Cattle Identification** Regulations 1998 (SI 871) Regulation 27, point 1*	
	Completion of Cattle Passports
• **After slaughter, complete each passport and give it to the OV with notification of the fact that the animal has been slaughtered.** ***CC15, CC16***	*After slaughter, the death details in the back page of the passport must be entered by a responsible member of the slaughterhouse staff <u>before</u> it is handed to an Authorised Officer for verification of cattle identity, i.e.* ▪ *stick a barcode label with slaughterhouse name & address in the box marked 'Holding at the time of death';* ▪ *enter the date of death (see note); and* ▪ *sign and then hand the passport to MHS staff for checking, stamping and return to the BCMS.* ***Note:** It is also useful to record the slaughter batch or kill number to help with traceability. If, in the case of OTM cattle, the recording of these details is part of the RMOP procedures, keeping these records becomes a legal requirement.*
	Register
• **Keepers, including slaughterhouse operators are required to keep records of cattle moving to the slaughterhouse and cattle deaths.** ***Regulation: CIR 2005, Part III, Article 29***	*The register must contain the following information:* ▪ *the animal's unique official identification code;* ▪ *the animal's breed and sex;* ▪ *where the animal came from;* ▪ *date of arrival at the lairage or slaughterhouse. If the lairage is at a separate location and has a different CPH number, the date of arrival at both the lairage and the slaughterhouse must be recorded;* ▪ *date of return to keeper and address animal sent to (where movement restrictions permit such movements); and*

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	▪ *date of death.* ***Availability for inspection -*** *the register (or a copy of computer printouts) must be available for inspection to the MHS, Defra or the Local Authority.*

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SHEEP & GOATS - GB

CS1. The system for the identification and registration of animals shall comprise the following elements:
- **(a) means of identification to identify each animal;**
- **(b) up-to-date registers kept on each holding;**
- **(c) movement documents;**
- **(d) a central register or a computer database.**

Regulation (EC) No 21/2004 Article 3 point 1

CS2. … is not necessary for an animal intended for slaughter if the animal is transported directly from the veterinary border inspection post to a slaughterhouse situated in the Member State where the checks … are carried out and the animal is slaughtered within five working days of undergoing those checks.

Regulation (EC) No 21/2004 Article 4 point 4

	Sheep and Goats
• **Make sure that only sheep and goats with a valid identification are slaughtered for human consumption.** ***CS1*** • **Take appropriate measures if the requirements are not complied with and notify the official veterinarian.** ***B3***	***Check that animal identification is adequate and correlates with the movement document so that it can be traced back to the last farm from which it was consigned.*** ***For sheep and goats,*** *identification should meet the requirements of EC Regulation 21/2004 and The Sheep and Goats (Records, Identification and Movement) (England) Order 2005 (SI 2005/3100) (SAGRIMO) www.opsi.gov.uk/si/si2005/20053100.htm or the equivalent legislation in Scotland and Wales.* ***SEE EXAMPLES AT APPENDIX A TO THIS ANNEX*** ***UK derogation*** *- EC 21/2004 Regulation places a requirement for double tagging of all sheep & goats; however the UK is currently allowed to continue the current single tagging system.* ***Initial tagging requirement*** *- all sheep and goats must be individually identified with a UK tag normally placed in the left ear and includes an individual number, the holding number and the letters 'UK'.*

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	Further tagging *- for further moves, all sheep and goats must be identified with an 'S' tag, normally placed in the right ear. Keepers can apply up to a maximum of three tags, which includes a combination of UK and S tags.* ***Lost tags*** *– lost or unreadable UK tags must be replaced with an identical tag or with a red 'R' replacement tag.* ***GB Tagging of sheep and goats to slaughter*** *- all sheep and goats moved for slaughter must be tagged with at least:* ▪ *the original tag if they come from the farm where they were born;* ▪ *an S baseline tag if an older animal not moving from birth holding and not previously identified;* ▪ *in addition, an S movement tag is required if the animal comes from a farm where it has not been UK or S baseline tagged (unless the keeper has recorded the full identification number in the holding register and the movement document);* ▪ *a replacement R tag (if the UK or S baseline tag has been lost).* ***Note:*** *animals born in other Member States will retain their original ID. Animals born in 3rd Countries will have an F tag (i.e. a UK tag but with an F at the end).* *See: www.defra.gov.uk/animalh/tracing/sheep/index.htm www.scotland.gov.uk/Publications/2006/04/21141157/0)*
	Checks on Identification
• **Make sure that only sheep and goats with valid identification are slaughtered for human consumption.** ***CS1***	*Set up a system for checking that all sheep are tagged and to check a proportion of each consignment to verify that their tags correlate with the movement document. Agree this system of checks with the OV, and include procedures for informing the OV of the arrival of animals.*

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	Livestock Markets *- sheep that are sold through a market may consist of animals from different farms. In this case, the checks on tagging and proper identification may be carried out at the slaughterhouse or at the market, or by a combination of checks at both premises. The division of responsibility between market and slaughterhouse operators is a commercial matter between the parties. Slaughterhouse operators should have a written description of the system employed, and a procedure for audit of the system. Factors in deciding how many of a consignment should be checked include:* ▪ *the nature of any agreement between the operator and the market operator for checks at the market, and* ▪ *the record of previous checks on sheep from the same market.*
	Unacceptable Identification/Documentation
• **Take appropriate measures if the requirements are not complied with and notify the official veterinarian.** ***B3***	*If, during pre-slaughter checks, an animal is found with unacceptable identification or documentation, notify the OV.* ***'Reasonably ascertainable identity'*** *- the identity of a sheep may be considered 'reasonably ascertainable' if it can be traced back to the last farm from which it was moved. Loss of eartags is a recognised problem in sheep. When sheep without tags are delivered to the slaughterhouse, and this cannot be considered to have happened since the animals left the farm (i.e. significant numbers of sheep, or no physical evidence of having been tagged), they should not be accepted for slaughter for human consumption.* ***Disposal*** *- where the OV is not satisfied with evidence of a carcase's identity, the carcase, its offal and all other parts of the carcase (except the pelt if removed) is to be identified and disposed of as animal by-products.*

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PIGS - GB

Identification Mark

CP1. (1) An identification mark is –
(a) an eartag stamped or printed with the letters "UK" followed by the herdmark; or
(b) a tattoo of the herdmark that is legible for the life of the pig.

(2) … the herdmark in paragraph (1) shall be followed by a unique individual identification number allotted to the pig by the keeper.

CP2. An eartag shall be (e) sufficiently heat-resistant that neither the eartag nor the information printed or stamped on it can be damaged by the processing of the carcase following slaughter;

CP3. A slapmark is a tattoo of the herdmark which is applied on each front shoulder area of the pig.

*The Pigs (Records, Identification and Movement) Order 2003 (**PRIMO**) Articles 10, 11e & 12*

Identification of pigs over 12 months moved off a holding

CP4. No person shall move a pig over 12 months old off a holding unless it is marked with
(a) an identification mark; or
(b) a slapmark that is legible for the life of the pig and throughout the processing of its carcase.

Identification of pigs under 12 months moved off a holding

CP5. (1) No person shall move a pig 12 months old or less off a holding unless it is identified in accordance with Article 14 or with a temporary mark.

(2) A temporary mark shall -
(a) either by itself or by reference to a document accompanying the pig during the movement, enable the holding from which the pig was last moved to be identified; and
(b) last until the pig reaches its destination.

PRIMO Articles 14, 15 & 16

Movement of pigs 12 months old or less to a slaughterhouse

CP6. (1) No person shall move a pig 12 months old or less off a holding to a slaughterhouse or slaughter market unless it is marked with –
(a) an identification mark; or
(b) a slapmark that is legible for the life of the pig and throughout the processing of its carcase.

(2) … slaughter market means a market for the sale of pigs intended for immediate slaughter.

PRIMO Article 18

GB OPERATORS' OBLIGATIONS	*ADVICE*
	Pigs
• **Only accept pigs for slaughter for human consumption if they are correctly identified.** ***CP1- CP6***	***Check that animal identification is adequate and correlates with the movement document.*** ***In the case of pigs,*** *identification should meet the requirements of The Pigs (Records, Identification and Movement) Order 2003 (**PRIMO**) SI 2632 www.opsi.gov.uk/si/si2003/20032632.htm or the equivalent legislation in Scotland and Wales.* ***Pig Identification Marks*** *- may be any of those listed below:* ***Slapmark*** *- applied to both shoulders with Defra herdmark. Size is not specified; however the slapmark must be legible before and after slaughter, throughout processing.* ***Eartags*** *that are:* ▪ *printed or stamped – not handwritten;* ▪ *tamper and not re-usable;* ▪ *include the letters UK plus Defra herdmark. A unique identification number can follow on from the official information or be printed on the other side of the tag e.g. UK AB1234 or UK AB1234 001;* ▪ *a suitable size and design for the pigs age;* ▪ *capable of remaining legible throughout carcase processing (for pigs going for slaughter).* ***Eartag material*** *- eartags must be sufficiently heat resistant that neither the eartag nor the information printed on it can be damaged by the processing of the carcase following slaughter. It follows that plastic tags are not acceptable for slaughter pigs because they may melt during scalding or singeing.* ***Tattoo*** *- Defra herdmark on one ear. The other ear may have an individual number and/or management information. Size is*

GB OPERATORS' OBLIGATIONS	*ADVICE*
	not specified, but the tattoo must be legible before and after slaughter and throughout processing.

Pigs from outside the European Union

CP7. (1) Any person importing a pig from outside the European Union shall apply an eartag or a tattoo to the pig containing the following information, in the following order -
(a) the letters "UK";
(b) the herdmark of the herd into which the imported pig is introduced;
(c) any other information, if the keeper wishes to apply such information; and
(d) the letter 'F'.

(2) The eartag or tattoo must be applied to the pig within 30 days of its arrival at the holding of destination, and in any event, before it is moved from that holding.

Regulation: PRIMO article 16.

	Imported pigs
• **Pigs imported from outside the EU must be identified at the destination holding with an eartag or tattoo containing the letters "UK" followed by the herdmark and the letter "F" unless the pigs are delivered directly to slaughter** ***CP7***	*Pigs imported from outside the European Union must be identified at the destination holding with an eartag or tattoo containing the letters "UK" followed by the herdmark and the letter "F" unless the pigs are delivered directly to slaughter.* *Also, the eartag or tattoo must be applied to the pig within 30 days of its arrival at the holding of destination, and in any event, before it is moved from that holding."*

CP8. (1) Any person transporting pigs shall carry a document, signed by the keeper, which specifies -
(a) the address, including postcode and CPH number of the holdings from, and to which, the pig is being moved;
(b) the date the movement is taking place;
(c) the number of pigs that the document covers;
(d) the identification mark of each of the pigs moved; and
(e) in the case of a movement from a market, the lot numbers of the pigs being moved.

Regulation: PRIMO Article 21.

GB OPERATORS' OBLIGATIONS	*ADVICE*
	Movement of pigs
• **Complete and retain the movement document for each lot of pigs, send a copy to the local authority.** ***CP8***	*Pigs moving to slaughter require an Animal Movement Licence – AML2 form completed, which specifies:* ▪ *the address, including postcode and CPH number of the holdings from, and to which, the pig is being moved;* ▪ *the date the movement is taking place;* ▪ *the number of pigs that the document covers;* ▪ *the identification mark of each of the pigs moved; and* ▪ *in the case of a movement from a market, the lot numbers of the pigs being moved.* *The document must be retained for at least 6 months by the FBO, who must also send a copy to the local authority within 3 days of the arrival of a pig.*
	Unacceptable Identification/Documentation
• **Take appropriate measures if the requirements are not complied with and notify the official veterinarian.** ***B3***	*If, during pre-slaughter checks, a pig is found with unacceptable identification markings or documentation, notify the OV.*

GB OPERATORS' OBLIGATIONS	*ADVICE*

FARMED DEER - GB

CD1. A person who has in his possession or under his charge an affected or a suspected animal and a veterinary surgeon who in the course of his duties, examines any such animal shall, with all practicable speed, give notice of the fact to the Divisional Veterinary Officer.

CD2. (1) The owner of a deer which is kept on a deer farm (whether or not that deer is a farmed deer) shall mark or identify the deer in a manner approved by the appropriate Minister and shall thereafter maintain such mark or identification so as to be clearly legible.

(2) No person shall move a deer on to or off any premises unless it is marked or identified in a manner approved by the appropriate Minister.

(3) The requirement in paragraph (1) above shall not apply in relation to any deer less than 16 weeks old.

The Tuberculosis (Deer) Order 1989

	Farmed Deer
• **Deer kept on a deer farm must be uniquely identified if they have been tested for tuberculosis before they leave the farm of origin.** ***CD1, CD2***	***Check that animal identification is adequate and correlates with the movement document.*** ***In the case of farmed deer,*** *identification should meet the requirements of The Tuberculosis (Deer) Order 1989 (www.opsi.gov.uk/si/si1989/Uksi_19890878_en_1.htm) as amended (www.opsi.gov.uk/si/si1993/Uksi_19932010_en_1.htm) or the equivalent legislation in Scotland and Wales.* *Farmed deer must be uniquely identified if they have been tested for tuberculosis or before they leave the farm of origin. The tag must show either the Defra herd number, or British Deer Farmers Association (BDFA) herd registration number and the animal's own unique number. The letters UK must go before the Defra herdmark, for example, UK AB1234 000001.* *BDFA: www.bdfa.co.uk Tel: +44 (0)1629 827037* ***Farmed deer slaughtered on farm*** *– an operator's declaration stating their identity and a veterinary certificate must accompany bodies to the slaughterhouse – see Section*

GB OPERATORS' OBLIGATIONS	*ADVICE*
	E of this Chapter.
	Movement Documentation
	When deer are moved the person who takes delivery of the animals must report the movements to the local authority within 3 days using the standard movement document (AML 24). For copies of the licenses to move deer contact the local Animal Health Divisional office (AHDO).
	Unacceptable Identification/Documentation
• **Take appropriate measures if the requirements are not complied with and notify the official veterinarian.** ***B3***	*If, during pre-slaughter checks, a deer is found with unacceptable identification markings or documentation, notify the OV.*

HORSES – GB

CH1. Food business operators must check passports accompanying domestic solipeds to ensure that the animal is intended for slaughter for human consumption. If they accept the animal for slaughter, they must give the passport to the OV. *853/2004 Annex II* ***Food Chain Information:*** *Section III, point 8* **CH2. … no person shall slaughter a horse for human consumption or consign it for slaughter unless it is accompanied by its passport and the declaration in Section IX [Medicinal Treatment] does not show that the animal is not intended for human consumption.** *The Horse Passports (England) Regulations 2004 No.1397 Regulation 20*	
	Horse Passports
• **Check the passports of domestic solipeds to ensure that the animal is intended for slaughter for human**	*'Horse' means an animal of the equine or asinine species.* ***Check that animal identification is adequate and correlates with the movement document.*** ***In the case of horses,*** *identification should meet the*

GB OPERATORS' OBLIGATIONS	*ADVICE*
consumption. If the animal is accepted for slaughter, give the passport to the OV. ***CH1, CH2***	*requirements of The Horse Passports (England) Regulations 2004 No.1397 www.opsi.gov.uk/si/si2004/20041397.htm or the equivalent legislation in Wales Scotland (The Horse Passport (Scotland) Regulations 2005 (SSI 2005/223)) and Northern Ireland (SR 2004 No 497 The Horse Passport Regulations (NI) 2004).* *Note: A list of approved issuing organisations can be found at www.defra.gov.uk/animalh/tracing/horses/horsepassport.htm* ***SEE EXAMPLES AT APPENDIX A TO THIS ANNEX*** *Before accepting horses for slaughter and giving the passports to the OV, check that:* ▪ *each animal is accompanied by its passport;* ▪ *the passport description matches the animal;* ▪ *any medicinal products that have been listed at Section IX of the passport do not preclude slaughter for human consumption.*
	Unacceptable Identification/Documentation
• **Take appropriate measures if the requirements are not complied with and notify the official veterinarian.** ***B3***	*If, during pre-slaughter checks, a horse is found with unacceptable identification markings or documentation, notify the OV.* ***OV decision*** *– note that when there are overriding animal welfare considerations, the OV may allow a horse to undergo slaughter at the slaughterhouse even if the legally required information concerning their identity has not been supplied. However, this information must be supplied before the carcase may be declared fit for human consumption. This also applies in the case of emergency slaughter of horses outside the slaughterhouse.* ***854/2004 Annex I Section II Chapter III point 2*** ***Horse passport deficiencies*** *- the OV may permit a horse*

GB OPERATORS' OBLIGATIONS	*ADVICE*
	with an ineligible passport or without a passport, to leave the slaughterhouse provided that no other restrictions apply. *Any horse presented with an ineligible passport, or presented without a passport, which cannot leave the slaughterhouse for any reason, must be humanely destroyed and disposed of as Category 2 animal by-product.* *Note: Horses to which Annex IV substances have been administered are Category 1 animal by-product.* ***Reg. 1774/2002 Article 4 (1)(c).***

CATTLE EARTAG REQUIREMENTS

Eartags - GB cattle

All cattle born and reared in GB and presented for slaughter for human consumption must be identified with an approved eartag in at least one ear.

Date of birth	Tagging requirements	Example of format
15 October 1990 to 1 April 1995	*Single eartag or tattoo.*	*A1234 123* *B654 3210* *D123 123C*
1 April 1995 to 31 December 1997	*One eartag in right ear with unique alpha-numeric identity including UK prefix.*	*UKAB 1234 56789* *UK A 1234 56789*
1 January 1998 to 31 December 1999	*Double tagging with same alpha-numeric identity including UK prefix in each ear, for lifetime of the animal.*	*UKAB 1234 56789* *UK A 1234 56789*
1 January 2000 to 30 June 2000	*Double tagging with same alpha-numeric or numeric identity including UK prefix in each ear, for lifetime of the animal.*	*UKAB 1234 56789* *UK A 1234 56789* *UK 666666500046*
1 July 2000 to present	*Double tagging, with same numeric identity including UK prefix in each ear, for lifetime of the animal.*	*UK 666666500046*

Double tagging

Both tags must show the same official identity. One of them is considered the primary eartag and the other, the secondary eartag. If the eartag is made from two pieces, both sides must be printed and bear the Crown logo.

Primary eartag

The main eartag, known in GB as the primary eartag, is a distance readable yellow plastic two piece eartag that requires specific information.

Information required - *Crown logo, followed by the letters 'UK' and the animal's unique number - a six digit all numeric herd mark followed by a six digit unique animal code. Note: This information will always be printed not hand written.*

There are two options for the primary eartag. Option 2 is recommended for small-eared breeds (e.g. Channel Island / Dexter Breeds) and meets the minimum size requirements for the primary tag.

MALE SIDE

FEMALE SIDE

Option 2

MALE SIDE

FEMALE SIDE

Secondary eartag (Management tag)

This eartag can be the same design as the main eartag or an approved alternative in a different colour. It should be placed in the other ear to the primary tag, unless an ear is damaged, when they can be fitted to the same ear.

Information required on secondary tag

Crown logo, followed by the letters 'UK' and the animal's unique number - a six digit all numeric herd mark followed by a six digit unique animal code. Note: This information will always be printed not hand written. Note: Management information concerning the animal may be added to the lower part of the eartag. This can be printed or hand written.

There are four options for the secondary (management) eartag.

Secondary eartag – Option 1

MALE SIDE

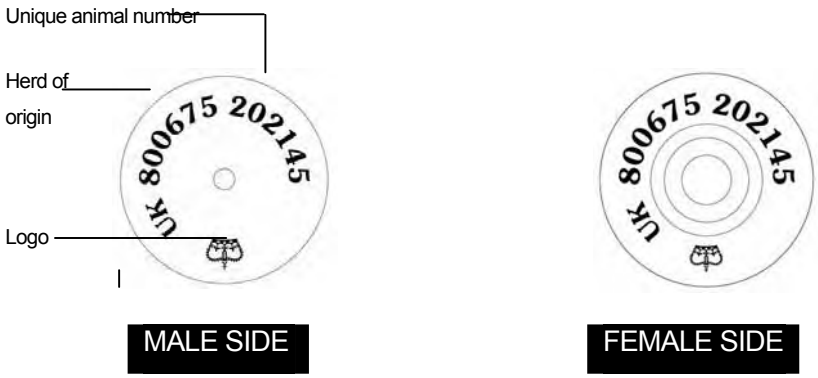
FEMALE SIDE

Secondary eartag – Option 2 *- small plastic two-piece eartag, which may be any colour.*

MALE SIDE

FEMALE SIDE

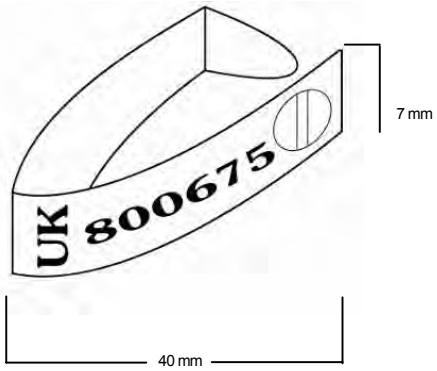
Secondary eartag – Option 3 button eartag *- a round two-piece, plastic, button design, which may be any colour.*



Secondary eartag – Option 4 (metal eartag) *- a one-piece metal design.*

Flat view

Three Dimensional View



CATTLE PASSPORT REQUIREMENTS

The table below describes the four types of official identification documents for cattle in Great Britain, dependant on the date of birth or import:

Date of birth /import	***Document***
Before 1 July 1996	*Certificate of CTS registration with movement cards (COR or form CHR3), or CPP13 if the original passport has been replaced since 9 October 2000.* ***Note****: Slaughter of cattle born before 1 August 1996 for human consumption is prohibited.*
1 July 1996 to 28 September 1998	*Old-style (blue and green A4) cattle passport (CPP1), and Certificate of CTS registration with movement cards (COR or form CHR3), or CPP13 if the original passport has been replaced since 9 October 2000.*
After 28 September 1998	*Chequebook-style passport with movement cards (CPP13) Temporary calf passport (CPP12) can be used for calves up to 27 days old.*
For cattle refused a cattle passport	*Notice of registration (CPP35).* ***Note:*** *such cattle are not eligible for slaughter for human consumption.*

Passports of Imported Cattle

Cattle from EU Member States

Passports issued by EU Member States vary in style. They can be a computer printout. They may be titled 'Movement Licence' or an equivalent description. See an example of a Dutch passport below.

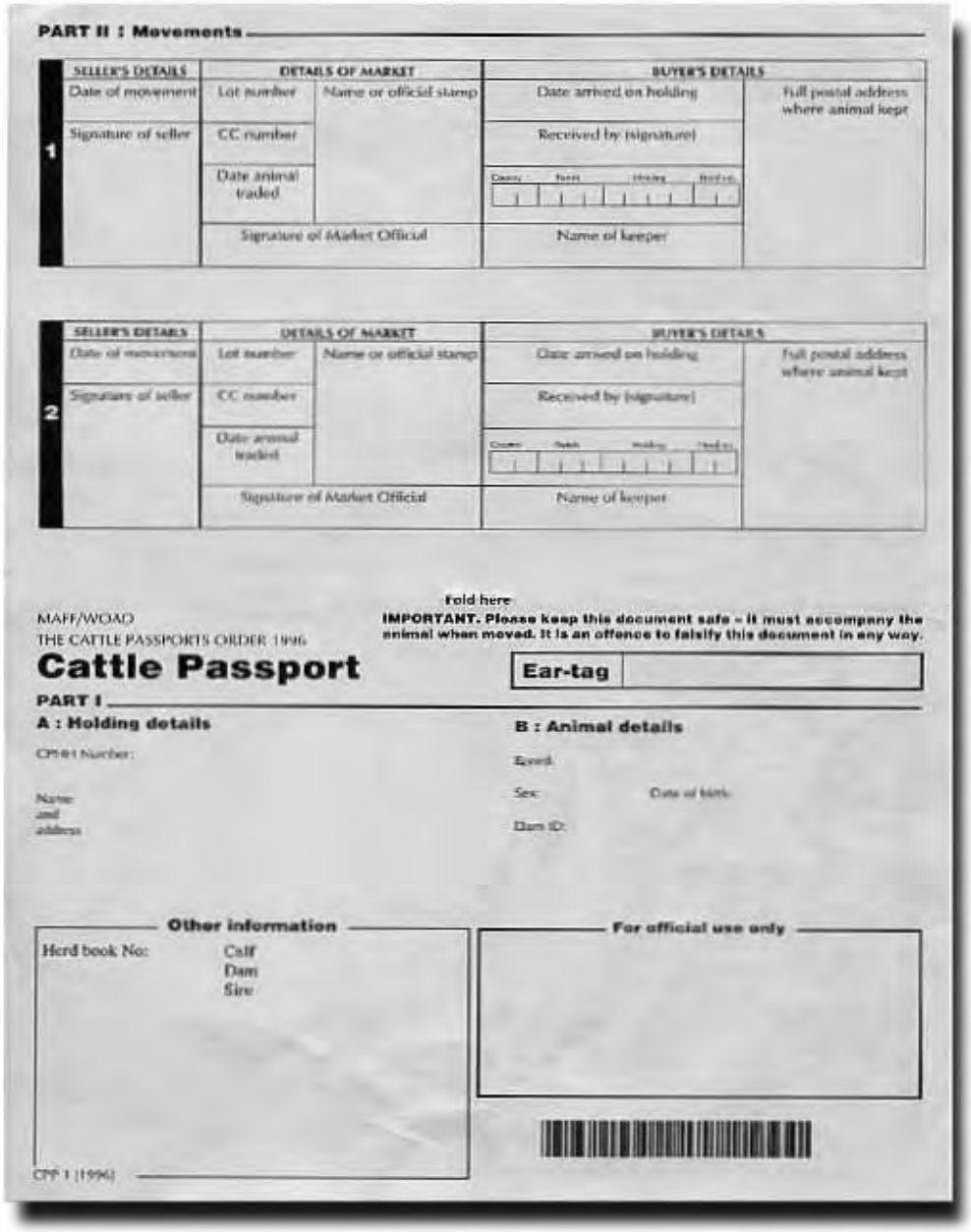
Imported animals not slaughtered within 20 days of arrival in GB must be issued with BCMS CPP13 passports. The inside back page provides details of the country from which the animal was imported.

Cattle from 3rd countries

A GB passport will accompany animals imported since 1 July 1996 from 3rd countries, unless they are presented for slaughter within 20 days of import in which case they must be accompanied by an export certificate and must be clearly identified.

CPP-1

This is an old style passport or CPP-1. It was issued from 01/07/96 until BCMS started issuing cheque book style passports in September 1998.



PART II : Movements

	SELLER'S DETAILS	DETAILS OF MARKET		BUYER'S DETAILS	
1	Date of movement	Lot number	Name or official stamp	Date arrived on holding	Full postal address where animal kept
	Signature of seller	CC number		Received by (signature)	
		Date animal traded		Country / Parish / Holding / Herd no.	
		Signature of Market Official		Name of keeper	

	SELLER'S DETAILS	DETAILS OF MARKET		BUYER'S DETAILS	
2	Date of movement	Lot number	Name or official stamp	Date arrived on holding	Full postal address where animal kept
	Signature of seller	CC number		Received by (signature)	
		Date animal traded		Country / Parish / Holding / Herd no.	
		Signature of Market Official		Name of keeper	

Fold here

MAFF/WOAD
THE CATTLE PASSPORTS ORDER 1996

IMPORTANT. Please keep this document safe – it must accompany the animal when moved. It is an offence to falsify this document in any way.

Cattle Passport

Ear-tag

PART I

A : Holding details

CPH/H Number:

Name and address

B : Animal details

Breed:

Sex: Date of birth:

Dam ID:

Other information

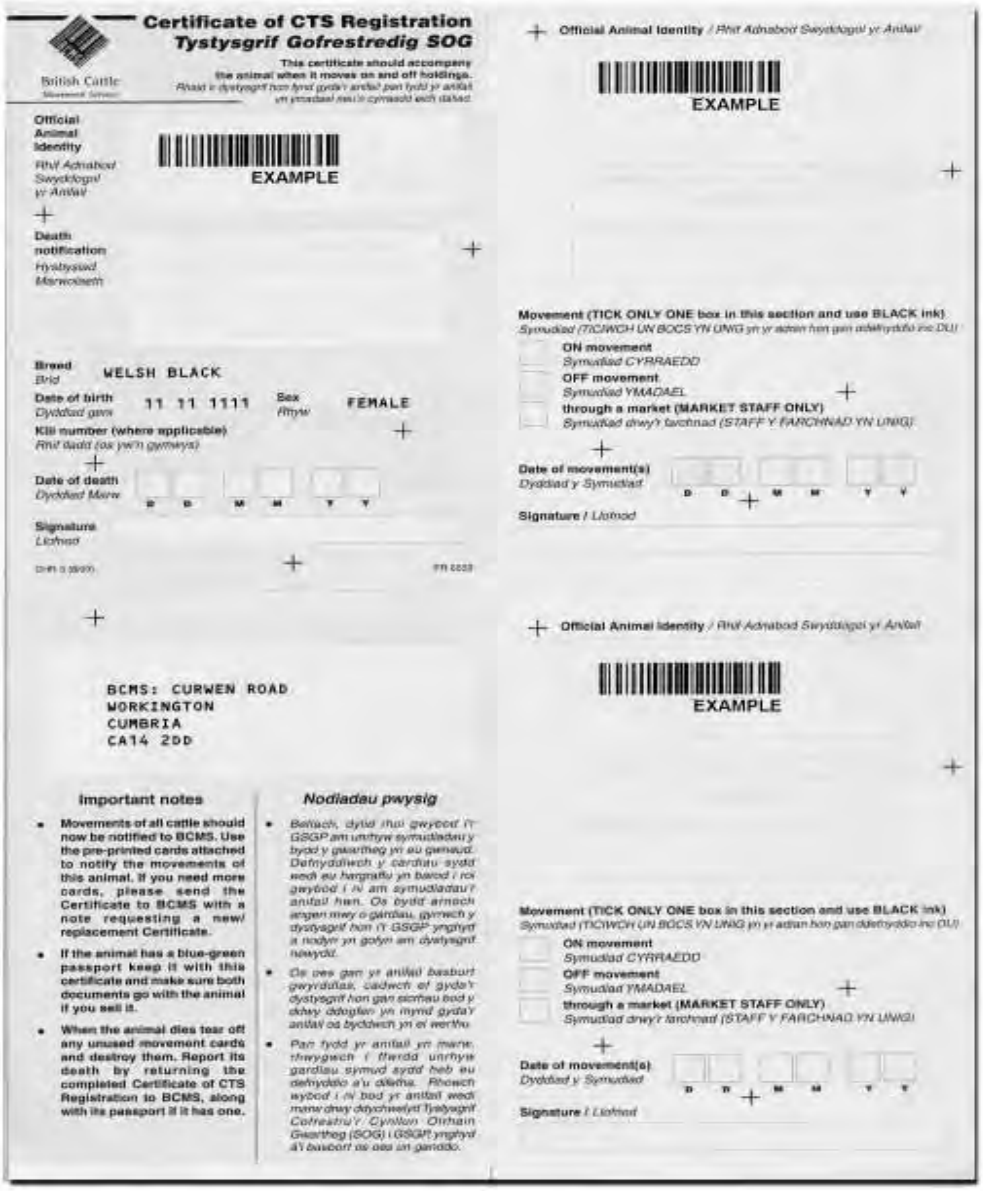
Herd book No: Calf
Dam
Sire

For official use only

CPP 1 (1996)

Certificate of CTS Registration (COR)

This is a Certificate of CTS Registration or COR. They were issued to cattle that were born before 01/07/96 (when passports were introduced) and animals that also have an old style passport (CPP-1).



Certificate of CTS Registration
Tystysgrif Gofrestredig SOG

British Cattle

This certificate should accompany the animal when it moves on and off holdings.
Rhaid i dystysgrif hon fynd gyda'r anifail pan fydd yr anifail yn symudiad rhwng daliadau

Official Animal Identity / *Rhif Adnabod Swyddogol yr Anifail*

EXAMPLE

Death notification / *Hysbysiad Marwolaeth*

Breed / *Brid* WELSH BLACK

Date of birth / *Dyddiad geni* 11 11 1111

Sex / *Rhyw* FEMALE

Kill number (where applicable) / *Rhif lladd (os yw'n gymwys)*

Date of death / *Dyddiad Marw* D D M M Y Y

Signature / *Llofnod*

BCMS: CURWEN ROAD
WORKINGTON
CUMBRIA
CA14 2DD

Movement (TICK ONLY ONE box in this section and use BLACK ink)
Symudiad (TICIWCH UN BOCS YN UNIG yn yr adran hon gan ddefnyddio inc DU)

ON movement
Symudiad CYRRAEDD
OFF movement
Symudiad YMADAEL
through a market (MARKET STAFF ONLY)
Symudiad drwy'r farchnad (STAFF Y FARCHNAD YN UNIG)

Date of movement(s) / *Dyddiad y Symudiad* D D M M Y Y

Signature / *Llofnod*

Official Animal Identity / *Rhif Adnabod Swyddogol yr Anifail*

EXAMPLE

Movement (TICK ONLY ONE box in this section and use BLACK ink)
Symudiad (TICIWCH UN BOCS YN UNIG yn yr adran hon gan ddefnyddio inc DU)

ON movement
Symudiad CYRRAEDD
OFF movement
Symudiad YMADAEL
through a market (MARKET STAFF ONLY)
Symudiad drwy'r farchnad (STAFF Y FARCHNAD YN UNIG)

Date of movement(s) / *Dyddiad y Symudiad* D D M M Y Y

Signature / *Llofnod*

Important notes

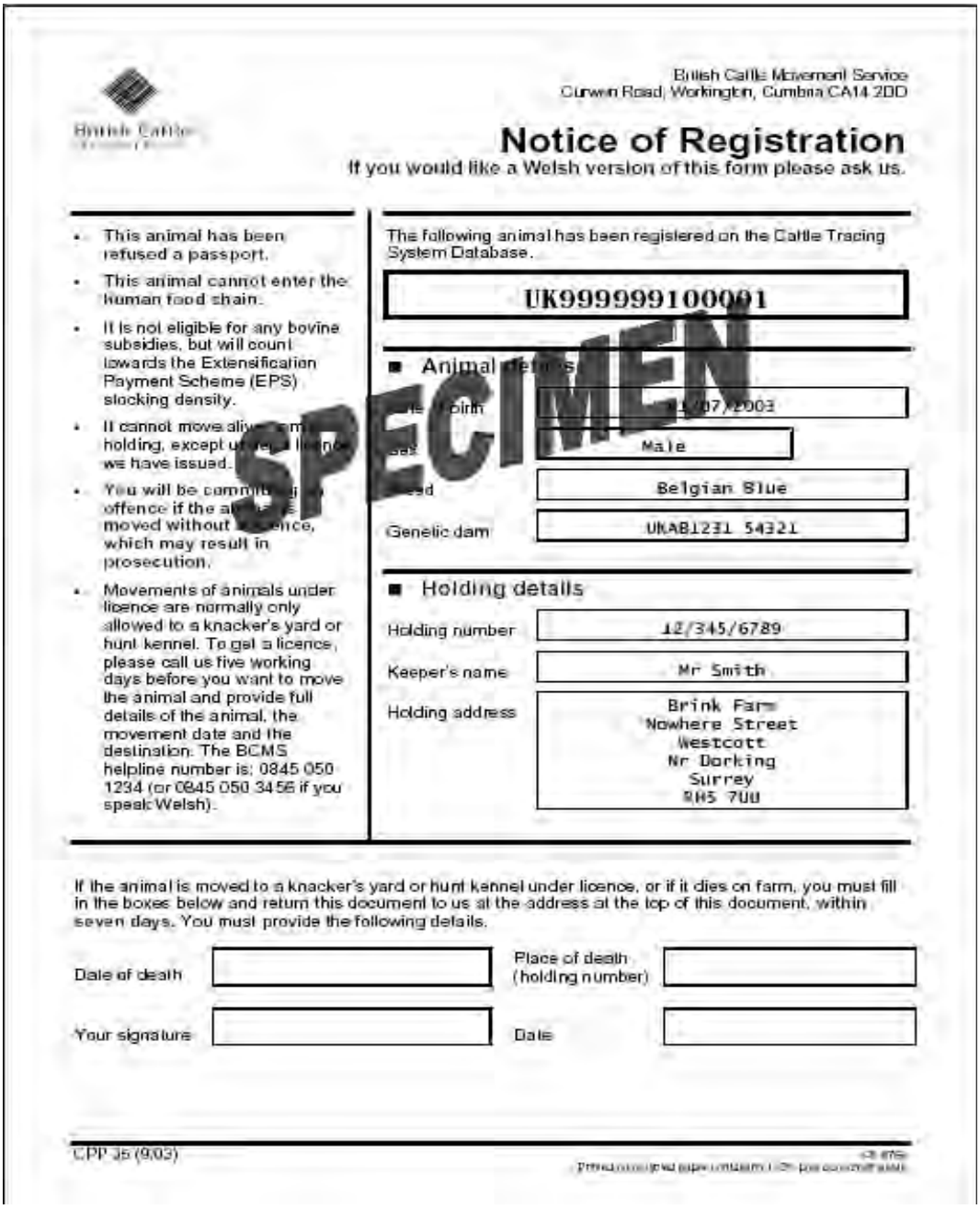
- **Movements of all cattle should now be notified to BCMS. Use the pre-printed cards attached to notify the movements of this animal. If you need more cards, please send the Certificate to BCMS with a note requesting a new/ replacement Certificate.**
- **If the animal has a blue-green passport keep it with this certificate and make sure both documents go with the animal if you sell it.**
- **When the animal dies tear off any unused movement cards and destroy them. Report its death by returning the completed Certificate of CTS Registration to BCMS, along with its passport if it has one.**

Nodiadau pwysig

- *Bellach, dylid rhoi gwybod i'r GSGP am unrhyw symudiadau y bydd y gwartheg yn eu gwneud. Defnyddiwch y cardiau sydd wedi eu hargraffu yn barod i roi gwybod i ni am symudiadau'r anifail hwn. Os bydd arnoch angen mwy o gardiau, gyrrwch y dystysgrif hon i'r GSGP ynghyd a nodyn yn gofyn am dystysgrif newydd.*
- *Os oes gan yr anifail basbort gwyrddlas, cadwch ef gyda'r dystysgrif hon gan sicrhau bod y ddwy ddogfen yn mynd gyda'r anifail os byddwch yn ei werthu.*
- *Pan fydd yr anifail yn marw, tnwygwch i ffwrdd unrhyw gardiau symud sydd heb eu defnyddio a'u dinistrio. Rhowch wybod i ni bod yr anifail wedi marw drwy ddychwelyd Tystysgrif Cofrestru'r Cyntlun Olrhain Gwartheg (SOG) i GSGP ynghyd a'i basbort os oes un ganddo.*

Notice of Registration (CPP35)

This is a Notice of Registration (CPP35) and is issued for animals that have been refused a passport.



British Cattle Movement Service
Curwen Road, Workington, Cumbria CA14 2DD

British Cattle

Notice of Registration

If you would like a Welsh version of this form please ask us.

- This animal has been refused a passport.
- This animal cannot enter the human food chain.
- It is not eligible for any bovine subsidies, but will count towards the Extensification Payment Scheme (EPS) stocking density.
- It cannot move alive from holding, except under a licence we have issued.
- You will be committing an offence if the animal is moved without a licence, which may result in prosecution.
- Movements of animals under licence are normally only allowed to a knacker's yard or hunt kennel. To get a licence, please call us five working days before you want to move the animal and provide full details of the animal, the movement date and the destination. The BCMS helpline number is: 0845 050 1234 (or 0845 050 3456 if you speak Welsh).

The following animal has been registered on the Cattle Tracing System Database.

UK999999100001

SPECIMEN

■ Animal details

Date of birth	01/07/2003
Sex	Male
Breed	Belgian Blue
Genetic dam	UKAB1231 54321

■ Holding details

Holding number	12/345/6789
Keeper's name	Mr Smith
Holding address	Brink Farm Nowhere Street Westcott Nr Dorking Surrey RH5 7UU

If the animal is moved to a knacker's yard or hunt kennel under licence, or if it dies on farm, you must fill in the boxes below and return this document to us at the address at the top of this document, within seven days. You must provide the following details.

Date of death		Place of death (holding number)	
Your signature		Date	

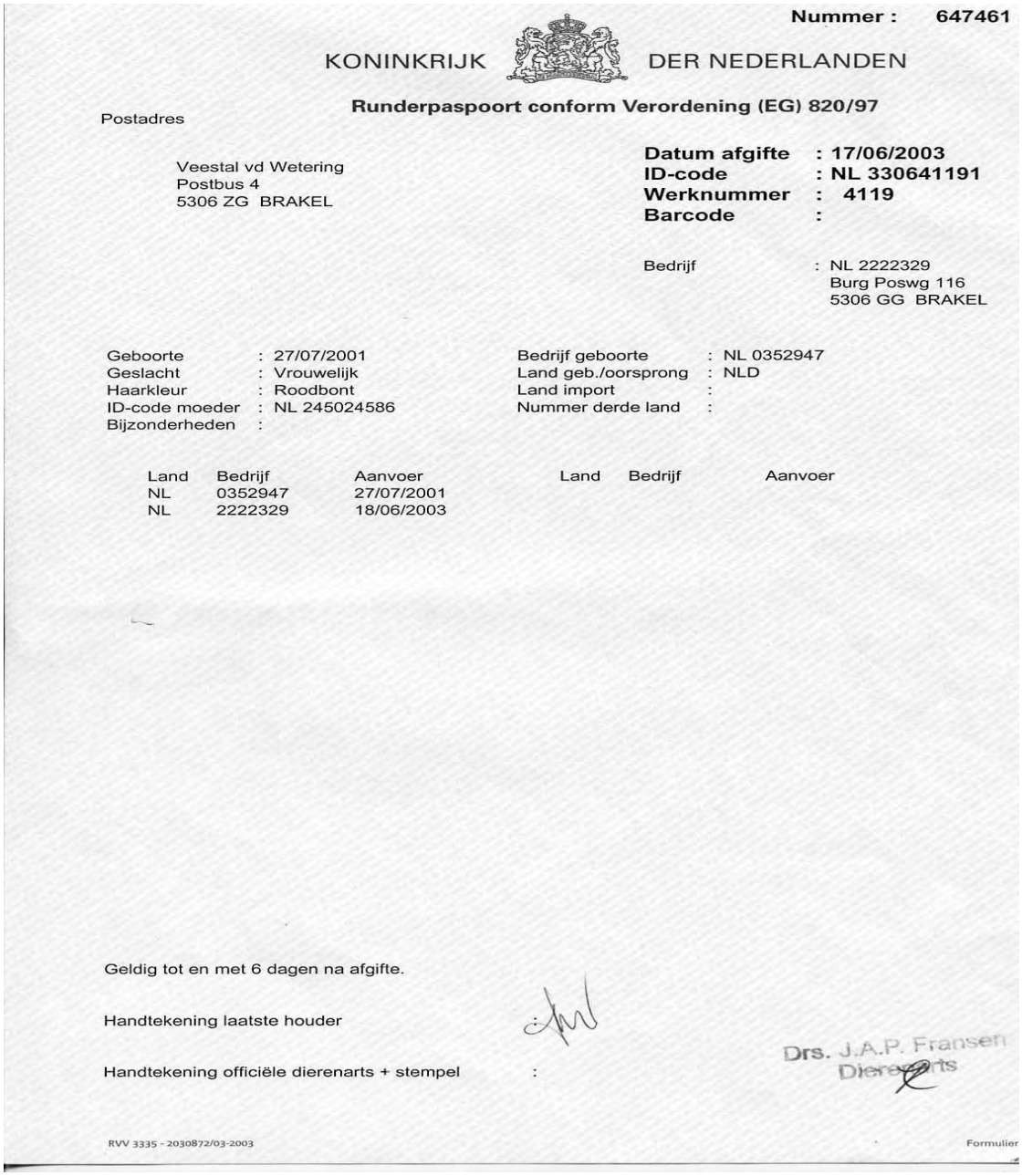
CPP 35 (9/03)

CPP13

This is a cheque book-style passport for animals born or imported after 28 September 1998. These are also issued when keepers send their old style passports and certificates of registration for amendment.

Example MBM Stamped Passport

Example of a Dutch Cattle Passport



Nummer : 647461

KONINKRIJK DER NEDERLANDEN

Runderpaspoort conform Verordening (EG) 820/97

Postadres

Veestal vd Wetering
Postbus 4
5306 ZG BRAKEL

Datum afgifte : 17/06/2003
ID-code : NL 330641191
Werknummer : 4119
Barcode :

Bedrijf : NL 2222329
Burg Poswg 116
5306 GG BRAKEL

Geboorte	: 27/07/2001	Bedrijf geboorte	: NL 0352947
Geslacht	: Vrouwelijk	Land geb./oorsprong	: NLD
Haarkleur	: Roodbont	Land import	:
ID-code moeder	: NL 245024586	Nummer derde land	:
Bijzonderheden	:		

Land	Bedrijf	Aanvoer	Land	Bedrijf	Aanvoer
NL	0352947	27/07/2001			
NL	2222329	18/06/2003			

Geldig tot en met 6 dagen na afgifte.

Handtekening laatste houder :

Handtekening officiële dierenarts + stempel :

Drs. J.A.P. Fransen
Dierenarts

RVV 3335 - 2030872/03-2003 Formulier

SHEEP AND GOATS (SCOTTISH REQUIREMENTS)

Baseline tags and tattoos

Sheep [goats] moving from their holding of birth must be baseline tagged/tattooed with the holding of birth's UK flock number and a 6 digit individual number.

The Baseline tag/tattoo should preferably be in the animal's left ear.

Baseline Tattoo for sheep [goats] moving from their holding of birth should read: 123456 118

UK marks can only be used for animals born on your holding

Sheep [goats] not on their holding of birth and not already baseline tagged/tattooed must be identified prior to moving off your holding with a baseline tag or tattoo.

Tag format: S + Flock number of the current location + a unique 6 digit individual number.

The tattoo format is S 123456 123

Note: This tag/tattoo should preferably be in the left ear.

Replacement tags

Lost baseline tags must be replaced as follows:

If a keeper knows the lost baseline tag's exact details he may apply a tag with the same details

If a keeper is unsure of the details on the lost baseline tag, he must apply a Replacement tag. This tag must be Red and should preferably go in the left ear.

It should be in the format:
UK + Flock number of its current location + a unique 6 digit number + R.

Movement tags

A Movement tag must be applied when an animal leaves a location other than where the baseline tag/tattoo was applied. Up to a maximum of 3 Official tags may be applied.

Movement tags should be placed in the opposite ear to the baseline tag/tattoo.

The format is: S + Flock number of its current location

No individual number should be used on a Movement tag

If a keeper decides not to apply a Movement tag or the animal already has 3 official tags, he must record its baseline tag details on the movement document.

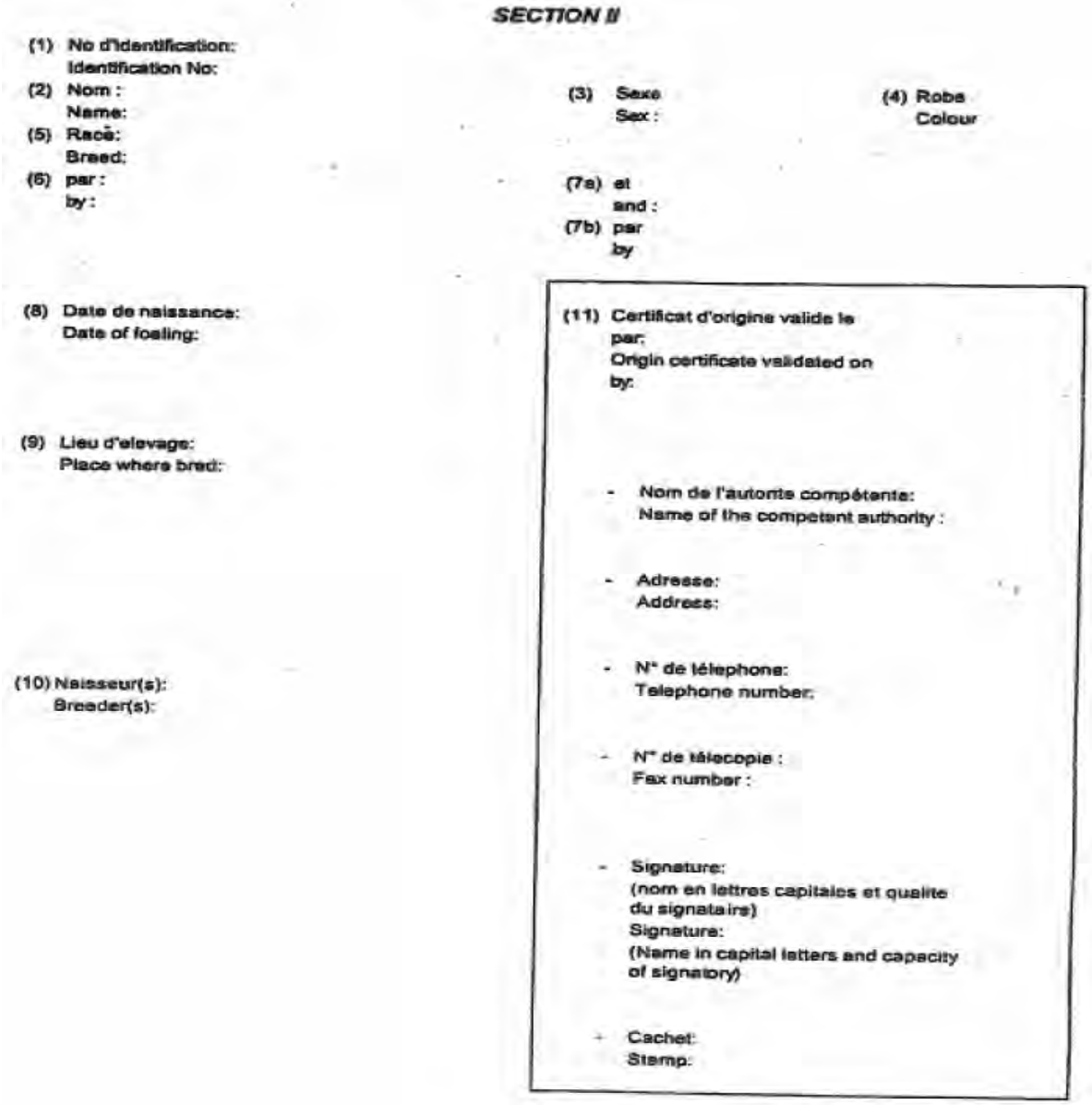
PIG IDENTIFICATION MARKS

The identification mark may be any of those listed in the table below: *Regulation: PRIMO Article 11.*
Eartag
Eartags must be: ▪ *printed or stamped – not handwritten* ▪ *tamperproof and not re-usable* ▪ *include the letters UK plus Defra herdmark. A unique identification number can follow on from the official information or be printed on the other side of the tag e.g. UK AB1234 or UK AB1234 001* ▪ *a suitable size and design for pig's age* ▪ *capable of remaining legible throughout carcase processing (for pigs going for slaughter).* *Note: Plastic tags are not acceptable for slaughter pigs because they may melt during scalding or singeing*
Tattoo
Defra herdmark on one ear. *If desired, the other ear may have an individual number and/or management information. Size is not specified, but the tattoo must be legible before and after slaughter and throughout processing.*

HORSE PASSPORTS

Passport Section	
Sections I & II	*The horse identity must match the information contained in Sections I & II.*
Section IX, Part IIA	*The owner declaration stating that the horse is intended for human consumption must be signed and dated.*
Section IX, Part IIIB	*The withdrawal periods for the medicines recorded in these sections must have been met.*

Section II of the Horse Passport



SECTION II

(1) No d'identification:
Identification No:

(2) Nom :
Name:

(3) Sexe
Sex :

(4) Robe
Colour

(5) Race:
Breed:

(6) par :
by :

(7a) et
and :

(7b) par
by

(8) Date de naissance:
Date of foaling:

(9) Lieu d'elevage:
Place where bred:

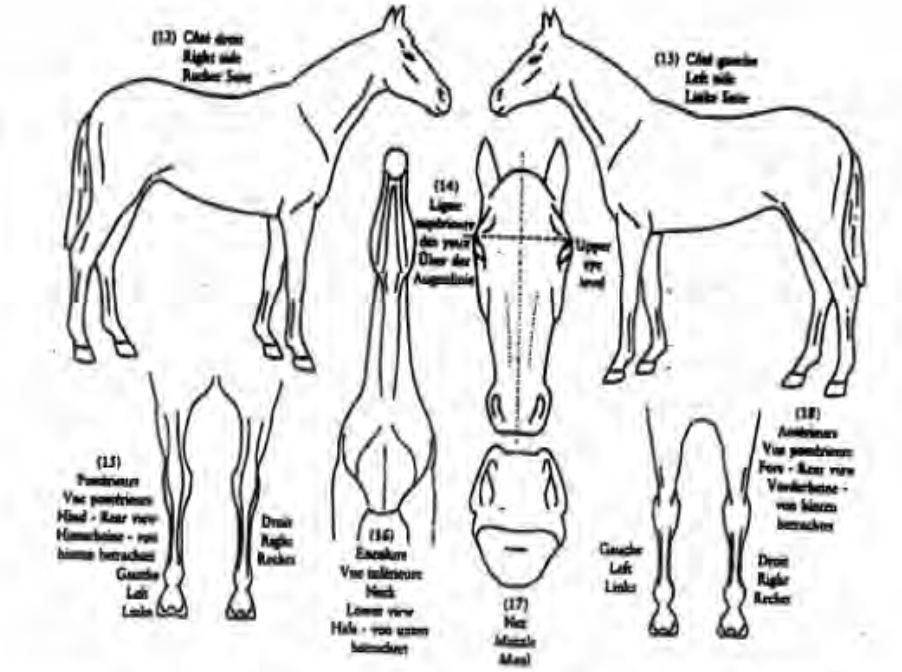
(10) Naisseur(s):
Breeder(s):

(11) Certificat d'origine valide le
par:
Origin certificate validated on
by:

- Nom de l'autorite compétente:
  Name of the competent authority :
- Adresse:
  Address:
- N° de téléphone:
  Telephone number:
- N° de télecopie :
  Fax number :
- Signature:
  (nom en lettres capitales et qualite du signataire)
  Signature:
  (Name in capital letters and capacity of signatory)
- Cachet:
  Stamp:

Section III of the Horse Passport

SECTION III



(2) Nom - Name: (5) Race - Breed : (3) Sexe - Sex: (4) Robe - Colour:

(19) Signalement relevé sous la mère par:
Description taken with dam by:

Tête:
Head:

Ant. G:
Forleg L:

Ant. D:
Foreleg R:

Post G:
Hindleg L:

Post D:
Hindleg R:

Corps:
Body:

Marques:
Markings:

Le:
On:

(20) Circonscription:
District:

(21) Signature et cachet du vétérinaire agréé
(ou de l'autorité competente)
Signature and stamp of qualified veterinary surgeon
(or competent authority)
(en lettres capitales)
(in capital letters)

SECTION IX OF THE HORSE PASSPORT

SECTION IX

MEDICINAL TREATMENT

IDENTIFICATION NUMBER OF ANIMAL (1) (*) :
.....

Part I

Date and Place of issue of this section: .....(1)

Competent authority issuing this section of the identification document.....(1)

Part II (excludes the animal definitively from slaughter for human consumption, must be reconfirmed when the animal changes ownership)

I, the undersigned owner (*) / representative of the owner (*) declare that the animal described in this identification document is not intended for slaughter for human consumption (*)		
Date and Place	Name in capitals and signature of the owner of the animal or his/ her representative	Name in capitals and signature of representative of competent authorities

Part III — A (only valid in connection with information in Part III —B)

I, the undersigned owner (*)/ representative of the owner (*) declare that the animal described in this identification document is intended for slaughter for human consumption (*)		
Date and Place	Name in capitals and signature of the owner of the animal or his/ her representative	Name in capitals and signature of representative of competent authorities.

NI OPERATORS' OBLIGATIONS	*ADVICE*

9.4 ANNEX A2: ANIMAL IDENTIFICATION REQUIREMENTS (NORTERN IRELAND)

- **CATTLE (CC)**
- **SHEEP & GOATS (CS)**
- **PIGS (CP)**
- **HORSES (CH)**
- **FARMED DEER (CD)**

- **Establish procedures to identify and trace food producing animals to their place of origin.**

C1, C2

CATTLE - NORTHERN IRELAND

Eartags missing at a slaughterhouse

CC1. If the operator of a slaughterhouse discovers that an animal, which should have been identified by eartags in accordance with Article 4.1 of the Council Regulation or the 1964 Order, is not so identified, he shall notify the Department of that fact and shall ensure that the animal is not slaughtered for human consumption.

The Cattle Identification (No.2) Regulations (NI) 1998 (SR 279) Regulation 6(4)

CC2. The operator of a slaughterhouse shall not accept any animal into that slaughterhouse, or slaughter it, unless it is identified with eartags in accordance with Article 4.1 of the Council Regulation of 1760/2000 or, where appropriate, the 1964 Tuberculosis Order.

CC3. If an animal is slaughtered in contravention of paragraph (1), the operator of the slaughterhouse shall dispose of the carcase of the animal as an animal by-product in accordance with the Animal By-Products Regulations (Northern Ireland) 2003 unless the Department, on being satisfied as to the identity of the animal concerned, certifies the carcase as fit for human consumption.

*The **Cattle Identification (No.2)** Regulations (NI) 1998 (SR 279) regulation 12,*

CC4. Any person who, in contravention of Article 4.3 of the Council Regulation, fails to attach eartags to an animal imported from a third country within 20 days of the animal passing the checks specified in Council Directive 91/496/EEC (laying down the principles governing the organisation of veterinary checks on animals entering the Community) shall be guilty of an offence.

CC5. It shall be a defence for any person charged under this regulation to prove that when the animal was imported, the holding of destination was a slaughterhouse, and the animal was slaughtered within 20 days of undergoing the checks on importation.

*The **Cattle Identification (No.2)** Regulations (NI) 1998 (SR 279) regulation 9, points 1-2*

NI OPERATORS' OBLIGATIONS	*ADVICE*
	Cattle Eartags
• **Make sure that cattle are only slaughtered for human consumption when identified with two matching eartags.** ***CC1*** • **Make sure that carcases of cattle slaughtered <u>without either or both eartags</u> are identified as an animal by-product and disposed of unless the OV is satisfied as to the identity of the animal and serves a notice allowing it to be used for human consumption.** ***CC2, CC3***	***Check that cattle have complete, matching and approved eartags and the number correlates with the movement documents MC2 or MC2L****.* *Slaughterhouse operators have been given the facility through APHIS-on-line to act as agents for the purposes of ordering and receiving replacement tags where a single tag is missing.* *All eartags must be of an approved type. Both eartags attached to the animal will carry the following information:-* *- the DARD logo* *- the letters 'UK'* *- the unique number allocated in relation to the animal by the Department e.g. UK 230011 200123.* *In the case of two piece eartags, both parts must bear the logo.* ***Cattle born before 1st January 1998*** *were required to be identified by a single eartag of a type approved by DARD.* ***Cattle born between 1st January 1998 and 31st December 1999*** *were required to be identified by a plastic tag of a type approved by DARD in each ear, each of the pair of tags bearing the same identification code which must consist of the letters UK, the herd number, the individual animal number and a check letter. A single metal tag and matching plastic tag was permitted for animals born between 01/01/98 and 14/09/98.* ***Cattle born after 1st January 2000****, should be identified with an all-numeric tag, i.e. inscribed with a check digit as opposed to a check letter.*
	Cattle imported from EU member states, Great Britain, the Isle of Man and the Channel Islands
	Cattle imported into NI from EU member states (including any

NI OPERATORS' OBLIGATIONS	*ADVICE*
	*imported to an EU country from a 3rd country for onward trade with the UK)***,** *Great Britain, the Isle of Man and the Channel Islands must have a printed eartag in each ear, both with the same official identity bearing:* - *the member state's country logo, the Crown logo in the case of GB, the IoM and the Channel Islands;* - *the country code; and* - *an official identity of not more than 12 digits.*
	Cattle imported from 3rd countries
• **Cattle imported from a 3rd country for slaughter within 20 days of the animal passing the veterinary checks specified in Directive 91/496/EEC on importation may be slaughtered with non-UK eartags.** ***CC5***	*Cattle from 3rd countries that go direct to slaughter within 20 days of arrival in the UK must have eartags and administrative documents of the country of origin and a veterinary certificate. Otherwise cattle must be re-tagged with UK tags within 20 days of passing the veterinary checks on imports and must be registered on APHIS.*
	Unacceptable identification
• **Take appropriate measures and notify the official veterinarian if the requirements are not complied with.** ***B3***	*Unacceptable identification would include:* ▪ *hand written tags,* ▪ *tattoos (with the exception of pedigree animals born before January 1994),* ▪ *printed tags without a country code,* ▪ *tags where the code appears to have been amended or tampered with,* ▪ *tags with missing information e.g. missing one number,* ▪ *unreadable eartags.*

NI OPERATORS' OBLIGATIONS	*ADVICE*
	In such cases, notify the OV immediately and take steps to identify the animal within 48 hours. ***Disposal of unidentified carcases*** *- where the OV is not satisfied with evidence of a carcase's identity, the carcase, its offal and all other parts of the carcase (except the hide if removed) should be identified and treated as specified risk material, category 1 animal by-product in accordance with the TSE Regulations (NI) 2006 and disposed of in accordance with the Animal By-Products Regulations (NI) 2003.*

Cattle movements to slaughterhouses and notification of deaths

CC6. The notification of movement of cattle in accordance with the second indent of Article 7.1 of the Council Regulation shall be by the keeper correctly completing a notification document with the date of the movement to which it relates and indicating whether the movement was off or on to his holding.

CC7. In accordance with Article 6.3 of the Commission Regulation a notification document shall be sent to the Department on the day of the movement to which it relates.

CC8. Each notification document sent in accordance with this regulation shall be signed and dated by the keeper who sent it.

CC9. The keeper of an animal shall ensure that a copy of the notification document delivered in pursuance of this regulation accompanies the animal to which it relates while it is in transit.

CC10. The Department may authorise any person to notify movement of an animal for the purposes of regulation 7 by electronic means.

*The **Cattle Identification** (Notification of Births, Deaths and Movements) Regulations (NI) 1999, Regulation 7 and 9,*

CC11. The notification of the death of an animal in accordance with the second indent of Article 7.1 of the Council Regulation and Article 6.3 of the Commission Regulation shall be by the keeper correctly completing a notification document with the details of the death of the animal and delivering it to the Department within 7 days in accordance with Article 6.4 of the Council Regulation.

*The **Cattle Identification** (Notification of Births, Deaths and Movements) Regulations (NI) 1999, Regulation 8*

CC12. The operator of a slaughterhouse shall remove the eartags from each animal at the slaughterhouse; and keep the eartags in a secure place and surrender them to the Department on request.

NI OPERATORS' OBLIGATIONS	*ADVICE*

CC13. It shall be the duty of the operator of a slaughterhouse to present to a veterinary inspector on request any animal which has been admitted to the slaughterhouse and afford to him all reasonable facilities for the purpose of inspecting it and, if necessary, removing any eartag from it.

CC14. The person operating a slaughterhouse shall mark or cause to have marked each animal or carcase admitted to those premises, and after an animal is slaughtered, the carcase of that animal, in a manner considered by the Department to be sufficient to identify at any time the animal or carcase from which the eartag has been removed in accordance with paragraph (3).

*The **Cattle Identification** (No.2) Regulations (NI) 1998 (SR 279) Regulation 12 points 3, 4 & 6*

Cattle from other Member States, Great Britain, the Isle of Man and the Channel Islands

CC15. If an animal is brought to a holding of destination in Northern Ireland from a Member State, Great Britain, the Isle of Man or any of the Channel Islands the keeper shall, subject to paragraph (2), within 7 days of its arrival at that holding, and in any event before the animal leaves that holding, surrender the cattle passport accompanying the animal to the Department.

CC16. Nothing in paragraph (1) shall require the keeper of any animal to surrender to the Department a passport relating to it where the holding of destination was a slaughterhouse the animal was slaughtered within seven days of its arrival at the slaughterhouse, but in such a case the keeper shall give any cattle passport accompanying the animal to the official veterinary surgeon for the slaughterhouse, or his representative, at the time of slaughter.

CC17. Any person who fails to surrender a cattle passport as required by paragraph (1) or (2) shall be guilty of an offence.

The Cattle Passport Regulations (NI) 1999 (SR 324) Regulation 8

CC18. Each keeper of animals shall keep an up to date register. The register shall be kept for 3 years from the end of the calendar year in which the last entry was made.

Council Regulation 1760/2000 Article 7 & The Cattle Identification (Enforcement) Regulations (NI) 1998 (SR 27) Regulations 3(4) & (5)

APHIS

The Animal and Public Health Information System (APHIS) provides a Northern Ireland database for recording animal identification, animal movement, animal and public health and holding information.

The system should be used to check:

- *validity of movement documents*
- *accuracy of information on movement documents*
- *status of animals regarding animal and public health issues e.g. animals age, disease status of holding from which the animal comes etc.*

NI OPERATORS' OBLIGATIONS	***ADVICE***
The system is used to record ante- and post-mortem inspection findings and to make these available to relevant parties.	
	Cattle movement and death notification
• **All cattle movements on to the slaughterhouse must be notified and all cattle deaths must be notified.** ***CC7, CC8, CC9, C10, C11***	***Check that animal identification is adequate and correlates with accompanying documents.*** *All cattle must be accompanied by a valid movement document, MC2 or MC2L containing producer and animal details as held on APHIS (Animal and Public Health Information System).* *Submission of the movement documents for entering information onto APHIS is accepted as the notification of movement onto the holding.* *Application of the kill number and confirmation of the slaughter is accepted as the notification of death.*
	Register
• **Keepers, including slaughterhouse operators are required to keep records of cattle moving to the slaughterhouse and cattle deaths.** ***CC18***	*The register must contain the following information:* ▪ *date of arrival at the lairage or slaughterhouse.* ▪ *date of death.* *Availability for inspection - the register (or a copy of computer printouts) must be available for inspection by DARD.*
	Removal of eartags and marking of carcases
• **Each animal and resultant carcase or carcase admitted to the slaughterhouse must be marked to allow traceability back to the eartags which have been**	*Apply a kill number tag to each animal and record the kill number applied against the original eartag number on the movement document. The kill number is then entered on APHIS correlated to the original identification mark.* *Remove the official eartags from the carcase once the kill*

NI OPERATORS' OBLIGATIONS	*ADVICE*
removed. ***CC14*** • **All cattle must have the eartags removed and the eartags must be retained in a secure place until surrendered to DARD.** ***CC12***	*number has been applied and after slaughter. Collect all official tags and retain in a secure location until surrendered to DARD for disposal.*
	Cattle Passports
	Imported Cattle
• **Make sure that only imported cattle with a valid cattle passport are slaughtered for human consumption.** ***CC15, CC16***	*Cattle from EU countries, Great Britain, the Isle of Man and the Channel Islands can go direct to slaughter in NI without being registered on APHIS and accompanied by their passport from the place of origin provided they go direct to the slaughterhouse and are slaughtered within 7 days.* *See guidance on acceptable cattle passports in GB.*
	Unacceptable Identification/Documentation
• **Cattle must be accompanied by a valid MC2 or MC2L.** ***CC6, CC7, CC8, CC9*** • **Take appropriate measures if the requirements are not complied with and notify the official veterinarian.** ***B3***	*Validity of the MC2 can be checked in the first instance that it is a valid document, recognised by APHIS. Secondly checks should be made to see that it is completed correctly – all sections filled in and in the case of MC2 that the animal details match that held on APHIS. Since the MC2L is generated by APHIS the checks are restricted to ensuring that the animal details on the document match those of the animal presented. Where the animal details on either the MC" or the MC2L do not match the live animal presented for slaughter this should be reported to DARD official at the slaughterhouse. For example:* ▪ *different identification number, or* ▪ *different sex, or*

NI OPERATORS' OBLIGATIONS	*ADVICE*
	▪ *different breed, or* ▪ *different colour, or* ▪ *where the animals date of birth is at odds with its appearance.*
	Carcases Sent for Dressing
	Bodies of emergency slaughter cattle should be accompanied by the producer's declaration and the veterinary certificate as well as a movement document.
	TSE Regulations
• **No cattle born or reared in the UK before 01 August 1996 may be slaughtered for human consumption or have its body consigned to a slaughterhouse for dressing for human consumption.** ***TSE Regulations (NI) 2006 (SR 202), Schedule 2, Part I, point 2*** • **Cattle over 30 months of age can only be slaughtered for human consumption in a slaughterhouse where DARD has approved the 'Required Method of Operation' (RMOP).** ***TSE Regulations (NI) 2006 (SR 202), Schedule 2, Part I, point 4***	*Any bovine arriving at a slaughterhouse and found to be born or reared in the UK before 01/08/96 should be reported to the OV.* ***Disposal*** *- Any such animals will be seized and destroyed and treated as a fallen animal (including procurement of the necessary TSE sample) as provided for in Regulation 14 of the TSE Regulations (NI) 2006.* ***Cattle over 30 months of age*** *- must be clearly identified and separated into batches from bovine animals which are 30 months of age and under.* ***OTM Animals identified at establishment with no approved RMOP*** *- the FBO must inform the OV and should also make arrangements for the animal be consigned onward to a suitable slaughterhouse with the agreement of the recipient. There should be no unnecessary delay in arranging the transfer for slaughter since the FBO is obliged to ensure slaughter without undue delay.*

NI OPERATORS' OBLIGATIONS	*ADVICE*

SHEEP & GOATS - NORTHERN IRELAND

CS1. All animals on a holding born after 9 July 2005 shall be identified in accordance with paragraph 2 within a period to be determined by the Member State as from the birth of the animal and in any case before the animal leaves the holding on which it was born.

Council Regulation (EC) No 21/2004 Article 4, point 1

CS2. The operator of a slaughterhouse shall take reasonable steps to satisfy himself of the place of origin and movement history of any animal presented for slaughter.

CS3. The operator of a slaughterhouse shall ensure that an animal is not accepted for slaughter or slaughtered unless it is identified in accordance with this Order.

CS4. The operator of a slaughterhouse shall ensure that an animal is not accepted for slaughter unless it is accompanied by a valid copy of a movement document in accordance with Article 19 [except for animals not originating from a holding in NI].

CS5. The operator of a slaughterhouse shall endorse the movement document relating to the animal with the name and address of the owner or person in charge of the slaughterhouse and such further information as the Department may specify on the movement document.

CS6. The operator of a slaughterhouse shall in the case of an animal not originating from a holding in Northern Ireland but moving directly to the slaughterhouse from the point of import, ensure -

(i) that it is accompanied by the original veterinary health certificate from the country/region of origin or a copy of the same endorsed by an inspector;

(ii) that the certificate described at sub-paragraph (i) is surrendered to an inspector at the slaughterhouse at the earliest opportunity after arrival of the animal; and

(iii) that the veterinary health certificate described at sub-paragraph (i) is endorsed in a manner specified by the Department upon acceptance of an animal for slaughter, ensuring that every detail specified by the Department in respect of an imported animal has been recorded on the document;

CS7. The operator of a slaughterhouse shall retain a copy of the veterinary health certificate referred to in (e) or the completed movement document referred to in (d) for a period of 3 years following the end of the month in which the document was received.

CS8. The operator of a slaughterhouse shall remove all eartags from each animal and keep them in a secure place and surrender them to the Department on request.

CS9. The operator of a slaughterhouse shall provide such information or returns, as the Department shall determine, in respect of the movement of an animal into the slaughterhouse.

The Sheep and Goats (Records, Identification and Movement) Order (Northern Ireland) 2005, regulation 23 (SR 2005/535)

	Sheep and goats

NI OPERATORS' OBLIGATIONS	*ADVICE*
• **Only sheep and goats with valid identification, eartag(s) and movement document, are slaughtered for human consumption.** ***CS2, CS3, CS4***	***Check that animal identification is adequate and correlates with the movement document so that it can be traced back to the last farm from which it was consigned.*** ***In the case of sheep and goat identification,*** *these should meet the requirements of EC Regulation 21/2004 and The Sheep and Goats (Records, Identification and Movement) Order (Northern Ireland) 2005 (SR 2005/535)* *http://www.opsi.gov.uk/legislation/northernireland/ni-srni.htm* ***UK derogation*** *- EC 21/2004 Regulation places a requirement for double tagging of all sheep & goats; however the UK is currently allowed to continue the current single tagging system.* ***Initial tagging requirement*** *- all sheep and goats must be individually identified with an approved NI natal tag normally placed in the left ear and includes an individual number, the holding number and the letters 'UK'.* ***Further tagging*** *- for further moves, all sheep and goats must be identified with an approved green movement tag, normally placed in the right ear (includes an individual number, the holding number and the letters 'UK'.).* ***Lost tags*** *- lost or unreadable UK tags must be replaced with an orange total replacement tag.* ***Tagging of sheep and goats to slaughter*** *All sheep and goats moved for slaughter must be tagged with at least:* ▪ *the natal tag if they come from the farm where theywere born - a green tag in the left ear with the prefix UK9 followed by a 6 digit flock identifier and 6 digit individual animal number.* ▪ *a green movement tag where the animal has been on more*

NI OPERATORS' OBLIGATIONS	*ADVICE*
	than one holding in its life - a green tag in the right ear. There may be two movement tags applied where the sheep has moved through more than one holding. There may only be movement tags where the sheep moved from the natal holding prior to 09/07/05. ▪ *an orange total replacement tag (if the natal and movement tags have been lost), the number of which relates to holding on which the original identification was lost* ***Note:*** *animals born in other Member States and GB will retain their original ID and an approved green tag will be placed in the right ear. Animals born in 3rd Countries will have an F an approved green tag applied to the right ear within 6 days of importation.*
	Checks on identification
	In the case of sheep transported ***directly from the farm****, the operator should check that all sheep are tagged and that the number presented correlates with details on the movement document MS2. The operator must also check a proportion of the consignment to verify that their tags correlate with the movement document.* *Sheep sold through a* ***livestock market*** *may be consigned to the slaughterhouse in a composite group comprising sheep from many different farms. Slaughterhouse operators should have a system to check that all sheep are tagged, that the numbers presented correlate and check a proportion of each consignment to ensure that they are properly identified.* *Slaughterhouse operators should have a written description of the system employed, and should have a procedure for audit of the system.* *Factors to be considered by the operator in determining the size*

NI OPERATORS' OBLIGATIONS	*ADVICE*
	of the proportion of a consignment to be checked include record of previous checks on sheep from the same source. As a guide, for a batch size less than 100, a minimum 10% check, and more than 100 minimum 5% check is recommended. *In all cases, the system of checks on identification should be agreed with the OV, and include a system of notification of arrival of animals in the slaughterhouses to the OV, taking account of the operating practices of the plant.*
	Unacceptable Identification/Documentation
• **Take appropriate measures if the requirements are not complied with and notify the official veterinarian.** ***B3***	*If, during pre-slaughter checks, a sheep or goat is found with unacceptable identification markings or documentation, notify the OV an hold the consignment.* ***'Reasonably ascertainable identity'** - the identity of a sheep may be considered 'reasonably ascertainable' if it can be traced back to the last farm from which it was moved. Loss of eartags is a recognised problem in sheep. When sheep without tags are delivered to the slaughterhouse, and this cannot be considered to have happened since the animals left the farm (i.e. significant numbers of sheep, or no physical evidence of having been tagged), they should not be accepted for slaughter for human consumption.* ***Disposal** - where the OV is not satisfied with evidence of a carcase's identity, the carcase, its offal and all other parts of the carcase (except the pelt if removed) is to be identified and disposed of as SRM, category 1 animal by-product.*

NI OPERATORS' OBLIGATIONS	*ADVICE*

PIGS – NORTHERN IRELAND

Identification of pigs

CP1. The pig shall be clearly marked with the holding number of the holding on which it is kept; and in the case of a breeding pig, with an individual number (of not more than 4 characters) to distinguish it from any other pig marked with the same holding number.

CP2 The holding number and, if appropriate the individual number shall be marked on the pig by means of a tattoo or a tag attached to its ear.

Aujeszky's Disease Order (Northern Ireland) 1994 (SR 198), Schedule 1

Movement of pigs

CP3. A person shall not move any pig from or onto any holding except under and in accordance with the conditions of a licence issued by DARD.

CP4. Where it is a condition of any [movement] licence that pig movement is accompanied by any particular document … the consignee of the pig shall retain the document for 1 year from the date of movement and shall make it available for inspection by an inspector and permit him to take a copy.

Aujeszky's Disease Order (Northern Ireland) 1994 (SR 198), Article 5

Imported pigs

CP5. Pigs imported into Northern Ireland from outside the EU must be identified at the destination holding in accordance with the Aujeszky's Disease Order (NI) 1994 unless the pigs are delivered directly to slaughter.

Aujeszky's Disease Order (Northern Ireland) 1994 (SR 198)

	Pigs
• **Check that pigs to be slaughtered for human consumption are appropriately identified.** ***CP1, CP2***	***Check that animal identification is adequate and correlates with the movement document.*** ***In the case of pig identification****, these should meet the requirements of* ***The Aujeszky's Disease Order (NI) 1994****.* ***Pig identification marks*** *- may be any of those listed below:* *The identification mark used for pigs going to the slaughterhouse is the slapmark. It may be the holding code (e.g. UK2ABC) from which the consignment originated or a curer number consisting of four digits which are agreed between the producer and the slaughterhouse FBO and*

NI OPERATORS' OBLIGATIONS	*ADVICE*
	registered to that holding code on APHIS. The four-digit curer number slapmark is a concession, which was agreed between DARD, producers and slaughterhouse operators and is not referred to in the legislation. ***Slapmark -*** *applied to both shoulders, size is not specified; however the slapmark must be legible before and after slaughter, throughout processing.* *Curer numbers are held on APHIS against each holding slaughtering pigs and are required for entering ante-mortem and post-mortem data. The four-digit curer number is unique for each producer at a specific slaughterhouse, APHIS will not allow duplication. Larger producers, with more than one finishing premises, may have several slap numbers recorded against their holding code to identify the origin of the consignment, i.e. each premises might have an individual slapmark.* ***Eartags****, where used****,*** *that:* ▪ *include the letters UK plus DARD holding code comprising .a digit followed by 3 alpha characters e.g. UK 2 ABC. A unique identification number can follow on from the official information or be printed on the other side of the tag.* ▪ *a suitable size and design for pig's age.* ▪ *are capable of remaining legible throughout carcase processing unless alternative means of maintaining traceability during processing is used.* ***Tattoo -*** *DARD holding code on one ear. The other ear may have an individual number and/or management information. Size is not specified, but the tattoo must be legible before and after slaughter and throughout processing.*

NI OPERATORS' OBLIGATIONS	*ADVICE*
	Pigs from Republic of Ireland
	Pigs imported from ROI have an eartag and a slapmark of the ROI holding code of origin.
	Imported Pigs
• **Check that imported pigs are identified appropriately.** ***CP5***	*Pigs imported into NI from outside the EU must be identified at the destination holding in accordance with the Aujeszky's Disease Order (NI) 1994 unless the pigs are delivered directly to slaughter.*
	Movement of pigs
• **Check that pigs have the appropriate movement licence.** ***CP3*** • **Retain the document for 1 year from the date of movement and make it available for inspection by an inspector and permit him to take a copy.** ***CP4***	*Pigs moving to slaughter require an Aujeszky's movement licence – AD2, AD3 or AD4 depending on the holding Aujeszky's status. The movement document specifies:* ▪ *the address, and holding code from, and to which, the pig is being moved;* ▪ *the date the movement is taking place;* ▪ *the number of pigs that the document covers;* ▪ *the identification mark of the pigs moved;* ▪ *the age; and* ▪ *in the case of a movement from a market, the lot numbers of the pigs being moved.* *Check the document and reconcile it with the number of pigs presented. Any missing documents or documents with discrepancies e.g. different number of pigs stated to number presented, brought to the attention of the OV.* *Keep the document for 1 year and send a copy via the OV to the local Divisional Veterinary Office (DVO) within a week of the arrival of a pig.* *The OV will forward the movement documents to the local DVO for entry onto APHIS.*

NI OPERATORS' OBLIGATIONS	*ADVICE*
	Trichinella testing
	The FBO should alert the OV before ante-mortem inspection of the acceptance for slaughter of any pig that requires to be tested for Trichinella, i.e. ▪ *breeding sows and boars;* ▪ *pigs reared outdoors after weaning;* ▪ *farmed wild boars.*
	Unacceptable Identification/Documentation
• **Take appropriate measures if the requirements are not complied with and notify the official veterinarian.** ***B3***	*If, during pre-slaughter checks, a pig is found with unacceptable identification markings or documentation, notify the OV.* ***Disposal*** *- where the OV is not satisfied with evidence of a carcase's identity, the carcase, its offal and all other parts of the carcase is to be identified and disposed of as category 2 animal by-product.*

NI OPERATORS' OBLIGATIONS	*ADVICE*

HORSES – NORTHERN IRELAND

CH1. Food business operators must check passports accompanying domestic solipeds to ensure that the animal is intended for slaughter for human consumption. If they accept the animal for slaughter, they must give the passport to the OV.

853/2004 Annex II ***Food Chain Information:*** *Section III, point 8*

CH2. … a person shall not slaughter a horse for human consumption or consign it for slaughter unless it is accompanied by its passport and the declaration in Section IX [Medicinal Treatment] shows that the animal is intended for human consumption and that all withdrawal periods relating to veterinary medicines given to the horse are complied with.

The Horse Passports Regulations (NI) 2004 No.497 Regulation 20

	Horses Passports
• **Check the passports of domestic solipeds to ensure that the animal is intended for slaughter for human consumption and that withdrawal periods, where relevant, are complied with. If the animal is accepted for slaughter, give the passport to the OV.** ***CH1, CH2***	*'Horse' means an animal of the equine or asinine species.* ***Check that animal identification is adequate and correlates with the movement document.*** ***In the case of horse identification,*** *these should meet the requirements of The Horse Passports Regulations (NI) 2004 No.497 www.opsi.gov.uk/legislation/northernireland/ni-srni.htm.* *Before accepting horses for slaughter, check that:* ▪ *the animal is accompanied by its passport;* ▪ *the passport description matches the animal;* ▪ *the horse is intended for slaughter for human consumption;* ▪ *any medicinal products that have been listed at Section IX do not preclude slaughter for human consumption.*
	Unacceptable Identification/Documentation
• **Take appropriate measures if the requirements are not complied with and notify the official veterinarian.**	*If, during pre-slaughter checks, a horse is found with unacceptable identification markings or documentation, notify the OV.* ***OV Decision*** *– note that, when there are overriding animal*

NI OPERATORS' OBLIGATIONS	*ADVICE*
B3	*welfare considerations, horses may undergo slaughter at the slaughterhouse even if the legally required information concerning their identity has not been supplied. However, this information must be supplied before the carcase may be declared fit for human consumption. This also applies in the case of emergency slaughter of horses outside the slaughterhouse.* ***854/2004 Annex I Section II Chapter III point 2*** *Note that, where the OV is not satisfied with identification markings or documentation or the documentation precludes the horse from slaughter for human consumption, the horse must be killed and disposed of as animal by-product. It may be Category 1 animal by-product if it contains a residue of a prohibited substance.*

FARMED DEER – NORTHERN IRELAND

There are no legal requirements for the identification of farmed deer for animal health purposes in Northern Ireland.
Farmed deer slaughtered on farm
An operator's declaration stating their identity and a veterinary certificate must accompany bodies to the slaughterhouse – see Section E of this Chapter.

PART TWO

9.4 ANNEX B: FOOD CHAIN INFORMATION - MODEL DOCUMENTS

9.4 Annex B

1. Model document for Cattle
2. Model document for Pigs
3. Model document for Sheep
4. Model document for Food Chain Information for Poultry
5. Model document for Farmed Game slaughtered on farm
6. Model document for Poultry slaughtered on farm
7. Model document for Emergency Slaughter animals
8. Model document for Food Chain Information for Tuberculosis test reactors and dangerous contact cattle for slaughter (SVS)

FOOD CHAIN INFORMATION TO ACCOMPANY CATTLE FOR SLAUGHTER KNOWN OR SUSPECTED TO BE INJURED OR SHOWING SIGNS OF ABNORMALITY	***Reference No:***

Owner's name, address and holding number	
Production site address and holding number (if different)	
Contact name, telephone number and email address of owner/owner's agent	
Identification details - ear tag number - breed - age - sex	
Describe the **injury** the animal has suffered or **abnormality** it is showing, or If a veterinary surgeon has examined the animal, his/her **diagnosis**	
Record all **veterinary medicinal products or other treatments** administered to the animal, from which the body is derived within the last 6 months, dates of administration and withdrawal periods	
Tuberculosis Is the animal a reactor or inconclusive reactor to the TB test? Is the holding under a TB restriction order?	
Brucellosis Is the animal a Brucellosis reactor? Is the holding under a Brucellosis restriction order?	
Is the holding/area **under restrictions** for other animal health or other reasons?	
Have any **analyses** shown that the animal may have been exposed to food-borne zoonoses or substances likely to result in residues in meat? If so attach a copy.	
Name, address and contact details of the owner's **veterinary surgeon**	
Signature	
Name	
Status (e.g. owner, manager, stockman)	
Time and date	

FOOD CHAIN INFORMATION TO ACCOMPANY PIGS FOR SLAUGHTER KNOWN OR SUSPECTED TO BE INJURED OR SHOWING SIGNS OF ABNORMALITY	***Reference No:***

Owners name and address and holding number	
Production site address and holding number (if different)	
Contact name, telephone number and email address of owner/owner's agent	
Identification details - slapmark - individual identification	
Age - adult - age in weeks	
Describe the **injury** the animal has suffered or **abnormality** it is showing, or If a veterinary surgeon has examined the animal, his/her **diagnosis**	
Record all **veterinary medicinal products or other treatments** administered to the animal within the **last 28 days**, dates of administration and withdrawal periods	
Is the holding/area **under restrictions** for animal health or other reasons?	
Have any **analyses** shown that the animal may have been exposed to food-borne zoonoses or substances likely to result in residues in meat? If yes, attach a copy.	
Is the herd in a **Salmonella monitoring scheme**? If so what is its status?	
Name, address and contact details of the owner's **veterinary surgeon**	
Signature	
Name	
Status (e.g. owner, manager, stockman)	
Time and date	

FOOD CHAIN INFORMATION TO ACCOMPANY SHEEP FOR SLAUGHTER KNOWN OR SUSPECTED TO BE INJURED OR SHOWING SIGNS OF ABNORMALITY	***Reference No:***

Owner's name and address and holding number	
Production site address and holding number (if different)	
Contact name, telephone number and email address of owner/owner's agent	
Identification of sheep	
Class of sheep - prime - adult/cull	
Describe the **injury** the animal has suffered or **abnormality** it is showing, or If a veterinary surgeon has examined the animal, his/her **diagnosis**	
Record all **veterinary medicinal products or other treatments** administered to the animal within the last 3 months, dates of administration and withdrawal periods	
Is the holding/area **under restrictions** for animal health or other reasons?	
Have any **analyses** shown that the animal may have been exposed to food-borne zoonoses or substances likely to result in residues in meat? If yes, attach a copy.	
Name, address and contact details of the owner's **veterinary surgeon**	
Signature	
Name	
Status (e.g. owner, manager, stockman)	
Time and date	

FOOD CHAIN INFORMATION FOR POULTRY	***Reference No:***

Part 1 – Information about Producer and the Veterinary Surgeon

A. Producer details

Name of Producer and his position.e.g. keeper, owner etc..,			
Address of Producer (farm)	Post code		
County parish Holding Number		Tel no Fax no	
Email address			

Are you a member of any assurance scheme? **YES/NO**

If **YES**

Name of assurance scheme		Membership number	

B. Veterinary surgeon & practice details

Name of Veterinary Surgeon			
Name and address of Veterinary Practice (if different)	Post code		
Email address (if known)		Tel. number	

Part 2 – Information about poultry being sent for slaughter

	House 1	House 2	House 3	House 4
Species				
Age				
Production type[free range, housed or organic etc.]				
No of birds				
Batch identification reference e.g trailer / shed no.				
Proposed slaughter date				
Name of slaughter house				
Mortality % at 14 days				
Mortality % to date				

Name of medication prescribed (include vaccines and preventative medicines – coccidiostats)	Houses	Date withdrawn	Have the withdrawal periods been observed?

Has any disease been diagnosed in this shed/house? **YES/NO**

If **YES** give details

Has the mortality rate been High for a reason other than disease? **YES/NO**

If **YES** give details

Have any tests been carried out on the batch for agents with the potential to cause food-borne disease in humans (e.g. Salmonellae) **YES/NO**

If **YES**

Agent tested for

Result of test

Part 3 – Disease history of the holding

Is the holding under any statutory or voluntary restrictions? **YES/NO**

If **YES** what restrictions apply?

Provide the following information ONLY if previous consignments were sent to a different slaughterhouse

In 2 previous consignments from this (these) house (s)/shed (s) please record the rejection rate

Reason for rejection

% Rejected

Reason for rejection

% Rejected

To be signed by the person responsible for completing Parts 1, 2 & 3

Signature of Producer

Date

Time

Part 4 – Slaughterhouse operator's check and comments

I accept these birds for slaughter for human consumption

Signature		Date		Time	

Comments	

Part 5 – Official or Approved Veterinarian's check and comments

FCI checked Signature		Date		Time	

Comments	

GUIDANCE FOR COMPLETION OF FOOD CHAIN INFORMATION (FCI) FOR POULTRY

Timing

FCI is required to be supplied at least 24 hours before the arrival of animals at slaughterhouse, except where ante mortem inspection is done at the farm. In this case the FCI and veterinary ante mortem declaration is to accompany the animals to which they relate.
(Regulation (EC) No 853/2004, Annex II, Section III and Regulation (EC) No 854/2004, Annex I, Section I, Chapter II A and Section II, Chapter II.)

Part 1, 2 and 3 to be completed by the producer.
Part 4 to be completed by the slaughterhouse operator.
Part 5 to be completed by the Official or Approved Veterinarian.

PART 1 - INFORMATION ABOUT PRODUCER AND THE VETERINARY SURGEON
The producer is the person in charge of birds being sent for slaughter. This may be the owner of birds, farm manager, keeper or grower. The email address provided should be that to which you wish the results of the inspection activities to be sent.

PART 2 - INFORMATION ABOUT POULTRY BEING SENT FOR SLAUGHTER
Provide only details relevant for birds from a particular house or shed that are being sent for slaughter.
Mortality % at 14 days for breeders/layers to be provided if known.
Medicines given should only cover those where withdrawal period is greater than zero. For breeders and layers the period covered is to include of the last six weeks as a minimum.
Also, give details about any disease diagnosed or any test done (e.g. Salmonellae), where the results are known.

PART 3 - DISEASE HISTORY OF THE HOLDING
If applicable, please provide details of any disease diagnosed on your farm (e.g. Avian Influenza, Newcastle Disease) where movement restrictions have been imposed.

NOTE: The person completing Parts 1, 2 and 3 is to sign the box provided.

PART 4 - SLAUGHTERHOUSE OPERATOR'S CHECK AND COMMENTS
This check is concerned with completeness of document for obvious errors and omissions rather than making the professional evaluation of information supplied. However, when for example birds have been tested positive for Salmonellae, the slaughterhouse operator will have to note down action taken. In order to minimise cross contamination during processing the action taken may include processing the batch before the break or last in the day.

PART 5 - OFFICIAL OR APPROVED VETERINARIAN'S CHECK AND COMMENTS
As a part of ante-mortem inspection, the FCI may be checked either on farm or in the slaughterhouse.

DOCUMENT TO ACCOMPANY THE BODIES OF FARMED GAME ANIMALS TO AN APPROVED SLAUGHTERHOUSE	**Reference No:**

Regulation 853/2004 Annex III Section III points 3(i) and (j)

Owner's name, address and holding number	
Contact name, telephone number and email address of owner or owner's agent	
Identification details: ▪ Animal species ▪ Sex ▪ Number of animals ▪ Identification markings	

VETERINARY SURGEON'S DECLARATION

Name and address of holding and holding number at which ante-mortem inspection took place (if different from above)	
Time and date of ante-mortem inspection	
Name and address of slaughterhouse to which farmed game will be transported	
I hereby certify that the animals described above underwent an ante-mortem inspection at the above holding were found to be healthy.	**Signed:** **Designation: OV / AV** **Date:**
Name	
Practice Name and Address	
Telephone number	
Email address	

B. OWNER/AGENT'S DECLARATION

Veterinary Medicinal Products or Other Treatments Record all veterinary medicinal products or other treatments administered to any animal(s) within the last 6 months, dates of administration and withdrawal periods	
Is the holding/area under restrictions for animal health or other reasons?	
Have any analyses shown that the animal may have been exposed to food-borne zoonoses or substances likely to result in residues in meat? If so attach a copy.	
Time and date of slaughter	
Means of transport to slaughterhouse	
I hereby certify that the animals described above were correctly slaughtered at the declared date and time and that the information given above is correct to the best of my knowledge.	**Signed:** **Time:** **Date:**
Name	
Status (e.g. owner, manager)	

DOCUMENT TO ACCOMPANY THE BODIES OF POULTRY SLAUGHTERED ON FARM TO AN APPROVED SLAUGHTERHOUSE/CUTTING PLANT	**Reference No:**

Regulation 853/2004 Annex III Section II points 6 and 7

Owner's name, address and holding number	
Contact name, telephone number and email address of owner or owner's agent	
Identification: - Species - Number	

VETERINARY SURGEON'S DECLARATION

Name and address of holding and holding number at which ante-mortem inspection took place (if different from above)	
Time and date of ante-mortem inspection	
Name and address of premises to which poultry will be transported	
I hereby certify that the poultry described above were examined before slaughter and were found to be healthy. the documents concerning them satisfied the legal requirements and do not prohibit slaughter of the birds (see notes)	**Signed:** **Designation: OV / AV** **Date:**
Name	
Practice Name and Address	
Telephone number	
Email address	

B. OWNER/AGENT'S DECLARATION

Veterinary Medicinal Products or Other Treatments Record all veterinary medicinal products or other treatments administered to any animal(s) within the last 6 months, dates of administration and withdrawal periods	
Is the holding/area under restrictions for animal health or other reasons?	
Have any analyses shown that the animal may have been exposed to food-borne zoonoses or substances likely to result in residues in meat? **If so attach a copy.**	
Time and date of slaughter	
I hereby certify that the animals described above were correctly slaughtered at the declared date and time and that the information given above is correct to the best of my knowledge.	**Signed:** **Time:** **Date:**
Name	
Status (e.g. owner, manager)	

Notes: 854/2004 Annex I Section IV Chapter V A Ante-Mortem Inspection, points 8, 2 and 3

8. In the case of poultry reared for the production of 'foie gras' and delayed eviscerated poultry slaughtered at the holding of provenance, ante-mortem inspection is to be carried out in accordance with paragraphs 2 and 3. A certificate conforming to the model set out in Part C is to accompany the uneviscerated carcases to the slaughterhouse or cutting plant.

2. Ante-mortem inspection on the holding of provenance is to comprise:

(a) checks on records or documentation at the holding, including food chain information;

(b) a flock inspection, to determine whether the birds:

(i) have a disease or condition which may be transmitted to animals or humans through handling or eating the meat, or are behaving in a manner indicating that such a disease may occur,

(ii) show disturbance of general behaviour or signs of disease which may make the meat unfit for human consumption, or

(iii) show evidence that they may contain chemical residues in excess of the levels laid down in Community legislation, or residues of forbidden substances.

3. An official veterinarian or an approved veterinarian is to carry out ante-mortem inspection at the holding.

DOCUMENT TO ACCOMPANY THE BODY OF CATTLE SUBJECT TO EMERGENCY SLAUGHTER OUTSIDE THE SLAUGHTERHOUSE	**Reference No:**

Regulation 853/2004 Annex III, Section I, Chapter VI, paragraphs 5 & 6

Owner's name, address and holding number	
Production site address and holding number (if different)	
Contact name, telephone number and email address of owner/owner's agent	
Identification details: - Animal species - Sex - Number of animals - Identification markings	

A. Veterinary Surgeon's Declaration

Reason for emergency slaughter	
Record any treatment administered by the veterinary surgeon.	
After carrying out ante-mortem inspection, it is my opinion that the animal from which this body was derived was not showing clinical signs of: - any disease or condition that may be transmitted to animals or humans through handling or eating meat or; of systemic disease or emaciation.	
Name and address of slaughterhouse to which carcase will be transported	
Practice Name and Address	
Telephone number	
Email address	
Signature	
Name of veterinary surgeon	
Time and date of emergency slaughter	

B. Owner/Agent's Declaration

Veterinary Medicinal Products or Other Treatments Record all veterinary medicinal products or other treatments administered to the animal, from which the body is derived within the last 6 months, dates of administration and withdrawal periods	
Tuberculosis Is the animal a reactor or inconclusive reactor to the TB test? Is the holding under a TB restriction order?	
Brucellosis Is the animal a Brucellosis reactor? Is the holding under a Brucellosis restriction order?	
Is the holding/area under restrictions for other animal health or other reasons?	
Have any analyses shown that the animal may have been exposed to food-borne zoonoses or substances likely to result in residues in meat? If so attach a copy.	
Signature	
Name	
Status (e.g. owner, manager, stockman)	
Time and date	

Note: The Hygiene Regulations permit the emergency slaughter of animals outside the slaughterhouse if they fulfil the condition: An otherwise healthy animal must have suffered an accident that prevented its transport to the slaughterhouse for welfare reasons

stateveterinaryservice

	Name and address of herd owner	AHDO address or Office Stamp
To:		
CPH no.		

Food Chain Information for Tuberculosis Test Reactor and Dangerous Contact Cattle for Slaughter

Official Animal ID	Official Animal ID	Official Animal ID

The above animal(s) has/have received **no** treatment or medication.*

The above animal(s) has/have received treatment or medication and the required withdrawal period has been completed.*

(* *delete as appropriate*)

Signed _____ Status _____

(*Owner/Herdperson etc.*)

Name in BLOCK LETTERS _____

Date _____

On farm medicines records have been seen.

Signed _____ *Veterinary Officer/Animal Health Officer*

NB. It is an offence to transport a sick or injured animal if this is likely to cause it unnecessary suffering.

If in doubt, or medicines are administered to any of the above cattle after the date of this declaration please contact this office on the above number for advice before the date of collection.

Slaughterhouse copy

PART TWO

10. DRESSING OF CARCASES

10.1 WHY IS HYGIENIC CARCASE DRESSING IMPORTANT?

Fresh meat is at risk from microbiological contamination through contact with food poisoning bacteria from skin or gut contents during dressing as even healthy animals may carry bacteria (e.g. *E.coli* O157, *Salmonella*, *Campylobacter*, *Yersinia*, *and Listeria*). Poor working practices will increase this risk. Meat may also be contaminated with grease, dirt, SRM etc. or with metal and other foreign bodies in meat plants. Contamination can be transferred from meat to other foods including ready-to-eat products. Procedures are needed to minimise the risk of such hazards causing illness in consumers.

For example:

- Poor evisceration technique can contaminate meat with food poisoning bacteria.
- Insufficient training of staff responsible for dressing will increase the risk of contamination of meat due to poor working practices.
- Poorly cleaned equipment increases the risk of cross-contamination between carcases or between batches of meat.
- Inadequate separation between 'clean' and 'dirty' areas, or between exposed meat and poorly cleaned or uncleanable surfaces may result in cross contamination.
- Failure to keep meat at low temperatures and with dry surfaces will encourage the growth of bacteria.

10.2 GENERAL INFORMATION

- **Note on Species**

  - **Domestic ungulates** – cattle, sheep, goats, pigs, bison, water buffalo including *solipeds* (horses, asses and mules)
  - **Poultry** – farmed birds, (e.g. chickens, turkeys, ducks, geese, guinea fowl, quail) but excluding *ratites* (flightless birds e.g. ostriches, rheas, emus)
  - **Farmed Game** – farmed deer *(cervidae),* farmed wild boar *(suidae)* and flightless birds *(ratites)*
  - **Wild game (large)** – wild deer *(cervidae)* and feral wild boar *(suidae)*
  - **Wild game (small)** – game birds (e.g. pheasants, partridges, pigeons, grouse) and *lagomorphs* (rabbits, hares and rodents)

- **Application of Dressing Requirements to Farmed Game**

  Mammals - the provisions of 853/2004 Annex III Section I [Meat of domestic ungulates] apply to the production and placing on the market of meat from even-toed farmed game mammals (deer & boar) unless the competent authority considers them inappropriate.

  Ratites (flightless birds) - the provisions of 853/2004 Annex III Section II [Meat from poultry and lagomorphs] apply to the production and placing on the market of meat from ratites. However, those of Section I [Meat of domestic ungulates] apply where the competent authority considers them appropriate. Appropriate facilities must be provided, adapted to the size of the animals. *(853/2004 Annex III Section III: Farmed Game: points 1 and 2).*

- **An establishment may be approved as a slaughterhouse without slaughter facilities if its activities are limited to the dressing of carcases -** see PART ONE Chapter 7 (Approvals).

- **Post-mortem Inspection**

  Regulation 854/2004 lays down the requirements for post-mortem inspection. The principal purpose of post-mortem inspection is to supplement ante-mortem inspection and to detect:

  - diseases of public health significance,
  - diseases of animal health significance,
  - residues or contaminants in excess of the levels allowed by legislation,
  - the risk of non-visible contamination,
  - other factors which might require the meat to be declared unfit for human consumption or restrictions to be placed on its use,
  - visible lesions that are relevant to animal welfare such as beating or long standing untreated injuries.

  After inspection, the meat is either: passed as fit for human consumption, declared unfit for human consumption or detained for further examination.

For more information see the relevant sections of this chapter and

- the MHS Manual of Official Controls at www.food.gov.uk/enforcement/meathyg/mhservice/mhsmanual2006/
- the DARD VPHU Manual of Official Controls at http://www.dardni.gov.uk/index/fisheries-farming-and-food/food-and-feed-safety-and-quality/meat-inspection.htm

- **TSE Controls**

> **This Regulation [853/2004] shall apply without prejudice to relevant animal and public health rules, including more stringent rules laid down for the prevention, control and eradication of certain transmissable spongiform encepalopathies (TSEs).**
> *853/2004 Article 1 point 6a*

For more information on:

- **TSE Testing**

  EU legislation lays down the rules for the prevention, control and eradication of TSEs, including the testing of animals under active surveillance – see PART THREE Chapter 4 (TSE Testing).

- **Specified Risk Material (SRM)**

  All SRM from carcases is to be removed, separated, stained and disposed of in accordance with the legislation - see PART THREE Chapter 3 (SRM Removal).

- **Animal By Products (ABPs)**

  Animal by-products are any animal carcase, part of an animal carcase, or any material of animal origin, not intended for human consumption. The **intention** is the important point since all products of animal origin would be considered to be ABPs if they were not intended for human consumption. Animal products therefore, become ABPs because they are either unfit and/or unsafe, or the food business operator decides that they will not be used for human consumption. Once this decision has been made (e.g. where they are labelled as such) the ABPs cannot then revert to being a foodstuff, on the contrary they must be kept out of the food chain. EC and national legislation establish strict health rules so that they are properly identified, handled, stored, transported, processed, used or disposed of.

  A separate Edible Co-Products Industry Guide includes a chapter on Animal By Products, see: www.food.gov.uk/foodindustry/guidancenotes/meatregsguid/coproductbyproductguide

- **EC Poultrymeat Marketing Standards Regulations**

  The regulations seek to protect EC consumers by setting uniform standards for the marketing of poultry meat intended for human consumption and providing informative labelling. They also protect the producer against unfair competition. They cover the classification by quality, weight, packaging (including labelling), water content and storage and also specify the criteria that must be met before claims about certain types of farming can be made.

  - **They apply to**: whole carcases, parts and offal of the following species of poultry - domestic fowl (Gallus domesticus); ducks; geese; turkeys; and guinea fowls.
  - **They do not apply to**: prepared or preserved poultry (e.g. cooked, processed, treated or value added products); poultrymeat intended for export from the EC; sales from farms with an annual production of under 10,000 birds, providing the farmer supplies fresh poultry meat from the holding in the same locality as that of the producer or in a neighbouring locality, or delayed evisceration poultry, such as Traditional Farm Fresh turkeys.

  For more information see:
  www.defra.gov.uk/foodrin/poultry/trade/marketregs/poultrymarketregs.htm#MARKET

OPERATOR'S OBLIGATIONS	*ADVICE*

10.3.1 WHAT ARE THE LEGAL REQUIREMENTS FOR DRESSING OF CARCASES?

The following sections set out the requirements of the regulations for dressing of carcase meat.

A. GENERAL REQUIREMENTS

A1. The layout, design, construction, siting and size of food premises are to:

- **a) … provide adequate working space to allow for the hygienic performance of all operations;**
- **b) be such as to protect against the accumulation of dirt, contact with toxic materials, the shedding of particles into food and the formation of condensation or undesirable mould on surfaces;**
- **c) permit good food hygiene practices, including protection against contamination …**

852/2004 Annex II ***Food Premises:*** *Chapter I point 2*

A2. Have slaughter lines (where operated) designed to allow constant progress of the slaughter process and to avoid cross-contamination between the different parts of the slaughter line. Where more than one slaughter line is operated … there must be adequate separation of the lines to prevent cross-contamination.

853/2004 Annex III ***Slaughterhouses:*** *Section I Chapter II point 2(e) & Section II Chapter II point 2(e)*

A3. In rooms where food is prepared, treated or processed … the design and layout are to permit good food hygiene practices, including protection against contamination between and during operations. In particular (f) surfaces (including the surfaces of equipment) in areas where foods are handled and in particular those in contact with food are to be maintained in a sound condition and be easy to clean and, where necessary, to disinfect.

852/2004 Annex II ***Rooms:*** *Chapter II points 1, 1(f)*

A4. Food premises have adequate lighting.

852/2004 Annex II ***Premises****: Chapter I point 7*

A5. To avoid contaminating meat, [red meat slaughterhouses] must:

- **a) Have a sufficient number of rooms, appropriate to the operations being carried out;**
- **b) Have a separate room for the emptying and cleaning of stomachs and intestines, unless the competent authority authorises the separation in time of these operations on a case-by-case basis;**
- **c) Ensure separation in space or time of the following operations:**
  - **(i) stunning and bleeding;**
  - **(ii) in the case of porcine animals, scalding, depilation, scraping and singeing;**
  - **(iii) evisceration and further dressing;**
  - **(iv) handling clean guts and tripe;**
  - **(v) preparation and cleaning of other offal, particularly the handling of skinned heads if it does not take place at the slaughter line;**
  - **(vi) packaging offal; and**

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(vii) dispatching meat;

853/2004 Annex III ***Red meat Slaughterhouses:*** *Section I Chapter II point 2*

A6. To avoid contaminating meat, [white meat slaughterhouses] must:

a) Have a sufficient number of rooms, appropriate to the operations being carried out;

b) Have a separate room for evisceration and further dressing, including the addition of seasonings to whole poultry carcases, unless the competent authority authorises separation in time of these operations … on a case-by-case basis;

c) Ensure separation in space or time of the following operations:

(i) stunning and bleeding;
(ii) plucking or skinning, and any scalding; and
(iii) dispatching meat

853/2004 Annex III ***White meat Slaughterhouses:*** *Section II Chapter II points 2(a)-(c)*

A7. [Slaughterhouses] must have facilities for disinfecting tools in hot water supplied at a temperature of not less than 82°C or by an alternative method having an equivalent effect.

853/2004 Annex III Section 1 ***Red meat slaughter:*** *Chapter II point 3, Section II* ***White meat slaughter*** *Chapter II point 3*

A8. The equipment for washing hands used by the staff engaged in handling exposed meat must have taps designed to prevent the spread of contamination.

A9. Lockable facilities for the refrigerated storage of detained meat and separate lockable facilities for the storage of meat declared unfit for human consumption.

A10. Post mortem inspection is to be carried out under suitable conditions with suitable facilities.

853/2004 Annex III ***Slaughterhouses:*** *Section I Chapter II points 4 & 5, Chapter IV point 12 & Section II Chapter II points 4 & 5, Chapter IV point 6*

	Design & Layout for Dressing of Carcases
• **Make sure that:** ▪ **there is adequate space to allow for hygienic performance of all operations and permit good hygiene practices, including protection against contamination between and during operations.** ***A1, A3***	*Take account of the hygiene requirements for dressing procedures and post-mortem inspection.* *The design of the slaughter line (where operated) should allow progressive working which avoids regular contact between carcases.* *Consider particularly the need to minimise the risk of contamination by having adequate working space with regard to throughput, the separation of 'clean' and 'dirty' processes and areas; as well as protecting the meat from chemicals, condensation, dirt, etc.* ***Separation*** *- effective separation of clean and dirty operations*

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▪ **there is constant progress of the slaughter process**
▪ **cross contamination is avoided between the different parts of the slaughter line and, where more than one line is operated, there is adequate separation to prevent cross contamination.**
A2
▪ **there is adequate lighting.**
A4
▪ **there are sufficient rooms for the operations being carried out to ensure the adequate separation of certain processes so that meat does not become contaminated:**
A5, A6
▪ **staff engaged in handling exposed meat have facilities with taps designed to prevent the spread of contamination;**
A7, A8
▪ **there is lockable refrigerated storage for detained meat and separate lockable facilities for the storage of unfit meat;**
	is important in minimising sources of contamination. Only where spatial separation is impossible should time separation be used and then only with an effective cleaning and disinfecting regime between operations.
	
	Storage of detained/unfit meat *- meat may be detained for further inspection or while awaiting information e.g. results of tests or identification checks. There should be no opportunity for cross contamination between fit and unfit meat.*
	
	Install suitable and cleanable fittings, equipment and surfaces that can easily be maintained.
	
	Lighting *- adequate light levels will help to make sure that dressing is being carried out hygienically and that cleaning is effective. As a guide these minimum levels are considered adequate: 540 lux at inspection points, 220 lux in workrooms. High intensity lighting is recommended.*
	
	For more information see:
	Chapter 1 (Design and Facilities) Sections:
	▪ ***A. General rules for food premises and foodstuffs***
	▪ ***B. Rooms where food is handled***
	▪ ***C. Equipment***
	▪ ***D. General requirements for slaughterhouses***
	  ▪ *Separation of Operations D3, D4, D5*
	  ▪ *Meat Handling Systems D6*
	  ▪ *Slaughter Lines D7*
	  ▪ *Handwashing Facilities D9*
	  ▪ *Facilities for Detained Meat D10*
	  ▪ *Post-mortem Inspection Facilities D12*

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A9 ▪ **there are suitable facilities for post mortem inspection to be carried out.** ***A10***	

A11. Where [red meat] establishments are approved for the slaughter of different animal species or for the handling of carcases of farmed game and wild game, precautions must be taken to prevent cross-contamination by separation either in time or in space of operations carried out on the different species. **Separate facilities for the reception and storage of unskinned carcases of farmed game slaughtered at the farm and for wild game must be available.** *853/2004 Annex III Section I* ***Slaughter Hygiene:*** *Chapter IV point 19* **A12. Where [white meat] establishments are approved for the slaughter of different animal species or for the handling of farmed ratites and small wild game, precautions must be taken to prevent cross contamination by separation either in time or in space of the operations carried out on the different species.** **Separate facilities for the reception and storage of carcases of farmed ratites slaughtered at the farm and for small wild game must be available.** *853/2004 Annex III Section II* ***Slaughter Hygiene:*** *Chapter IV point 3*	
	Multiple Species
• **If different species are handled, prevent cross-contamination by separation either in time or space.** ***A11, A12***	*See 9.1 (General Information) on Approval of premises and Chapter 1 (Design and Facilities) D1 & 2*

A13. Food business operators shall put in place, implement and maintain a permanent procedure or procedures based on the HACCP principles. *852/2004 Article 5 point 1*	
	HACCP-based Procedures
• **Put in place, implement and maintain a permanent procedure or procedures**	*HACCP-based procedures are necessary to ensure that food safety hazards, notably microbiological cross-contamination during dressing, is minimised. This is done by setting and*

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based on HACCP principles. ***A13***	*applying operational limits and procedures for dressing. Contamination of meat, particularly with faecal material, is likely to occur if sufficient care is not taken throughout the process.* *Set out in the HACCP plan, the procedures for controlling hazards, the limits that are to be monitored, the checks to be carried out, the corrective actions to be taken to ensure the safety of the meat and the records to be kept of those checks and actions.* *See 10.3.3 below and PART THREE Chapter 1 (Application of HACCP principles).*

Hygiene prerequisites for all establishments, see:

- ***Chapter 2 (Water Supply)***
- ***Chapter 3 (Maintenance)***
- ***Chapter 4 (Cleaning)***
- ***Chapter 5 (Pest Control)***

Food business operators are to ensure:

A14. That food handlers are supervised and instructed and/or trained in food hygiene matters commensurate with their work activity.

852/2004 Annex II ***Training:*** *Chapter XII point 1*

	Training, Instruction & Supervision
• **Make sure that food handlers are instructed and/or trained in food hygiene matters commensurate with their work activity.** ***A14***	*Before allowing staff to dress carcases without direct individual supervision, instruct them in hygienic dressing, awareness of food safety principles especially about the hazards associated with raw meat and about personal hygiene, the need to follow instructions and to report failing controls promptly.* *Supervise staff as appropriate. Issue reminders if lapses occur. Keep accurate, dated individual training records to show what instruction/training has been given.* *See also Chapter 6 (Training).*

A15. Every person working in a food-handling area is to maintain a high degree of personal cleanliness and is to wear suitable, clean and, where necessary, protective

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clothing. *852/2004 Annex II* ***Personal Hygiene:*** *Chapter VIII point 1*	
	Personal Hygiene
• **Make sure that every person working in a food-handling area maintains a high degree of personal cleanliness.** ***A15***	*All staff need to comply with the company's personal hygiene procedures, particularly handwashing and wearing of protective clothing.* *See Chapter 7 (Personal Hygiene)*

A16. Food business operators shall not use any substance other than potable water - … - to remove surface contamination from products of animal origin, unless the substance's use has been approved … . *853/2004 Article 3 point 2*	
	Removal of Contamination
• **Use only potable water or EU approved substances for the removal of surface contamination from meat or other products of animal origin. Follow the conditions of use.** ***A16***	*Visible contamination is normally removed by trimming.* ***Potable water*** *- see Chapter 2 (Water Supply).* ***Approved substances*** *– anti-microbial treatments for food of animal origin may be approved by the European Commission following a risk assessment by the European Food Safety Authority (EFSA). This will include: overall efficacy, microflora changes and implications, potential for introducing other food safety hazards, occupational safety, impact on the environment, effects on sensory properties and quality of the product, feasibility and effectiveness of control under commercial conditions, toxicological implications of residues and reaction products and consumer perception.* ***At present no such substances are approved.***

A17. [Slaughterhouses] must have facilities for disinfecting tools in hot water supplied at a temperature of not less than 82°C or by an alternative method having an equivalent effect.

853/2004 Annex III Section 1 ***Red meat slaughter:*** *Chapter II point 3, Section II* ***White meat slaughter:*** *Chapter II point 3*

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	Disinfection of Tools
• **Disinfect tools in hot water supplied at a temperature of not less than 82°C or by an alternative method having the equivalent effect.** ***A17***	***Note: Equivalent methods of disinfection – any agreed alternatives to the requirement for 82°C will be notified by an agreed change to this guidance.*** *Facilities for Disinfecting Tools/approval of alternatives – see Chapter 1 (Design and Facilities) Section D8.* *Start each work period with clean and disinfected tools. Rinse tools to remove visible dirt before they are disinfected e.g. in a knife 'steriliser'. Knives and other tools should be rinsed and disinfected often. Equipment such as splitting saws and brisket saws should be dismantled regularly for thorough cleaning.* ***Knives** - it is important to clean knives and disinfect after cutting through contaminated tissues such as skin. Less frequent cleaning and disinfection may be acceptable when, for example, exposing kidneys for inspection.* ***Scabbards** can be a source of contamination of disinfected knives, but may be used for health and safety reasons (e.g. to carry knives across workrooms, or for use where bovine heads are dressed and handled). In a cutting room for example, clean, disinfected scabbards may provide temporary storage for a set of clean, disinfected knives. If a scabbard is used, use it either for clean or for dirty knives, not both. Only put clean knives in a clean scabbard. In slaughterhouses, unless the scabbard can be effectively disinfected, knives placed in scabbards are considered dirty and should be treated as such.* ***Steels** – disinfect steels after cleaning and do not use in a way that contaminates clean, disinfected knives. Leaving steels in a knife steriliser may damage them.*

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B. WILD GAME

A GUIDE TO FOOD HYGIENE REGULATIONS FOR THOSE SUPPLYING WILD GAME FOR HUMAN CONSUMPTION (THE WILD GAME GUIDE) is available at www.food.gov.uk/multimedia/pdfs/draftwildgameguide.pdf

LARGE WILD GAME (BL)

BL1. The trained person must carry out an examination of the body, and of any viscera removed, to identify any characteristics that may indicate that the meat presents a health risk. The examination must take place as soon as possible after killing.

853/2004 Annex III Section IV Chapter II: point 2

SMALL WILD GAME (BS)

BS1. The trained person must carry out an examination to identify any characteristics that may indicate that the meat presents a health risk. The examination must take place as soon as possible after killing.

853/2004 Annex III Section IV Chapter III: point 1

	Trained Persons (Hunters)
• **One 'trained' person in a hunting party must, except in exceptional circumstances, carry out an initial examination of game that is accepted by an approved Game Handling Establishment.** ***BL1, BS1***	***Initial examination*** *- game supplied to approved game handling establishments is to have been examined by a trained person with sufficient knowledge and skill to identify abnormal characteristics or any that may indicate that the meat presents a health risk. An exception may be made if, for example, the trained person was unexpectedly unavailable, but this affects the viscera required to accompany deer and boar (see 'Large Wild Game' below).* *See the Wild Game Guide Section 8 (Trained Person)*

IMMOBILON - 'EAT NOT' EAR TAGS

Veterinary surgeons administering Large Animal Immobilon, or any other immobilising medicine not licensed for use in a food-producing animal, must mark permanently, with an appropriate tag in each ear, any deer (farmed or wild) or, if relevant, dispose of the carcase, to ensure, so far as practicable, that such animals will not enter the human food chain.
See: Medicines (Dart Guns) at: www.rcvs.org.uk/Templates/Internal.asp?NodeID=92595
Animals tagged in this way are not to enter the human food chain.

LARGE WILD GAME

BL2. After killing, large wild game must have their stomachs and intestines removed as soon as possible and, if necessary, be bled.

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BL3. Meat of large wild game may be placed on the market only if the body is transported to a game handling establishment as soon as possible after the examination referred to in point 2 [BL1]. The viscera must accompany the body as specified in point 4 [BL4]. The viscera must be identifiable as belonging to a given animal.

BL4. (a) If no abnormal characteristics are found during the examination referred to in point 2 [BL1], no abnormal behaviour was observed before killing, and there is no suspicion of environmental contamination, the trained person must attach to the animal body a numbered declaration stating this.

This declaration must also indicate the date, time and place of killing. In this case, the head and the viscera need not accompany the body, except in the case of species susceptible to Trichinosis (porcine animals, solipeds and others), whose head (except for tusks) and diaphragm must accompany the body. However, hunters must comply with any additional requirements imposed in the Member State where hunting takes place, in particular to permit the monitoring of certain residues and substances in accordance with Directive 96/23/EC;

(b) In other circumstances, the head (except for tusks, antlers and horns) and all the viscera except for the stomach and intestines must accompany the body. The trained person who carried out the examination must inform the competent authority of the abnormal characteristics, abnormal behaviour or suspicion of environmental contamination, that prevented him or her from making a declaration in accordance with (a);

(c) If no trained person is available to carry out the examination referred to in point 2 [BL1] in a particular case, the head (except for tusks, antlers and horns) and all the viscera except for the stomach and the intestines must accompany the body.

BL5. Chilling must begin within a reasonable time after killing and achieve a temperature throughout the meat of not more than 7ºC. Where climactic conditions so permit, active chilling is not necessary.

BL6. During transport to the game handling establishment, heaping must be avoided.

BL7. In addition, unskinned large wild game may be skinned and placed on the market only if, (a) before skinning it is stored and handled separately from other food and not frozen.

853/2004 Annex III Section IV Chapter II: points 1, 3, 4, 5, 6 & 8a

SMALL WILD GAME

BS2. If abnormal characteristics are found during the examination, abnormal behaviour was observed before killing, or environmental contamination is suspected, the trained person must inform the competent authority.

BS3. Meat of small wild game may be placed on the market only if the body is transported to a game handling establishment as soon as possible after the examination referred to at point 1 [BS1].

BS4. Chilling must begin within a reasonable time after killing and achieve a temperature throughout the meat of not more than 4ºC. Where climatic conditions so permit, active chilling is not necessary.

853/2004 Annex III Section IV Chapter III: points 2, 3 & 4

	Wild Game Notifications

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• **The trained person who carries out the initial examination of game must inform the competent authority of the abnormal characteristics, abnormal behaviour or suspicion of environmental contamination.** ***BL4, BS2***	*If abnormal characteristics or behaviour has been identified, then the competent authority needs to be informed. In the case of suspicion of* ***notifiable disease,*** *by a report to an Animal Health Divisional Office for GB www.defra.gov.uk/corporate/contacts/ahdo.htm (Defra helpline 08459 335577) or Divisional Veterinary Office for NI www.dardni.gov.uk/vetservice/main/offices.htm (DARD helpline 028 9052 4999).* ***Otherwise, for*** ▪ ***large game*** *- a numbered declaration must be attached to the body, stating that following an examination the animal has been found to be free of any abnormal characteristics, behaviour or environmental contamination, and the date, time and place of killing or indicate where this is not the case;* ***and for*** ▪ ***small game*** *-- a declaration may be attached to trays or cartons to inform the competent authority of any abnormal characteristics, behaviour or environmental contamination.* ***Specimen Forms*** *- see examples at the end of this Section, taken from Section 9 of the Wild Game Guide.* *If the correct documentation is not provided the carcases must be disposed of as animal by-product.*
	Large Wild Game
• **Large wild game is to have been transported to a game handling establishment as soon as possible after an initial examination accompanied by appropriate parts identified as belonging to a given animal.** ***BL3, BL4, BL5, BL6***	***Guidance for suppliers of Wild Game*** *- see the Wild Game Guide.* ***Initial examination*** *– see 'Trained Persons' above.* *Accept only carcases accompanied by the appropriate viscera identified as belonging to a given animal.* ***Accompanying viscera (feral wild boar)*** *– as a species susceptible to Trichinosis, the head (except tusks) and diaphragm must accompany the body. The Official*

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• **Game carcases are chilled within a reasonable time after killing to a temperature of not more than 7°C throughout the meat unless active chilling is unnecessary due to climate.** ***BL6***	*Veterinarian will carry out Trichinella testing.* ***Accompanying viscera (deer) with a trained person's declaration*** *– the body need not be accompanied by the head and viscera, which can be removed immediately after killing.* ***Accompanying viscera (deer) without a trained person's declaration*** *– the head (except for antlers and horns) and all the viscera (except for the stomach and intestines, such as heart, lungs and liver) must accompany the body.* ***Correlation of carcases and parts*** *- if an animal is declared unfit for human consumption its parts will also be unfit. It is therefore necessary to be able to match all parts of the animal taken from the carcase before post mortem inspection as belonging to that one animal.*
• **Unskinned large wild game are stored and handled separately from other food and not frozen.** ***BL7***	***Chilling*** *– in the UK except for the coldest time of year, and where storage and transport times are short, active chilling will be necessary to attain the required temperature. See Chapter 8 (Temperature Controls).* ***Freezing -*** *large, in-fur game is not to be frozen before processing.* ***Storage*** *- keep skinned and in-fur game separate.*
	Small Wild Game
• **Small wild game are to have been transported to a game handling establishment as soon as possible after an initial examination and chilled within a reasonable time after killing to a temperature of not more than 4°C throughout the meat unless the climate makes active chilling**	***Guidance for suppliers of Wild Game*** *- see the Wild Game Guide.* ***Initial examination*** *– see 'Trained Persons' above.* ***Chilling*** *– in the UK except for the coldest time of year, and where storage and transport times are short, active chilling will be necessary to attain the required temperature. See Chapter 8 (Temperature Controls).* ***Freezing*** *– small, in fur, in feather game may be frozen before processing.* ***Storage*** *– keep in fur/in feather game separate from skinned*

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unnecessary. ***BS3, BS4***	*and de-feathered carcases.*

LARGE WILD GAME

BL8. Large wild game delivered to a game handling establishment must be presented to the competent authority for inspection.

BL9. In addition, unskinned large wild game may be skinned and placed on the market only if: (b)after skinning it undergoes a final inspection in accordance with regulation 854/2004

BL10. The rules laid down in Section I, Chapter V, apply to the cutting and boning of large wild game.

853/2004 Annex III Section IV Chapter II: points 7, 8b & 9

SMALL WILD GAME

BS6. Small wild game delivered to a game-handling establishment must be presented to the competent authority for inspection.

BS7. The rules laid down in Section II, Chapter V, apply to the cutting and boning of small wild game.

853/2004 Annex III Section IV Chapter III: points 6 & 7

	Dressing, Official Inspection & Cutting
• **Game sent to approved Game Handling Establishments is to be subject to official inspection.** ***BL8, BL9, BS6*** • **Wild game meat is to be cut and boned in the same way as the equivalent domestic species.** ***BL10, BS7***	***Dressing of Carcases:*** ***Large wild game*** *- see relevant parts of Section C (Dressing of Domestic Ungulates and Large Game).* ***Small wild game*** *- see relevant parts of Section D (Dressing of Poultry & Lagomorphs including Game).* ***Cutting:*** *- see Chapter 11 (Cutting of Meat).*

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Section B Annex

A. SUGGESTED FORMAT FOR LARGE WILD GAME DECLARATION

FRONT

LARGE WILD GAME DECLARATION

Tag Number: …… **Species:** **ROE** **FALLOW** **RED**

Date/Time of Kill: ……../…..…… **MUNTJAC** **SIKA** **CHINESE**

Location/Estate:..…….. **OTHER**……

Sex: **M** **F** **Weight**: …….. **(KGs)**

BACK

I declare in accordance with EU Regulation 853/2004 that no abnormal behaviour was observed before killing and there is no indication of environmental contamination. I have inspected the head, pluck and viscera without observing abnormalities.

Notes:……

Trained person qualification:…….…….. **Contact details** ……

Name:…… ……

Signature:…..…… ……

B. SUGGESTED FORMAT FOR SUBMITTING INFORMATION ON SMALL WILD GAME

SMALL WILD GAME INFORMATION

Date/Time of Kill: ……..……/…..……..…… **Location/Estate**:……..……

Number in batch:…… **Species: Pheasant Partridge Pigeon Hare Other**……..…..

Observations:……..……..…..

……..…

Trained person qualification:…….…….. **Contact details** ……

Name:…… ……

Signature:…… ……

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C. DRESSING OF DOMESTIC UNGULATES & LARGE GAME

See Chapter 9 Acceptance & Slaughter of Animals:

- **Animal Welfare legislation**
- **Section A. Transport of livestock to slaughterhouses**
- **Section B. Acceptance of livestock**
- **Section C. Animal identification**
- **Section D. Food chain information**
- **Section E. Farmed game**
- **Section F. Slaughter of domestic ungulates**

Acceptance of bodies of Emergency Slaughtered Animals for dressing

… meat from domestic ungulates that have undergone emergency slaughter outside the slaughterhouse may be used for human consumption only if …

C1. An otherwise healthy animal must have suffered an accident that prevented its transport to the slaughterhouse for welfare reasons.

C2. A veterinarian must carry out an ante-mortem inspection of the animal.

C3. The slaughtered and bled animal must be transported to the slaughterhouse hygienically and without undue delay. Removal of the stomach and intestines, but no other dressing, may take place on the spot, under the supervision of the veterinarian. Any viscera removed must accompany the slaughtered animal to the slaughterhouse and be identified as belonging to that animal.

C4. If more than two hours elapse between slaughter and arrival at the slaughterhouse, the animal must be refrigerated. Where climactic conditions so permit, active chilling is not necessary.

C5. A declaration by the FBO who reared the animal, stating the identity of the animal and indicating any veterinary products or other treatments administered to the animal, dates of administration and withdrawal periods, must accompany the slaughtered animal to the slaughterhouse.

C6. A declaration issued by the veterinarian recording the favourable outcome of the ante-mortem inspection, the date and time of, and reason for, emergency slaughter, and the nature of any treatment administered by the veterinarian to the animal, must accompany the slaughtered animal to the slaughterhouse.

853/2004 Annex III Section I Chapter VI: points 1 – 6

Acceptance of bodies of Farmed Game animals for dressing

C7. (a) Slaughtered and bled animals are transported to the slaughterhouse hygienically and without undue delay. If transport takes more than two hours, the animals are, if necessary, refrigerated. Evisceration may take place on the spot, under the supervision of the veterinarian;

(b) a declaration by the FBO who reared the animals, stating their identity and indicating any veterinary products or other treatments administered, dates of administration and withdrawal periods, accompanies the slaughtered animals to the slaughterhouse; and

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853/2004 Annex III Section III: points 3(h) and (i) and point 4 (ref. bison).

(c) during transport to the approved establishment, a certificate issued and signed by the OV or approved veterinarian, attesting to a favourable result of the ante-mortem inspection, *correct slaughter and bleeding and the date and time of slaughter,* accompanies the slaughtered animals.

853/2004 Annex III Section III: point 3(j) and point 4 (ref. bison) ***as amended***

(d) By way of derogation from 3(j)…, the certificate referred to in Article 16 [of 2076/ 2005], attesting to a favourable result of the ante-mortem inspection, is issued and signed by the veterinary service.

2076/2005 ***Transitional Arrangements*** *Article 9*

	Bodies Accepted for Dressing
• **Only animals that have suffered an accident that prevented transportation on animal welfare grounds and have been subject to ante-mortem inspection go for human consumption.** ***C1, C2*** • **Bodies are transported hygienically and without delay. If the time between slaughter and arrival at the slaughterhouse is more than 2 hours, the animal is refrigerated unless active chilling is unnecessary due to climate.** ***C3, C4, C7a*** • **Animals are accompanied by owners' declarations and veterinary certificates with any viscera removed under veterinary supervision.** ***C3, C5, C6, C7b, C7c, C7d***	*Advise suppliers of the conditions that have to be met before bodies can be accepted for dressing.* *Confirm that when the bodies of farmed game animals or emergency slaughtered animals arrive at the premises they are under refrigeration if necessary (i.e. usually in the UK except for the coldest time of year, and where storage and transport times are short, active chilling will be necessary) and are accompanied by* ***Owner Declarations*** *and* ***Veterinary Certificate****.* ***Farmed Game*** *– see Chapter 9 Section E including the model document at Annex 5.* ***Emergency Slaughtered Animals*** *- see Chapter 9 Section F including the model document at Annex 7.* *If the correct documentation is not provided to the operator the carcase must be disposed of as animal by-product having regard to the need for any statutory testing that is required, e.g. TSE testing.*

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C8. Carcases and offal must not come into contact with floors, walls or work stands. *853/2004 Annex III Section I* ***Slaughter Hygiene:*** *Chapter IV point 11*	
	Contact of Meat with Floors, Walls, Workstands
• **Avoid carcases and offal from coming into contact with floors, walls or work stands.** ***C8***	*Minimise the opportunity for contact between carcases and offal and floors, walls and work stands through layout and design of equipment and lines, control of line speed and staff training, awareness and supervision.* *Where such contact is difficult to avoid completely, the installation, maintenance and treatment of surfaces as 'food contact surfaces' will reduce the risk of contamination.* ***Dropped meat policy*** *– the procedures for dealing with meat that has fallen on the floor, depend on the size of the piece of meat and the extent and nature of any possible contamination. Trim large pieces of red meat of visible contamination before processing is resumed. Pieces that are not suitable for trimming should be disposed of as unfit food.*

C9. If the blood or other offal of several animals is collected in the same container before completion of post-mortem inspection, the entire contents must be declared unfit for human consumption if the carcase of one or more of the animals concerned has been declared unfit for human consumption. *853/2004 Annex III Section I* ***Slaughter Hygiene:*** *Chapter IV point 15*	
	Blood Collection
• **If the blood of several animals is collected in the same container before post-mortem inspection is completed, the entire contents are to be declared unfit for human consumption if the carcase of one or more of the animals concerned has**	*If blood is intended for human consumption and an animal is declared unfit for human consumption, its blood will also be unfit. It is therefore necessary to be able to match batches of blood collected before post mortem inspection to individual animals.* *Collect any blood intended for human consumption hygienically, for example by using a hollow knife.* ***OV decisions*** *– note that the OV is to declare meat unfit for human consumption if it consists of blood that may constitute*

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been declared unfit for human consumption. ***C9***	*a risk to public or animal health owing to the health status of any animal from which it derives or contamination arising during the slaughter process;* ***854/2004 Annex I Section II Chapter V(t)*** *Blood not intended for human consumption is an Animal By-Product – see 10.2 above.*

C10. … skinning, evisceration and other dressing must be carried out without undue delay and in a manner that avoids contaminating the meat. **C10d In particular: (d) removal of the udder must not result in contamination of the carcase with milk or colostrum.** *853/2004 Annex III Section I* ***Slaughter Hygiene:*** *Chapter IV point 7(d)*	
	Processing
• **Carry out skinning, evisceration and other dressing without undue delay, avoiding contamination of the meat.** ***C10***	*Once an animal has been stunned, bleeding and dressing should be a continuous process. Schedule breaks accordingly.*
	Udder Removal
• **Remove the udder in a way that avoids contamination of the carcase with milk or colostrum.** ***C10d***	*Remove udders hygienically and avoid spillage.*

C11. Until post-mortem inspection is completed, parts of a slaughtered animal subject to such inspection must: **(a) remain identifiable as belonging to a given carcase; and** **(b) come into contact with no other carcase, offal or viscera, including those that have already undergone post-mortem inspection.** **However, provided that it shows no pathological lesion, the penis may be discarded immediately.** *853/2004 Annex III Section I* ***Slaughter Hygiene:*** *Chapter IV point 13*	

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C3. Any viscera removed [from emergency slaughtered] animals must accompany the slaughtered animal to the slaughterhouse and be identified as belonging to that animal.

853/2004 Annex III Section I ***Domestic Ungulates:*** *Chapter VI point 3*

	Correlation of Carcases & Parts
• **Make sure that, until post-mortem inspection is completed, parts of a slaughtered animal subject to such inspection (including emergency slaughtered animals)** ▪ **remain identifiable as belonging to a given carcase; and** ▪ **do not come into contact with other carcases, offal or viscera, including those that have already undergone post-mortem inspection** ▪ **however, the penis may be discarded immediately provided it shows no pathological lesion.** ***C11, C3***	*If an animal is declared unfit for human consumption its parts will also be unfit. It is therefore necessary to be able to match parts of the animal, including batches of blood (see C9) or fat when intended for human consumption, taken from the carcase before post mortem inspection, as belonging to that one animal.* *If removed before post mortem meat inspection, most parts of each animal must accompany the carcase to allow a full inspection to take place.* *Make sure that:* ▪ *slaughtered animals are dressed and treated in such a way as not to prevent or hinder official inspection* ▪ *no carcases are cut up* ▪ *no action is taken to destroy or alter evidence of disease* ▪ *no part, is removed from the establishment until post-mortem inspection is completed and any required samples are taken except:* - ***for all species****: the penis if not intended for human consumption, provided retention was not required following ante-mortem inspection -* ***C11.*** - ***for sheep and goats****: the head, if no part of it is intended for human consumption –* ***854/2004 Annex I Section IV Chapter II point 1.*** - ***for relevant species****: the hide or skin - but see below.*

C10b. … skinning …. must be carried out without undue delay and in a manner that avoids contaminating the meat. In particular:

(b) during the removal of hides and fleece:

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(i) contact between the outside of the skin and the carcase must be prevented; and

(ii) operators and equipment coming into contact with the outer surface of hides and fleece must not touch the meat;

C12. Carcases and other parts of the body intended for human consumption must be completely skinned, except for porcine animals, the heads of ovine and caprine animals and calves, the muzzle and lips[1] of bovine animals and the feet of bovine[2], ovine and caprine animals. Heads, including muzzle and lips[1], and feet must be handled so as to avoid contamination of other meat.

[1] Amended by1662/2006 Annex II point 1a
[2] Amended by 2074/2005 ***Implementing Measures*** *Article 5(f)*

C13. When destined for further handling:
(c) heads and feet must be skinned or scalded and depilated.

853/2004 Annex III Section I ***Slaughter Hygiene:*** *Chapter IV: points 7(b), 8 and 18(c)*

	Skinning
• **During the removal of hides and fleece, prevent contact between the outside of the skin and the carcase.** ***C10(b)(i)***	*Mechanical methods (e.g. crocodile clips and papers) may be used to reduce the risk of the carcase being contaminated from the in-rolling of the hide/fleece during its removal.* *After the initial cut through the skin a second clean knife should be used for further skinning.*
• **Operators and equipment that have come into contact with the outer surface of hides and fleece must not touch the meat.** ***C10(b)(ii)***	*Wash hands frequently and make sure that carcases do not touch either equipment or, if skinned on a cradle, the floor.*
• **Skin carcases and other parts intended for human consumption, completely except for pigs and certain heads, muzzle and lips of bovines and feet (see below),** ***C12***	***De-pelting of lambs (insufflation) -*** *if gas is used as an aide to pelt removal, the process needs to be carried out hygienically, taking into account e.g.:* *- preventing contamination at the injection site* *- sanitising needles to prevent contamination between carcases* *- the type of gas, which must either be food grade or filtered compressed air (not one directly drawn from the abattoir environment).* *Carcases handled in this way should be included in the company's microbiological testing plan.*

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	Hides & Skin *- when intended for food use (e.g. production of gelatine and collagen) hides and skins must derive from animals that have passed ante- and post-mortem inspection.* *Hides and skins are classed as category 3 animal by-products when the operator decides not to use them for human consumption - see 10.2 above.*
	Heads & Feet
• **Skin <u>or</u> scald and depilate the heads of pigs, sheep, goats and calves and the feet of pigs, sheep, goats and cattle when destined for further handling.** ***C12, C13*** • **Handle heads, muzzle, lips and feet in a way that avoids contamination of other meat.** ***C12***	*Remove heads and feet hygienically.* *If left unskinned, the heads and feet intended for human consumption must be scalded and all hair removed before dispatch from the slaughterhouse.* ***Feet*** *– treat feet intended for human consumption as edible offal. Feet that have not been inspected and have not been processed are not to be despatched from the establishment as intended for human consumption.* ***Sheep & goat heads*** *– if no parts are intended for human consumption – see C11 above.*

C14. When not skinned, porcine animals must have their bristles removed immediately. The risk of contamination of the meat with scalding water must be minimised. Only approved additives may be used for this operation. Porcine animals must be thoroughly rinsed afterwards with potable water. *853/2004 Annex III Section I* ***Slaughter Hygiene:*** *Chapter IV: point 9*	
	Scalding of Pigs
• **For pigs that are not skinned, remove the bristles immediately and rinse the carcase thoroughly in potable water. The risk of**	*Use potable water to fill the scalding tank at the start of each day. Empty and clean the tank when necessary and at the end of the day.* *Keep the water at an appropriate temperature (around 60°C)*

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contamination of the meat with scalding water must be minimised. Use only approved additives for this operation. ***C14***	*to maintain effective scalding.* *Vertical scalding which involves the use of humidified air as opposed to water in a tank may reduce the risk of cross contamination of the carcase via the stick wound. If used, the scald tank should be cleaned at the end of the day.* *Scald tank additives are not known to be used in the UK.*

C10 … evisceration … must be carried out without undue delay and in a manner that avoids contaminating the meat. In particular: **C10c. (c) measures must be taken to prevent the spillage of digestive tract content during and after evisceration and to ensure that evisceration is completed as soon as possible after stunning.** *853/2004 Annex III Section I* ***Slaughter Hygiene:*** *Chapter IV point 7(c)*	
	Evisceration
• **Carry out evisceration without undue delay.** ***C10*** • **Prevent the spillage of digestive tract contents during and after evisceration.** ***C10c***	*Instruct staff how to avoid opening the digestive tract and why it is important to prevent such contamination of the carcase.* *The risk of faecal contamination may be reduced by rodding and/or bunging of cattle and sheep.* ***Rodding*** *– the oesophagus can be sealed or by mechanical methods such as tying, elastic/rubber rings, plastic clips, starch cones. Rodding is usually carried out straight after bleeding is completed to prevent the escape of ruminal or stomach fluid or contents, which would contaminate the tissues of the head and neck. Alternatively this may be carried out after hide/fleece removal to minimise contamination of the throat.* ***Bunging*** *– reduce faecal contamination by placing a bag over the rectum and securing it in place with an elastic band. Specialist bunging equipment is available for pigs which cuts round the orifice and pushes rectal content back up the rectum and so prevents spillage. For sheep rectal contents can be milked, or milked and tied, or milked and clipped as well as bunged.*

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C15. Both kidneys must be removed from their fatty covering. In the case of bovine and porcine animals, and solipeds, the peri-renal capsule must also be removed. *853/2004 Annex III Section I* ***Slaughter Hygiene:*** *Chapter IV point 14*	
	Kidneys
• **Remove both kidneys from their fatty covering.** • **In the case of bovine and porcine animals and solipeds, also remove the peri-renal capsule.** ***C15***	*Remove kidneys to facilitate post-mortem inspection.* *Correlate to carcases for inspection*

C16. When destined for further handling: (a) stomachs must be scalded or cleaned; (b) intestines must be emptied and cleaned; *853/2004 Annex III Section I* ***Slaughter Hygiene:*** *Chapter IV point 18(a) & (b)*	
	Stomachs & Intestines
• **When destined for further handling, scald or clean stomachs; empty and clean intestines.** ***C16*** • **Unless otherwise authorised, provide a separate room for the emptying and cleaning of stomachs and intestines.** ***A5***	*If intended for human consumption, scald or clean stomachs and empty and clean intestines thoroughly with potable water, before despatch from the slaughterhouse.* *Cleaning of green offal should take place in a separate room (or at a separate time if authorised at approval) to avoid cross contamination- see A5 above.* *Section XIII Annex III of Regulation 853/2004 sets out requirements for Treated Stomachs, Bladders & Intestines - see the separate Edible Co-Products Industry at www.food.gov.uk/foodindustry/guidancenotes/meatregsguid/coproductbyproductguide.* *Staff handling green offal should not handle other fresh meat unless they first wash their hands and other parts of the body that were contaminated and change protective clothing if necessary.* *Remove labelled containers used for the collection and*

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	disposal of gut content from the work area when full and at the end of the day.

C17. The carcases must not contain visible faecal contamination. Any visible contamination must be removed without delay by trimming or alternative means having an equivalent effect.

853/2004 Annex III Section I ***Slaughter Hygiene:*** *Chapter IV point 10*

A8. Food business operators shall not use any substance other than potable water - … - to remove surface contamination from products of animal origin, unless the substance's use has been approved … .

853/2004 Article 3 point 2

	Visible Carcase Contamination
• **Make sure that carcases do not contain visible faecal contamination. If any such contamination has occurred remove it without delay by trimming or alternative means with an equivalent effect.** ***C17***	***Gross visible contamination of meat must be trimmed.*** *If such contamination is detected* ***plant staff should remove it before*** *the carcase is presented for post-mortem inspection.* ***Check every carcase*** *to ensure absence of visible contamination with, in particular, faeces, viscera, bedding, hide and hair, wool or bristle. In order to inspect in the proper way, ensure there is enough light (see A4 above) at the point of inspection and that the carcase can be seen from all angles (e.g. mirrors can assist - but take care as glass can become a food safety hazard).* ***Trimming of bullet entry points*** *– shot game carcases may require localised trimming around bullet holes because of bruising, or more extensive trimming if there is bone/muscle damage.* ***OV decisions –*** *note that the OV is to declare meat unfit for human consumption if it shows soiling, faecal or other contamination.* ***854/2004 Annex I Section II Chapter V(s)***
	Removal of surface contamination
• **Use only potable water or EU approved substances**	*Remove any visible faecal contamination before the carcase is washed or rinsed. Rinsing or showering of carcases should*

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for the removal of surface contamination from meat or other products of animal origin. Follow the conditions of use. ***A15***	*be kept to a minimum using only potable water (or approved substances – see Section A15 above). If spraying is carried out water should be contained in such way to prevent cross contamination and waste water collected and ducted into a drain.* *Washing is recommended:* *- after beef carcase splitting to remove bone dust, taking care to restrict water spray to the back bone;* *- after the scald tank for pigs and poultry but before evisceration, to remove debris from the scald tank.* ***Heads and tongues** – wash before inspection, to remove any ingested material that may hamper inspection.* ***OV decisions –** note that the OV is to declare meat unfit for human consumption if it has been treated illegally with decontaminating substances.* ***854/2004 Annex I Section II Chapter V (I)***

C18. Slaughterhouse operators must follow the instructions of the competent authority to ensure that post-mortem inspection of all slaughtered animals is carried out under suitable conditions in accordance with Regulation 854/2004.

*853/2004 Annex III Section I **Slaughter Hygiene:** Chapter IV point 12*

Emergency Slaughter Outside the Slaughterhouse

C19. The slaughtered animal must be fit for human consumption following post-mortem inspection carried out in the slaughterhouse in accordance with Reg. 854/2004 including any additional tests required in the case of emergency slaughter.

C20. Food business operators must follow any instructions that the official veterinarian may give after post-mortem inspection concerning the use of the meat.

*853/2004 Annex III Section I **Domestic Ungulates:** Chapter VI points 7 and 8*

Large Wild Game

C21. Large wild game delivered to a game-handling establishment must be presented to the competent authority for inspection.

C22. In addition, unskinned large wild game may be skinned and placed on the market only if: (b) after skinning, it undergoes a final inspection in accordance with Reg. 854/2004.

*853/2004 Annex III Section IV **Large Wild Game:** Chapter II points 7 and 8*

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	Post-mortem Inspection
• **Follow the OV's instructions to ensure that post-mortem inspection of all slaughtered animals is carried out under suitable conditions in accordance with Regulation 854/2004** ***C18, C19, C21, C22*** • **Carcases and accompanying offal are to be subjected without delay after slaughter to post-mortem inspection. The slaughter line speed and the number of inspection staff present are to be such as to allow for proper inspection.** ***854/2004 Annex I Section I Chapter II D point 1*** • **For post-mortem inspection the OV will require certain carcases to be submitted split lengthways down the spinal column. The OV may also require any head or any carcase to be split lengthways.** ***854/2004 Annex I Section I Chapter II D point 3*** • **Post-mortem inspection procedures described for [red meat] animals are to be applied to the**	*Regulation 854/2004 lays down the requirements for post-mortem inspection – see 10.2 (Post-mortem Inspection). After the inspection, the OV/OA can:* ▪ *pass the meat as fit for human consumption* ▪ *declare the meat unfit for human consumption* ▪ *detain the meat for further examination following rectification.* ***Splitting carcases*** *– unless the OV authorises otherwise for a specific reason, split carcases of domestic solipeds, bovine animals over 6 months old and domestic swine over 4 weeks old lengthways down the spinal column. The OV may also require splitting of any carcase or head.* ***Operator rectification*** *- meat presented for post-mortem inspection should be free from visible faecal and other contamination.* *If contaminated meat is presented, official inspection staff will divert it to the detained rail or area until action has been taken by the operator to remove the contamination and re-present the meat for inspection. See C11 above on Correlation Of Carcases and Parts).* *Some defects can be removed under official supervision and re-presented for inspection and health marking. Other defects will render the carcase and parts unfit for human consumption. Where certain pathological defects are detected, e.g. bruising, these may, by agreement with the OV, be removed by the operator at the final inspection area. Otherwise, official inspection staff will divert the carcase to the detained rail or area for a final decision on fitness.* ***Uteri*** *- for the grading and classification of female bovines as heifers or cows, the uteri may be left attached to the carcase until grading is completed if the OV is satisfied with the procedures to ensure:*

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corresponding species of farmed game. ***854/2004 Annex I Section IV Chapter VII B point 2***	▪ *correlation is kept between the uteri and the carcase without a risk of cross contamination;* ▪ *no carcase is released for human consumption until the uteri has been completely removed and the carcase found fit for human consumption at post-mortem inspection and health marks are applied (note: for carcases over thirty months of age the health mark will only be applied when a negative TSE result is obtained the following working day).*
	Meat from Emergency Slaughter Animals
• **Follow the OV's instructions regarding any additional tests that may be required for an emergency slaughtered animal, or the use of its meat after post-mortem inspection.** ***C19, C20***	*Meat from emergency slaughtered animals may not be placed on the market unless it bears a special health mark and only in the country where slaughter takes place.* ***853/2004 Annex III Section I Chapter VI point 9*** *See Chapter 13 (Food Traceability etc.) Section C3.*

C23. After post-mortem inspection:

(a) the tonsils of bovine animals, porcine animals[1] and solipeds must be removed hygienically;

[1]amended by 1662/2006 Annex II point 1(b)

(b) parts unfit for human consumption must be removed as soon as possible from the clean sector of the establishment;

(c) meat detained or declared unfit for human consumption and inedible by-products must not come into contact with meat declared fit for human consumption; and

(d) viscera or parts of viscera remaining in the carcase, except for the kidneys, must be removed entirely and as soon as possible, unless the competent authority authorises otherwise.

853/2004 Annex III Section I ***Slaughter Hygiene:*** *Chapter IV point 16(a)-(d)*

	Unfit Meat
• **After post-mortem inspection make sure that:** ▪ **tonsils of cattle [, pigs]**	***OV decisions –*** *note that among other reasons, the OV will declare meat unfit for human consumption if it indicates patho-physiological changes, contains other than permitted SRM,*

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animals and solipeds (horses) are removed hygienically. ▪ **parts unfit for human consumption are removed as soon as possible from the clean sector of the slaughterhouse.** ▪ **meat detained or declared unfit for human consumption and inedible by-products do not come into contact with meat declared fit for human consumption.** ▪ **viscera or parts of viscera remaining in the carcase, except for the kidneys, are removed entirely and as soon as possible, unless the OV authorises otherwise.** ***C25***	*shows soiling, faecal or other contamination or, in the OV's opinion, it may constitute a risk to public or animal health or is for any other reason not suitable for human consumption.* ***854/2004 Annex I Section II Chapter V (p), (r), (s), (u)*** ***Detained meat** - use a rail to divert carcases to a lockable, refrigerated facility for storage of detained meat for further inspection - see A9 above.* ***Storage and removal of unfit meat** - place unfit meat in a designated, labelled container out of contact with fit meat and remove the container when full or at the end of the day. See Chapter 15 (Waste Management). There should be separate lockable facilities for the storage of meat declared unfit for human consumption – see A9 above.* ***Edible Co-products and Animal By-Products** – see separate guidance available at www.food.gov.uk/foodindustry/guidancenotes/meatregsguid/coproductbyproductguide*

See Chapter 11 (Cutting of Meat) for further information

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D. DRESSING OF POULTRY AND LAGOMORPHS INCLUDING GAME

See Chapter 9 Acceptance & Slaughter of Animals:

- **Animal Welfare legislation**
- **Section A. Transport of livestock to slaughterhouses**
- **Section B. Acceptance of livestock**
- **Section D. Food chain information**
- **Section E. Slaughter of farmed game mammals & poultry on farm**
- **Section G. Slaughter of poultry & lagomorphs**

<u>Acceptance of bodies of Poultry slaughtered on farms for dressing</u>

D1. The slaughtered birds must be accompanied to the slaughterhouse by a declaration by the … operator who reared the animal indicating any veterinary products or other treatments administered to the animal, dates of administration and withdrawal periods, and the date and time of slaughter.

D2. The slaughtered animal must be accompanied to the slaughterhouse by a certificate issued by the OV or approved veterinarian in accordance with Regulation 854/2004.

D3. In the case of poultry reared for the production of 'foie gras', the uneviscerated birds must be transported immediately and if necessary refrigerated to a slaughterhouse or cutting plant. They must be eviscerated within 24 hours of slaughter under the supervision of the competent authority.

D4. Delayed eviscerated poultry … may be kept for up to 15 days at a temperature of not more than 4ºC after slaughter. It must then be eviscerated in a slaughterhouse or cutting plant located in the same Member State as the farm of production.

853/2004 Annex III Section II Chapter VI points 6-9

	Bodies Accepted for Dressing
• **Make sure that:** ▪ **accepted farm slaughtered poultry are accompanied by a owners declaration and veterinary certificate.** ***D1, D2*** ▪ **uneviscerated poultry for 'foie gras' production is transported, immediately and if necessary refrigerated, to an**	***Foie gras*** *– eviscerate poultry within 24 hours of slaughter.* ***Delayed eviscerated poultry*** *must arrive for evisceration no later than 15 days after slaughter.* ***Documentation*** *– confirm that when the poultry arrives the birds are at no more than 4ºC if a delayed evisceration bird, or under refrigeration if necessary if a 'foie gras' bird (in the UK except for the coldest time of year, and where storage and transport times are short, active chilling will be necessary). Check that poultry is accompanied by* ***Owner Declarations*** *and* ***Veterinary Certificate*** *- see Chapter 9 Section E*

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approved slaughterhouse or cutting plant in the same Member State for evisceration within 24 hours of slaughter. ***D3*** ▪ **delayed eviscerated poultry arrives at a slaughterhouse or cutting plant in the same Member State as the farm of production no later than 15 days after slaughter and at a temperature of not more than 4ºC.** ***D4***	*including model document at Annex 6.* *If the correct documentation is not provided to the operator the carcase must be disposed of as animal by-product.*

D5a. … skinning or plucking, … and other dressing must be carried out without undue delay in such a way that contamination of the meat is avoided.

853/2004 Annex III Section II ***Slaughter Hygiene:*** *Chapter IV point 5*

	Plucking & Skinning
• **Carry out skinning or plucking, and other dressing without delay and in such a way as to prevent contamination of the meat.** ***D5a***	***Scalding*** *- using potable water, birds are scalded either by immersion in hot water or by dry hot air.* ***Automated plucking*** *- when used, make sure:* ▪ *Equipment is well maintained and in good working order so that it meets operational standards.* ▪ *Waste feathers are removed from plucking equipment and the plucking room regularly and hygienically.* ***Manual plucking*** *- when using the dry plucking method staff should observe good personal hygiene to avoid possible contamination (i.e. washing hands frequently and wearing clean protective clothing).*

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	Wax baths *– may be used to de-feather ducks. Refill wax bath with clean wax as necessary. Melt used wax in a separate room and remove feather remnants and dirt before the wax is used again.*

D5b. … evisceration … must be carried out without undue delay in such a way that contamination of the meat is avoided. In particular, measures must be taken to prevent the spillage of digestive tract contents during evisceration. *853/2004 Annex III Section II* ***Slaughter Hygiene:*** *Chapter IV point 5*	
	Evisceration
• **Evisceration may be delayed for up to** ▪ **15 days after on farm slaughter of poultry** ▪ **24 hours after on farm slaughter of 'foie gras' poultry.** ***D3, D4*** • **Carry out evisceration without delay and in such a way as to prevent contamination of the meat. In particular, take steps to prevent the spillage of digestive tract contents during evisceration.** ***D5b***	***Automated Evisceration –*** *in the case of mechanised lines, poor alignment of evisceration equipment may result in damage to the digestive tract and subsequent spillage of gut contents with contamination of the carcase. Adequate maintenance and adjustment of the equipment to the size of birds is important to avoid this.* ***Manual Evisceration –*** *frequent changing, rinsing and disinfection of knives and washing of the operative's arms and hands should be carried out to prevent cross-contamination. Keep aprons clean or change them regularly.* ***Partial Evisceration*** *- the removal of intestines only (see 'effilé' below) may be permitted by the Competent Authority. Requests will be considered by FSA Meat Hygiene & Veterinary Division on receipt of a proposed method of operation (see also D7c).* ***Evisceration (marketing terms)*** *- under the EU Poultrymeat Marketing Standards Regulations (see 10.2 above) relevant poultry carcases must be presented for sale in one of the following forms:* ▪ *'partially eviscerated' ('effilé', or 'roped') - in which the heart, liver, lungs, gizzard, crop and kidneys have not been removed from the carcase.* ▪ *'(eviscerated), without giblets' or '(eviscerated), with*

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	giblets'. (Giblets comprise only the heart, neck, gizzard (with contents and horned membrane removed) and liver (without gall bladder), and other parts considered as edible by the market on which the product is intended for final consumption. If the neck remains attached to the carcase, it is not considered as one of the giblets.)

D5c. … dressing must be carried out without undue delay in such a way that contamination of the meat is avoided. *853/2004 Annex III Section II* ***Slaughter Hygiene:*** *Chapter IV point 5*	
	Dressing
• **Carry out dressing without delay and in such a way as to prevent contamination of the meat.** ***D5c***	***Harvesting of heads, feet and offal*** *- staff involved in these operations should not touch carcases without first washing their hands and wash (and disinfect) equipment frequently. Any containers used must have been cleaned and disinfected before use and be removed from the room when full.* ***Feet*** *– when harvested for human consumption feet must be inspected. Feet that are not separately identifiable e.g. feet belonging to carcases rejected at evisceration, must not be released for human consumption.* ***Trimming*** *– trimming of minor blemishes such as bruising is discretionary – preferably completed after evisceration to minimise the risk of contamination of exposed meat. Removal of more significant quantities of meat is usually impracticable with high line speeds, and in these cases an adjacent trimming area should be provided.* ***Dropped meat policy*** *– have procedures to deal with carcases or offal that have fallen on the floor. This could include the provision of a meat tray off the floor at 'weak points' in the line and trimming affected parts. Trim in-skin poultry carcases immediately to remove of visible contamination before processing is resumed. Pieces that are not suitable for trimming should be disposed of as unfit food.*

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A15. Food business operators shall not use any substance other than potable water - … - to remove surface contamination from products of animal origin, unless the substance's use has been approved … . *853/2004 Article 3 point 2*	
	Washing of Poultry/Lagomorphs
• **Use only potable water or EU approved substances for the removal of surface contamination from meat or other products of animal origin. Follow the conditions of use.** ***A15***	*Washing of carcases can reduce the microbial load, provided the washers are strategically placed. Use only potable water (or approved substances – see Section A of this Chapter).* ***OV decisions –*** *note that the OV will declare meat unfit for human consumption if it has been treated illegally with decontaminating substances* ***854/2004 Annex I Section II Chapter V (I)*** *Spray wash internally and externally between different stages of evisceration to minimise the opportunity for bacterial attachment. Ensure that spray is minimised during washing and the waste water is ducted into drains to minimise cross contamination.* *Potable water flumes may convey offal; water used to transport offal should not enter the offal washer.* *Carcases to be subjected to immersion chilling should be effectively washed prior to immersion.*

D6. Slaughterhouse operators must follow the instructions of the competent authority to ensure that the post-mortem inspection is carried out under suitable conditions, and in particular that slaughtered animals can be inspected properly. *853/2004 Annex III Section II* ***Slaughter Hygiene:*** *Chapter IV point 6*	
	Post-mortem Inspection
• **Follow the OVs instructions to ensure that post-mortem inspection of all slaughtered animals is carried out under suitable conditions in accordance with Reg**	*Regulation 854/2004 lays down the requirements for post-mortem inspection – see 10.2 (Post-mortem Inspection).* *After the inspection, the OV/OA can:* ▪ *pass the meat as fit for human consumption* ▪ *declare the meat unfit for human consumption* ▪ *detain the meat for further examination following*

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854/2004. ***D6*** • **Carcases and accompanying offal are to be subjected to post-mortem inspection without delay after slaughter. The speed of the slaughter line and the number of inspection staff present are to allow for proper inspection.** • **854/2004 Annex I Section I Chapter II D point 1Post-mortem inspection procedures described for poultry are to be applied to the corresponding species of farmed game.** ***854/2004 Annex I Section IV Chapter VII B point 2***	*rectification.* *Carcases and/or offal affected with general contamination by faecal material, bile, grease or disinfectants should be considered unfit for human consumption.* ***Rectification –** rectification, including removal of unfit meat, resulting from post-mortem findings must be carried out by plant staff under official supervision (supervision of trimming may be carried out by a PIA). Identification of unfit meat for trimming must not be delegated to untrained individuals.* *Put in place a hygienic trimming system if contaminated carcases are to be trimmed. Any part of the carcase or offal affected with bile staining should be trimmed. Where plucking machines break the skin of poultry the underlying musculature should be considered to be contaminated and trimmed from the carcase. Meat contaminated after post-mortem inspection must not be released for human consumption.* ***Trimming after chilling** - trimming of carcases may be delayed until after chilling, if there is no risk of contamination to other carcases (i.e. does not apply to e.g. faecal contamination). In addition, arrangements are to be in place for the trimming to be done under official supervision at regular times and methods are agreed with the OV (i.e. marking and identification of parts to be trimmed) to ensure that trimming is effectively completed by plant staff.*
	Involvement of Slaughterhouse Staff
• **The Competent Authority (CA) may authorise the staff of poultry or rabbit slaughterhouses to carry out tasks of the meat inspectors** ▪ **the OV is present and supervises post-mortem inspection**	*Staff of an establishment may be authorised to undertake duties of the Official Auxiliaries (Meat Hygiene Inspectors) as Plant Inspection Assistants (PIAs) if MHS/DARD are satisfied that:* ***(A)** Operators are **taking responsibility** for ensuring the safe production of meat, based on:* ▪ *production and inspection records;* ▪ *type of activities undertaken in the establishment;* ▪ *history of compliance with the rules;*

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▪ **responsibilities for production and inspection in the establishment are kept separate.** ***854/2004 Annex I Section III Chapter III A*** ***2536/2005 Transitional Measures Article 14 and 15***	▪ *expertise, professional attitude and sense of responsibility of the PIAs with regard to food safety; and* ▪ *other relevant information.* *These factors will be routinely assessed at audit.* ***Certification** – there is a requirement to initiate and pursue certification in accordance with international standards, such as relevant EN ISO standards in quality management or food safety.* ***(B)** Staff are authorised for specific tasks and species. If a PIA moves to another poultry or rabbit slaughterhouse, they will be able to continue inspecting species listed on their authorisation.* ***New PIAs** – authorisations will only be issued where staff have been trained in the same way as Meat Hygiene Inspectors and passed an examination for the tasks they will be carrying out.* ***Existing PIAs –** need to pass the examination for the specific tasks they are carrying out by the end of 2009.* ***Wild game** – From 1.1.06 PIAs are not permitted to inspect wild game carcases in game handling establishments**.*** ***Training** - for information on training centres for PIAs, contact the Royal Society for the Promotion of Health on 020 7630 0121 or by email to examinations@rsph.org; www.rsph.org/qualifications.*

D7. After post-mortem inspection:

(a) parts unfit for human consumption must be removed as soon as possible from the clean sector of the establishment;

(b) meat detained or declared unfit for human consumption and inedible by-products must not come into contact with meat declared fit for human consumption; and

(c) viscera or parts of viscera remaining in the carcase, except for the kidneys, must be removed entirely, if possible, and as soon as possible, unless otherwise authorised by the competent authority.

853/2004 Annex III Section II Slaughter Hygiene: Chapter IV point 7(a)-(c)

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	After Post- mortem
• **After post-mortem inspection:** ▪ **remove parts unfit for human consumption as soon as possible from the clean sector of the establishment;** ▪ **do not allow meat detained or declared unfit for human consumption and inedible by-products to come into contact with meat declared fit for human consumption; and** ▪ **remove viscera or parts of viscera (except for the kidneys) remaining in the carcase entirely if possible, and as soon as possible, unless otherwise authorised by the competent authority.** ***D7***	***OV decisions*** *– note that among other reasons, the OV will declare meat unfit for human consumption if it indicates patho-physiological changes, shows soiling, faecal or other contamination or, in the opinion of the official veterinarian, it may constitute a risk to public or animal health or is for any other reason not suitable for human consumption.* ***854/2004 Annex I Section II Chapter V (p), (r), (s), (u)*** ***Authorisation of partial evisceration*** *(see D5b) – once authorised each batch would be subject to the satisfactory outcome of a post-mortem inspection of a sample of fully eviscerated as well as of partially eviscerated birds.* ***Detained meat*** *– use a rail to divert carcases for further inspection - see A9 above.* ***Animal By-Products*** *– remove by-products from the clean area to reduce the risk of cross-contamination. See separate guidance available at www.food.gov.uk/foodindustry/ guidancenotes/meatregsguid/coproductbyproductguide* *Gut content and any other animal waste should be removed or destroyed as often as may be necessary and, in any case, at least daily to avoid accumulation and thus reducing the risk of cross contamination.* ***Storage and removal of unfit meat*** *- place unfit meat in a designated, labelled container away from contact with fit meat and remove the container when full or at the end of the day. See Chapter 15 (Waste Management). There should be separate lockable facilities for the storage of meat declared unfit for human consumption – see A9 above.*

D8. **After inspection and evisceration, slaughtered animals must be cleaned and chilled to not more 4 °C as soon as possible, unless the meat is cut while warm.**

D9. **When carcases are subject to an immersion chilling process, account must be taken of the following:**

(a) Every precaution must be taken to avoid contamination of carcases, taking into

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account parameters such as carcase weight, water temperature, volume and direction of water flow and chilling time.

(b) Equipment must be entirely emptied, cleaned and disinfected whenever this is necessary and at least once a day.

853/2004 Annex III Section II ***Slaughter Hygiene:*** *Chapter IV points 8, 9(a) and 9(b)*

D10. … finished products likely to support the reproduction of pathogenic micro-organisms or the formation of toxins are not to be kept at temperatures that might result in a risk to health. The cold chain is not to be interrupted. However, limited periods outside temperature control are permitted, to accommodate the practicalities of handling during preparation, transport, storage, display and service of food, provided that it does not result in a risk to health.

852/2004 Annex II ***Foodstuffs:*** *Chapter IX point 5*

	Cleaning & Chilling of White Meat Carcases
• **Clean and chill carcases to not more than 4 °C as soon as possible after post inspection, unless the meat is cut while warm.** ***D8*** • **The cold chain is not to be interrupted.** ***D10***	***Cleaning*** *– see A15 above* ***Trussing*** *- may take place before chilling as long as it does not significantly delay the cooling of the meat.* ***Chilling*** *– after inspection carcases may be cut above 4°C, but meat must be chilled down to 4°C or below as soon as possible and before subsequent storage and transport from co-located cutting rooms. The cold chain is not to be interrupted excepted in limited circumstances e.g. while transferring food short distances. Include the procedures for maintaining the cold chain, checking and recording temperatures of the meat and taking corrective actions if procedures fail, in the HACCP plan - see Chapter 8 (Temperature Controls).* ***The EU Poultrymeat Marketing Standards Regulations*** *(see 10.2 above) specify the methods of chilling and their corresponding terms which may appear on poultrymeat labelling: 'Air chilling', 'Air spray chilling' and 'Immersion chilling' (see below). They also provide for poultry to be marketed in one of the following conditions':* ***'Fresh':*** *not stiffened by the cooling process, and kept at a temperature not below -2°C and not higher than 4°C.* ***'Frozen':*** *frozen as soon as possible and kept at a temperature no higher than -12°C.*

OPERATOR'S OBLIGATIONS	ADVICE
	'Quick-frozen': *kept at a temperature no higher than -18° C at any time within the tolerances as provided for in Directive 89/108/EEC relating to quick-frozen foodstuffs for human consumption.*
	Immersion Chilling
• **During immersion chilling, take every precaution to avoid contamination of carcases, taking into account parameters such as carcase weight, water temperature, volume and direction of water flow and chilling time.** • **Empty, clean and disinfect equipment is entirely emptied, whenever this is necessary and at least once a day.** ***D9***	*Immersion chilling lowers the temperature of poultry carcases. But it is considered inappropriate for carcases that are subject to delayed/partial evisceration.* *It is recommended that carcases for immersion chilling should be effectively washed both inside and out by spraying prior to immersion. The water or ice and water should be continuously renewed at an adequate rate with carcases moving in the opposite direction to the flow of water. Carcases should not remain in the equipment for longer than is strictly necessary.* ***Potable water** - see Chapter 3 (Water Quality).* ***Cleaning** - immersion chilling equipment must be entirely emptied, cleaned and disinfected whenever necessary and at least once a day to prevent the build up of microbiological contaminants.* ***Note**: Operators using immersion chilling to reduce carcase temperature may determine their own parameters but must avoid contamination of carcases. The following advice is taken from previous legislation.* ***Process** - after an initial carcase spray to wash both the internal and external surfaces, pass carcases through one or more tanks of potable water or of ice and water, the contents of which are continuously renewed, using a system that propels carcases through a counterflow of water.* *Where there are several tanks, regulate the inflow of fresh water and the outflow of used water so it decreases progressively in the direction of carcase movement, with the fresh water being divided between the tanks.*

OPERATOR'S OBLIGATIONS	ADVICE
	***Parameters**:* *For carcase spraying use the following quantities of water for carcases weighing:* *• below 2.5 kg, at least 1.5 litres* *• between 2.5 kg and 5 kg: at least 2.5 litres;* *• above 5 kg: at least 3.5 litres.* *For immersion chilling use a minimum water flow for carcases weighing:* *• below 2.5 kg: 2.5 litres per carcase,* *• between 2.5 kg and 5 kg: 4 litres per carcase,* *•above 5 kg: 6 litres per carcase.* *Water temperature at the points of entry and exit of the carcases: + 16 °C and + 4 °C respectively, the aim is for carcases to reach 4 °C as soon as possible.* *Chilling time: avoid keeping carcases in the first tank longer than 30 minutes (or 40 minutes for poultry slaughtered by the Jewish method) and in other tanks for longer than is strictly necessary.* ***Monitoring** - use calibrated control equipment to measure and record:* *(i) water consumption during spray-washing,* *(ii) water temperature in each tank at carcase entry and exit points,* *(iii) water consumption during immersion,* *(iv) the number of carcases in each of the weight-ranges above;* *Evaluate the correct functioning of the chillers by monitoring results of periodic microbiological tests on contamination of the carcases with total bacteria and enterobacteria before and after immersion.* ***Records** – keep the results of these checks.*

OPERATOR'S OBLIGATIONS	ADVICE

D11. FBOs shall ensure that poultrymeat that has been treated specifically to promote water retention is not placed on the market as fresh meat but as meat preparations or used for the production of processed products.

853/2004 Annex III Section II Chapter VII added by Implementing Measure 2074/2005 Annex VII 2(b)

	Water Retention Agents
• **Do not market poultry meat that has been treated specifically to promote water retention as 'fresh' meat.** ***D11***	*Such meat can be marketed as a meat preparation or used for the production of processed products.*
	Water Content
• **Water content of 'frozen' and 'quick-frozen' whole chickens must not exceed stated values for marketing in the EU.** ***Poultrymeat Marketing Standards Regulations***	*The EU Poultrymeat Marketing Standards Regulations (see 10.2 above) requires that frozen and quick-frozen whole chickens may only be marketed within the EU if the water content does not exceed technically unavoidable values. (Art.14A(1)).* *Measures must be adopted to ensure that the product from each establishment does not contain excessive water, in particular that:* ▪ *samples for monitoring water absorption during chilling and water content of frozen and quick frozen chickens are taken at least once every four working hours (Art.14A(3));* ▪ *results of the checks are recorded and kept for a period of one year; and* ▪ *each batch is marked in a way that its date of production can be identified; this batch mark must appear on the production record (Art.14A(2)).*

See Chapter 11 (Cutting of Meat) for further information

OPERATOR'S OBLIGATIONS	*ADVICE*

10.3.2. WHAT ARE THE OFFICIAL CONTROL REQUIREMENTS?

Audits by officials of good hygiene practices shall verify that meat plant operators apply pre-operational, operational and post-operational hygiene procedures, temperature controls and controls on food entering and leaving the establishment and any accompanying documentation, continuously and properly.

854/2004 Article 4 points 4c & 4h

Audits by officials of HACCP –based procedures shall verify that meat plant operators apply such procedures continuously and properly.

854/2004 Article 4 point 5

The official veterinarian shall carry out inspection tasks in slaughterhouses, game handling establishments and cutting plants placing fresh meat on the market in accordance with the general requirements of Section I, Chapter II, of Annex I, and with the specific requirements of Section IV, …

854/2004 Article 5 point 1

10.3.3 APPLYING PROCEDURES CONTINUOUSLY AND PROPERLY

The operator is responsible for food safety in the food business.

852/2004 Article 1 point 1(a)

Food business operators shall put in place, implement and maintain a permanent procedure or procedures based on the HACCP principles.

852/2004 Article 5 point 1

Food … business operators at all stages of production, processing, and distribution within the businesses under their control shall ensure that foods … satisfy the requirements of food law which are relevant to their activities and shall verify that such requirements are met.

178/2002 Article 17

	Operator Responsibilities for Carcase Dressing
• **Operator responsibility includes applying and verifying the company's hygienic meat production procedures and taking corrective action if those procedures fail.** • **Implement and maintain a**	***Operator Responsibility*** *includes maintaining and monitoring hygienic meat production procedures and taking corrective action if there is a failure.* ***These procedures should be based on HACCP principles*** *– see Section A13 above and PART THREE Chapter 1 (Application of HACCP Principles).* ***Delegation*** *– responsibility for maintaining and monitoring of hygienic dressing procedures may be delegated to a nominated person to whom problems are reported, and who has sufficient*

OPERATOR'S OBLIGATIONS	*ADVICE*
permanent procedure or procedures based on the HACCP principles.	*authority to ensure that corrective action is taken when necessary.* ***Monitoring*** *– check and record on a daily basis that staff are following the company's procedures for slaughter, dressing, chilling, cutting and processing, for example:* ▪ *Cleanliness of food handling areas, storage and transport, immersion chillers if used* ▪ *Meat handling procedures, including adequate tool cleaning and disinfection* ▪ *Meat temperatures in workrooms, storerooms, vehicles* ▪ *Effectiveness of heat treatment, if used* ▪ *Adequacy of personal hygiene practices* ▪ *Microbiological testing, if carried out* ***Records*** *- keep an accurate, dated account (e.g. in a Food Safety Management diary/daybook) of each monitoring check observations, of issues requiring special attention, and of any corrective action taken.* ***Corrective action*** *- Take action when failures of the company's production procedures are identified. Such action may include:* ▪ *Dealing with any product that has been contaminated;* ▪ *Dealing with equipment failures;* ▪ *Establishing the underlying cause and what needs to be done to prevent similar incidents in the future;* ▪ *Improving staff instructions and training.*

PART TWO

11. CUTTING OF MEAT

11.1 WHY IS HYGIENIC CUTTING OF MEAT IMPORTANT?

Meat for cutting may have been contaminated with food poisoning bacteria, such as Salmonella, *E.coli O157*, or by SRM, grease, dirt, metal or other foreign bodies in the slaughterhouse or during storage and transport to the cutting plant. Bacteria can multiply quickly if meat is kept at too high a temperature. Depending on the organism, the number of bacteria needed to cause illness in a healthy adult may vary from 1,000,000 to as low as 10 (*E.coli* O157). Poor hygiene will increase the potential for contamination of food, including transfer from meat to other foods including ready-to-eat products, and increase the possibility of food poisoning. Procedures are needed to minimise the risk of these hazards causing illness in consumers.

For example:

- Insufficient training of staff responsible for the cutting, subsequent storage and transport of meat will increase the risk of contamination of meat due to poor working practices.
- Badly cleaned equipment increases the risk of cross-contamination between batches of meat.
- Inadequate separation between 'clean' and 'dirty' areas, or between exposed meat and poorly cleaned or uncleanable surfaces may result in cross contamination.
- Food stored or transported under poorly cleaned or inadequate conditions may become physically contaminated by pests, or from the environment (dust, dirt etc.).
- Failure to maintain the cold chain will encourage the growth of bacteria on meat. The higher the storage temperature, the faster the bacteria will multiply, increasing the potential for a food safety hazard.

11.2 GENERAL INFORMATION

- **Definition**

  Cutting plant means an establishment used for boning and/or cutting up meat.

- **Approval of Establishments**

  With certain exceptions, an establishment that places the meat it cut on the market as fresh meat requires approval as a 'Cutting Plant' and is therefore subject to veterinary control, see PART ONE Chapter 7 (Approvals), including exemptions for retail establishments selling directly to the final consumer. However, Regulation 853/2004 sets hygiene requirements for all approved establishments where meat is cut.

  - **Meat Products**

    All meat used to produce meat products must meet the requirements for fresh meat *(853/2004 Annex III Section VI Meat Products: Section VI point 2)*. This means the meat is to be sourced from approved establishments and the requirements for hygiene during cutting and boning of red/white meat are to be met.

  - **Farmed Game**

    Mammals - the provisions of 853/2004 Annex III Section I [Meat of domestic ungulates] apply to the production and placing on the market of meat from even-toed farmed game mammals (deer & boar) unless the competent authority considers them inappropriate.

    Ratites (flightless birds) - the provisions of 853/2004 Annex III Section II [Meat from poultry and lagomorphs] apply to the production and placing on the market of meat from ratites. However, those of Section I [Meat of domestic ungulates] apply where the competent authority considers them appropriate. Appropriate facilities must be provided and adapted to the size of the animals.
    (853/2004 Annex III Section III: Farmed Game: points 1 and 2).

  - **Wild Game**

    Large wild game - the rules laid down in Annex III Section I Chapter V [Cutting and boning of meat of domestic ungulates] apply *(853/2004 Annex III Section IV Large Wild Game Chapter II point 9).*

    Small Wild Game - the rules laid down in Annex III Section II Chapter V [Cutting and boning of meat from poultry and lagomorphs] apply *(853/2004 Annex III Section IV Small Wild Game Chapter III point 7).*

OPERATOR'S OBLIGATIONS	*ADVICE*

11.3.1 WHAT ARE THE LEGAL REQUIREMENTS FOR CUTTING OF MEAT?

The following sections set out the requirements of the regulations that apply to the cutting of meat.

A. STRUCTURAL & PREREQUISITE HYGIENE REQUIREMENTS

Structural requirements for all establishments,

see: Chapter 1 (Design and Facilities)

- ***A. General rules for food premises and foodstuffs***
- ***B. Rooms where food is handled***
- ***C. Equipment***

A1. The layout, design, construction, siting and size of food premises are to:

a) … provide adequate working space to allow for the hygienic performance of all operations;

b) be such as to protect against the accumulation of dirt, contact with toxic materials, the shedding of particles into food and the formation of condensation or undesirable mould on surfaces;

c) permit good food hygiene practices, including protection against contamination …

852/2004 Annex II ***Food Premises:*** *Chapter I point 2*

A2. FBOs must ensure that cutting plants/production establishments … are constructed so as to avoid contamination of meat, in particular by:

a) allowing constant progress of the operations; or

b) ensuring separation between the different production batches;

A3. … cutting plants … have rooms for the separate storage of packaged and exposed meat [and products], unless stored at different times or in such a way that the packaging material and the manner of storage cannot be a source of contamination for the meat [or products];

853/2004 Annex III Section I ***Red meat cutting:*** *Chapter III points 1 & 2, Section II* ***White meat cutting:*** *Chapter III points 1a & 1b and Chapter V point 4; Section V* ***Production Establishments:*** *Chapter I points 1 & 2*

A4. Food premises have adequate natural and/or artificial lighting.

852/2004 Annex II ***Premises:*** *Chapter I point 7*

	Design & Layout for Cutting Meat
• **Make sure that premises and particularly rooms where food is prepared, treated or processed, have adequate**	*Take account of the hygiene requirements for cutting meat set out in the rest of this Chapter.* *Consider particularly the need for adequate working space to minimise the risk of contamination, with regard to*

OPERATOR'S OBLIGATIONS	*ADVICE*
space to allow for hygienic performance of all operations and permit good hygiene practices including protection against contamination between and during operations. ***A1, A2*** • **Have sufficient room to allow the progressive flow of work or batch separation in the cutting room.** • **Provide for separate storage of packaged and exposed meat and products, unless stored at different times so storage cannot be a source of contamination.** ***A3***	*throughput, and the separation of 'clean' and 'dirty' processes and areas.* *Have sufficient room to allow storage of meat before and after cutting so that the progressive flow of work can be properly organised and/or ensuring separation between the different production batches.* *Store exposed meat and processed products separately from packaging and from packaged meat. This can be in separate rooms, or by other means – see Chapter 14. Wrapping, Packaging & Transport Hygiene.* *Protect meat from chemicals, condensation, dirt, etc. and consider also the need for suitable, cleanable fittings, equipment and surfaces that can easily be maintained.* ***For more information on structural requirements see: Chapter 1 (Design and Facilities) Sections:*** ▪ ***A. General rules for food premises and foodstuffs*** ▪ ***B. Rooms where food is handled*** ▪ ***C. Equipment***
	Lighting
• **Install adequate lighting.** ***A4***	*Provide adequate lighting to assist the hygienic cutting of meat and processing operations as well as effective cleaning. As a guide these minimum levels are considered adequate:* ▪ *540 lux at inspection points* ▪ *220 lux in workrooms* ▪ *110 lux in other areas*

A5. If the following operations are undertaken in a cutting plant:

(a) the evisceration of geese and ducks reared for the production of 'foie gras', which have been stunned, bled and plucked on the fattening farm; or

(b) the evisceration of delayed eviscerated poultry,

FBOs must ensure that separate rooms are available for that purpose.

853/2004 Annex III Section II ***White meat cutting:*** *Chapter III point 2*

OPERATOR'S OBLIGATIONS	*ADVICE*
	Evisceration of Poultry
• **Provide separate rooms if the cutting plant is eviscerating geese and ducks reared for 'foie gras' production, or of delayed eviscerated poultry.** ***A5***	*White meat cutting plants may eviscerate poultry slaughtered on authorised farms for delayed evisceration or for the production of foie gras if there is a separate room for that operation and there are arrangements for official inspection (**854/2004 Annex I Section IV Chapter V B2**).* *See also Chapter 9 (Acceptance & Slaughter of Animals).*

A6. … cutting plants/production establishments … have cutting rooms equipped to ensure compliance with the requirements laid down in Chapter V [of Section I (red meat)], in Chapter V [of Section II (white meat)], in Chapter III [of Section V (processing)];

*853/2004 Annex III Section I **Red meat cutting:** Chapter III point 3; Section II **White meat cutting:** Chapter III point 1c; Section V **Production Establishments:** Chapter I point 3*

A7. Where the premises are approved for the cutting of meat of different animal species, precautions are taken to avoid cross-contamination, where necessary by separation of the operations on the different species in either space or time.

*853/2004 Annex III Section I **Red meat cutting:** Chapter V point 2c, Section II **White meat cutting:** Chapter V point 1c*

A8. (d) where necessary, provide suitable temperature-controlled handling and storage conditions of sufficient capacity for maintaining foodstuffs at appropriate temperatures and designed to allow those temperatures to be monitored and, where necessary, recorded.

*852/2004 Annex II **Food Premises:** Chapter I points 2(d)*

	Equipping of Cutting Plants
• **Make sure that cutting rooms can meet the requirements for :** ▪ **progressive working /batch separation,** ***A6, A2*** ▪ **separation of meat of different species,** ***A6, A7*** ▪ **temperature control.**	*Premises where meat is cut need to be equipped to meet the operational requirements for the hygienic cutting and boning of meat.* ***Progressive flow of work /batch separation** – see A2 above and B9/B10 below.* ***Meat of different species** – see B11 below.* ***Temperature control** – see Section C (Temperature Requirements) below.*

OPERATOR'S OBLIGATIONS	*ADVICE*
A6, A8	

A9. … cutting plants/production establishments … have equipment for washing hands with taps designed to prevent the spread of contamination, for use by staff engaged in handling exposed meat; and

A10. … cutting plants/production establishments … have facilities for disinfecting tools with hot water supplied at not less than 82 °C, or an alternative system having an equivalent effect.

853/2004 Annex III Section I ***Red meat cutting:*** *Chapter III points 4 & 5; Section II* ***White meat cutting:*** *Chapter III points 1d & 1e; Section V* ***Production Establishments:*** *Chapter I points 4 & 5*

A11 Adequate facilities are to be provided, where necessary, for the cleaning, disinfecting and storage of working utensils and equipment.

852/2004 Annex II ***Rooms:*** *Chapter II point 2*

	Facilities for Disinfecting Tools & Hand Washing
• **Provide hand washing equipment with taps designed to prevent the spread of contamination for staff that handle exposed meat.** ***A9***	***Hand washing facilities*** *- see Chapter 1 (Design and Facilities) Section D9*
• **Provide facilities for cleaning disinfecting and storage of tools.** ***A10, A11***	***Disinfection of Tools*** *- see B13 below and Chapter 1 (Design and Facilities) Section D8*

OPERATOR'S OBLIGATIONS	*ADVICE*

B. OPERATONAL REQUIREMENTS

Hygiene prerequisites for all cutting establishments, see:

- ***Chapter 2 (Water Supply)***
- ***Chapter 3 (Maintenance)***
- ***Chapter 4 (Cleaning)***
- ***Chapter 5 (Pest Control).***

Food business operators are to ensure:

B1. That food handlers are supervised and instructed and/or trained in food hygiene matters commensurate with their work activity.

B2. That those responsible for the development and maintenance of the required procedures based on HACCP principles, or for the operation of relevant guides, have received adequate training in the application of the HACCP principles.

852/2004 Annex II ***Training:*** *Chapter XII points 1 & 2*

	Training, Instruction & Supervision
• **Make sure that** ▪ **food handlers are instructed and/or trained in food hygiene matters commensurate with their work activity;** ***B1*** ▪ **staff responsible for the development and maintenance of HACCP-base procedures have received adequate training in the application of HACCP principles.** ***B2***	*Instruct all food handlers (including temporary staff) in hygienic cutting skills, awareness of food safety principles especially the need to minimise contamination, for temperature controls and personal hygiene, the need to follow instructions and to report failing controls promptly. Supervise as appropriate and issue reminders if lapses occur.* *Keep accurate individual training records to show what instruction/training has been given.* ***HACCP Training** - make sure that at least one person in the business has sufficient training in the application of HACCP principles to develop and maintain HACCP-based procedures or to follow guides to control the food safety hazards in the business. See PART THREE Chapter 1 (Application of HACCP Principles) Section A.* *See also Chapter 6 (Training).*

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B3. Every person working in a food-handling area is to maintain a high degree of personal cleanliness and is to wear suitable, clean and, where necessary, protective clothing.

852/2004 Annex II ***Personal Hygiene:*** *Chapter VIII point 1*

	Personal Hygiene
• **Make sure that every person working in a food-handling area maintains a high degree of personal cleanliness.** ***B3***	*All staff, as well as managers, officials and visitors, need to comply with the company's personal hygiene procedures, particularly handwashing and wearing of protective clothing.* *See Chapter 7 (Personal Hygiene)*

B4. Food business operators shall put in place, implement and maintain a permanent procedure or procedures based on the HACCP principles.

852/2004 Article 5 point 1

B5. At all stages of production, processing and distribution, food is to be protected against any contamination likely to render food unfit for human consumption, injurious to health or contaminated in such a way that it would be unreasonable to be consumed in that state.

852/2004 Annex II ***Foodstuffs:*** *Chapter IX point 3*

	HACCP-based Procedures
• **Implement and maintain a permanent procedure or procedures based on the HACCP principles.** ***B4*** • **Protect food at all stages of production, processing and distribution, against any contamination likely to render food unfit for human consumption, injurious to health or contaminated in such a way that it would be unreasonable to be consumed in that state.**	*HACCP-based procedures are necessary to ensure that food safety hazards, notably microbiological cross-contamination during cutting and the growth of bacteria through inadequate temperature control, are minimised. This is done by setting and applying operational limits and procedures for cutting and maintenance of the cold chain (e.g. during storage and transport).* *Set out in the HACCP plan, the procedures for controlling hazards, the limits that are to be monitored, the checks to be carried out, the corrective actions to be taken to ensure the safety of the meat and the records to be kept of those checks and actions.* *See 11.3.3 below and PART THREE Chapter 1 (Application of HACCP principles).* ***Microbiological testing** – can help confirm (validate/*

OPERATOR'S OBLIGATIONS	*ADVICE*
B5	*verify) the effectiveness of HACCP-based procedures – see process hygiene criteria. See PART THREE Chapter 2 (Microbiological Criteria)* ***Dropped meat policy** – procedures depend on the size of the piece of meat and the extent and nature of any possible contamination. Trim large pieces of red meat or in-skin poultry carcases of visible contamination before processing is resumed. Pieces that are not suitable for trimming should be disposed of as unfit food.*

B6. A food business operator is not to accept raw materials or ingredients, other than live animals, or any other material used in processing products, if they are known to be, or might reasonably be expected to be, contaminated with parasites, pathogenic micro-organisms or toxic, decomposed or foreign substances to such an extent that, even after the FBO had hygienically applied normal sorting and/or preparatory or processing procedures, the final product would be unfit for human consumption.

B7. Raw materials and all ingredients stored in a food business are to be kept in appropriate conditions designed to prevent harmful deterioration and protect them from contamination.

B8. Raw materials, ingredients, intermediate products and finished products likely to support the reproduction of pathogenic micro-organisms or the formation of toxins are not to be kept at temperatures that might result in a risk to health.
Food businesses manufacturing, handling and wrapping processed foodstuffs are to have suitable rooms, large enough for the separate storage of raw materials from processed material and sufficient separate refrigerated storage.

B9. Hazardous and/or inedible substances, including animal feed, are to be adequately labelled and stored in separate and secure containers.

852/2004 Annex II ***Foodstuffs:*** *Chapter IX points 1, 2, 5, 8*

	Acceptance & Sorting of Meat
• **Arrange for the sorting of incoming meat.** ***B6*** • **Do not accept raw materials if they are known, or reasonably expected, to be contaminated with parasites, pathogenic micro-organisms or toxic, decomposed or foreign**	*Make adequate arrangements to accept deliveries of meat (see Handling & Storage of Accepted Meat) below.* ***Inspection** - check raw meat on arrival to make sure that it* ▪ *is sourced from approved slaughterhouses, cutting establishments or cold stores and correctly identified (e.g. health/id marked meat – see Chapter 13 (Traceability etc.);* ▪ *meets temperature requirements;* ▪ *is not contaminated by, for example, foreign bodies*

substances to such an extent that, even after the hygienic application of normal sorting and/or processing, the final product would be unfit for human consumption. ***B6***	*parasites, pests, damaged packaging; and* ▪ *meets company quality specifications and documentation requirements.* *Take action if the food safety and other specifications are not met. Depending on the problem, action may include:* ▪ *holding e.g. to await documentation;* ▪ *treatment e.g. trimming otherwise fit meat of visible contamination;* ▪ *divert to production of heat treated product;* ▪ *disposal;* ▪ *return to the originating premises, but where the meat received is not fit for human consumption then it must be handled as an animal by-product. It cannot be returned to the supplier unless they are authorised to receive animal by-product.* ***Sampling -** if incoming raw materials are sampled for laboratory testing, and a positive release system is in place, these raw materials will need to be held until the results become available. In all cases, robust arrangements are needed so that test results can be matched to sampled products.*
	Handling & Storage of Accepted Meat
• **Arrange for:** ▪ **suitable rooms, large enough for the separate storage of raw materials from processed material and** ▪ **sufficient separate refrigerated storage** ▪ **separate storage of exposed meat from packaged meat and**	*Make adequate arrangements to accept deliveries of meat for cutting, so that the meat is either cut shortly after arrival or placed in refrigerated storage. The conditions must prevent harmful deterioration and protection from contamination.* ***Batch identification** - preserve the identity of incoming batches for stock control and traceability purposes.* ***Refrigeration** - the hygiene regulations set maximum temperature requirements for meat - see Section C below. Temperature control is important to minimise the growth of microbiological organisms that may spoil food or cause food poisoning - see Part One Chapter 6 (Hazards).*

OPERATOR'S OBLIGATIONS	*ADVICE*
packaging. ▪ **adequate storage for inedible and hazardous materials in labelled, separate and secure containers.** ***B6, B7, B8, B9, A3***	***Storage*** *- have enough space to store raw meat separately from processed and or packaged products. This may be done by keeping them in separate stores, or in the same store at a different time or at the same time with either a permanent barrier between them that can be cleaned and disinfected or by using an appropriately placed polythene covering to prevent air-borne cross-contamination. See also A3 above* ***Hazardous or inedible materials*** *- keep meat for human consumption apart from such material. Storage containers need to be clearly labelled and secured in a way that avoids the risk of contaminating foodstuffs.*

B10. The work on meat must be organised in such a way as to prevent or minimise contamination. … (a) meat intended for cutting is brought into the workrooms progressively as needed;

853/2004 Annex III Section I ***Hygiene during Cutting and Boning:*** *Chapter V point 2(a) and Section II Chapter V point 1(a), Section V Chapter III point 1*

B11. … (c) where the premises are approved for the cutting of meat of different animal species, precautions are taken to avoid cross-contamination, where necessary by separation of the operations on the different species in either space or time.

853/2004 Annex III Section I ***Hygiene During Cutting and Boning:*** *Chapter V point 2(c) and Section II* ***Hygiene During & After Cutting and Boning:*** *Chapter V point 1(c),*

	Cutting Operations
• **Bring meat into the workroom progressively as needed.** ***B10, A2***	*Minimise the opportunity for contamination and keep interruptions to the cold chain to a minimum by keeping meat packed and in chilled storage until it is to be worked on in the cutting room.* *Once it is cut, transfer meat promptly to refrigerated storage. Particular care is needed where the rate of accumulation of can compromise temperature control, e.g. where trim is gathered from the processing of larger cuts but it may take several hours for containers to be filled and moved to chilled storage.* ***Temperature requirements*** *- see Section C below*

OPERATOR'S OBLIGATIONS	*ADVICE*

	Meat of Different Species
• **Where cutting meat of different animal species, take precautions to avoid cross-contamination, where necessary by separation of the operations on the different species in either space or time.** ***B11, A7***	*Equip the premises so that if meat from different animal species is cut, contamination of meat of different species is avoided by adequate separation of cutting operations in time or space. Cut meat of different species at different times with adequate cleaning and disinfection between operations if separate facilities are not available. This may require adequate space for storage of meat before and after cutting*

B12 All articles, fittings and equipment with which food comes into contact are to: (a) be effectively cleaned, and where necessary, disinfected. Cleaning and disinfection are to take place at a frequency sufficient to avoid any risk of contamination. (b) be so constructed, … and be kept in such good order repair and condition …

852/2004 Annex II ***Equipment:*** *Chapter V point 1(a)*

B13. [Cutting plants/Production establishments] must have facilities for disinfecting tools in hot water supplied at a temperature of not less than 82°C or by an alternative method having an equivalent effect.

853/2004 Annex III Section I ***Red meat cutting:*** *Chapter III point 5, Section II* ***White meat cutting:*** *Chapter III point 1e; Section V* ***Production Establishments:*** *Chapter I point 5*

	Disinfection of Tools
• **Disinfect tools in hot water supplied at a temperature of not less than 82°C or by an alternative method having the equivalent effect.** ***B12, B13***	*Start each work period with clean and disinfected tools. Rinse tools to remove visible dirt before they are disinfected e.g. in a knife 'steriliser'. Knives and other tools should be rinsed and disinfected often.* ***Scabbards*** *can be a source of contamination of disinfected knives, but may be used for health and safety reasons (e.g. to carry knives across workrooms). In a cutting room for example, clean, disinfected scabbards may provide temporary storage for a set of clean, disinfected knives. If scabbards are used, use different scabbards for clean and dirty knives and only put clean knives in a clean scabbard.*

OPERATOR'S OBLIGATIONS	*ADVICE*
	Steels *– disinfect steels after cleaning and do not use in a way that contaminates clean, disinfected knives. Leaving a steel in a knife steriliser may damage it.*

OPERATOR'S OBLIGATIONS	*ADVICE*

C. TEMPERATURE REQUIREMENTS

C1. Raw materials, ingredients, intermediate products and finished products likely to support the reproduction of pathogenic micro-organisms or the formation of toxins are not to be kept at temperatures that might result in a risk to health. The cold chain is not to be interrupted. However, limited periods outside temperature control are permitted, to accommodate the practicalities of handling during preparation, transport, storage, display and service of food, provided that it does not result in a risk to health.

852/2004 Annex II ***Foodstuffs:*** *Chapter IX point 5*

C2. Where necessary, conveyances and/or containers used for transporting foodstuffs are to be capable of maintaining foodstuffs at appropriate temperatures and allow those temperatures to be monitored.

852/2004 Annex II ***Transport:*** *Chapter IV point 7*

	Maintaining the Cold Chain
• **Do not interrupt the cold chain except for limited periods, to accommodate the practicalities of handling during preparation, transport, storage, display and service of food, provided that it does not result in a risk to health.** ***C1***	*Keep meat chilled to minimise the opportunity for the growth of spoilage and food poisoning organisms. There are specific temperature requirements for meat that must be complied with – see following Sections:* ▪ ***CR*** *below for red meat* ▪ ***CW*** *below for white meat* ▪ ***CP*** *below for production establishments, and* ▪ ***Chapter 8*** *(Temperature Controls)*
• **Make sure that vehicles and containers are, where necessary, capable of maintaining foodstuffs at appropriate temperatures and allowing those temperatures to be monitored.** ***C2***	***Transport*** *- as there are specific temperature requirements for the transport of meat, vehicles and/or containers used for transporting meat need to be capable of maintaining the cold chain (and monitoring temperatures), unless specific exemptions apply - see CR4 and other references below.*

CUTTING & BONING OF RED MEAT (CR)

Warm cutting and chilling of red meat on the same site as the slaughterhouse

CR1. Meat may also be boned and cut prior to reaching the temperature referred to in point 2b [CR6b - i.e. not more than 3°C for offal and 7°C for other meat] when the cutting room is on the same site as the slaughter premises.

In this case, the meat must be transferred to the cutting room either directly from the slaughter premises or after a waiting period in a chilling or refrigerating room. As soon as it is cut and, where appropriate, packaged, the meat must be chilled to the temperature referred to in point 2b [CR6b - i.e. not more than 3°C for offal and 7°C for other meat].

853/2004 Annex III Section I ***Hygiene during Cutting and Boning:*** *Chapter V point 4*

Chilled storage of red meat

CR2. Meat must attain the temperature specified in point 1 [i.e. not more than 3°C for offal and 7°C for other meat] and remain at that temperature during storage.

853/2004 Annex III Section I ***Storage and Transport:*** *Chapter VII point 2*

Chilled transport of red meat to other premises

CR3. Meat must attain the temperature specified in point 1 [i.e. not more than 3°C for offal and 7°C for other meat] before transport, and remain at that temperature during transport. [but see CR4]

853/2004 Annex III Section I ***Storage and Transport:*** *Chapter VII point 3*

Warm transport of red meat from slaughterhouse for cutting at other premises

CR4. However, transport may also take place if the competent authority so authorises to enable the production of specific products, provided that:

(a) such transport takes place in accordance with the requirements that the competent authority specifies in respect of transport from one given establishment to another and

(b) the meat leaves the slaughterhouse, or a cutting room on the same site as the slaughter premises, immediately and transport takes no more than two hours.

853/2004 Annex III Section I ***Storage and Transport:*** *Chapter VII point 3(a) & 3(b)*

CR5. However, meat may be boned and cut before it reaches the temperature referred to in point 2b [CR6b - i.e. not more than 3°C for offal and 7°C for other meat] in accordance with Chapter VII point 3 [see CR4]

853/2004 Annex III Section I ***Hygiene during Cutting and Boning:*** *Chapter V point 3*

Cutting of chilled red meat

CR6. … food business operators must ensure in particular that:

(a) meat intended for cutting is brought into the workrooms progressively as needed;

(b) during cutting, boning, trimming, slicing, dicing, wrapping and packaging, the meat is maintained at not more than 3°C for offal and 7°C for other [red] meat by means of an ambient temperature of not more than 12°C or an alternative system having an equivalent effect; …

853/2004 Annex III Section I ***Hygiene during Cutting and Boning:*** *Chapter V points 2(a) (b)*

Subsequent storage and transport of red meat

CR7. Food business operators must ensure that the storage and transport of meat of domestic ungulates takes place in accordance with the following requirements. [see CR2 & CR3]

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853/2004 Annex III Section I ***Storage and Transport:*** *Chapter VII points 2 & 3*	
	Warm Cutting of Red Meat at Co-located Premises
• **Meat may be boned and cut warm in a cutting room on the same site as the slaughterhouse.** ***CR1***	*If red meat is to be cut warm at a co-located cutting room, transfer carcases or wholesale cuts either directly from the co-located slaughterhouse or after a waiting period in a chilling or refrigerating room.*
	Chilling, Storage & Transport of Red Meat
• **Chill the meat as soon as it is cut and where appropriate, packaged, to not more than 3°C for offal and 7°C for other meat. Store the meat at those temperatures.** ***CR2, CR7*** • **Unless transport of warm meat is allowed, make sure that meat attains 3°C for offal and 7°C for other meat before transport and remains at that temperature during transport.** ***CR3, CR7, C2***	*Chill red meat as soon as possible after cutting and packaging.* ***Chilling*** *- allow adequate space for air to circulate between carcases, avoid drips from one piece of meat to another. Meat not hung should be placed on corrosion-resistant trays. Keep chiller door opening and closing to a minimum.* ***Storage & transport*** *- once meat is chilled down to at least the legal temperatures throughout the meat, maintain the required temperatures during storage and transport.* ***Dispatch / Transport / Temperature checks / Temperature records -*** *see Chapter 8 (Temperature Controls) Section B3*
	Warm Transport of Red Meat
• **A slaughterhouse or co-located cutting room may send red meat to a named establishment before chilling for the production of specific products subject to competent authority requirements, if transport takes place immediately after slaughter**	*Red meat may be transported before reaching 7 °C throughout the meat or 3°C for offal, if authorised by the OV as meeting the requirements that:* ▪ *The meat is for the production of specified products. This means specifying the intended end products.* ***EC Guidance on the Implementation of 853/2004:*** ***'Specific products'*** *must be understood as any product for which the competent authority grants an authorisation and*

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and takes no more than two hours. ***CR4*** • **The cold chain is not to be interrupted except for limited periods, to accommodate the practicalities of handling during preparation, transport, storage, display and service of food, provided that it does not result in a risk to health.** ***C1***	*specifies the requirements to be respected.* ▪ *The meat is transported from a slaughterhouse immediately after slaughter or immediately after initial cutting in a co-located cutting room. This means that vehicles should leave as soon as loading is complete.* ▪ *Transport is to specified establishments no more than two hours away. It is the responsibility of the dispatching operator to ensure that all meat is delivered within two hours of departure, having regard to normal travelling times, even if consignments are being delivered to several premises by a single vehicle or if independent hauliers are used.* ▪ *The cold chain is not interrupted except for limited periods. This means that the dispatching operator needs to confirm that the operator at the receiving establishment is able to refrigerate or cut (see CR5 below) the meat on arrival as a lengthy delay is not covered by the exemption for 'limited periods, to accommodate the practicalities of handling'.* *Provide the OV with the necessary information about the establishment to be supplied and the specified end products. See example form at Annex A. The authorising OV must be satisfied with the procedures for handling meat transported warm at both the dispatching and receiving establishments. Once agreed, similar consignments between the two premises do not need to be re-authorised.* ***Halal meat** – the Muslim Organisations Working Group has confirmed that it is not an Islamic requirement for Halal meat to leave the slaughterhouse unchilled. Meat transported in unrefrigerated vehicles is at greater risk of arriving in an unfit state, which would mean it could no longer be considered Halal even though it has been derived from a Halal slaughtered animal.*
	Warm Cutting of Red Meat

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• **Meat may be boned and cut before it reaches 3°C for offal and 7°C for other meat if transported warm (as described at CR4).** ***CR5, C1***	*If red meat has been transported warm it may be cut warm if cutting is carried out soon after arrival at the premises. Otherwise make arrangements for chilling down the meat to the legal temperatures. A lengthy delay before cutting is not covered by the exemption for 'limited periods, to accommodate the practicalities of handling' set out at C1 above.* *If red meat is cut before chilling, its temperature should begin to be lowered as soon as possible after cutting.*
	Cutting of Chilled Red Meat
• **Bring meat into the cutting room progressively as needed;** • **Maintain the meat at not more than 3°C for offal and 7°C for other meat during cutting, boning, trimming, slicing, dicing, wrapping and packaging, by means of an ambient temperature of not more than 12°C or an alternative system having an equivalent effect.** ***CR6***	*Keep red meat in chilled storage until it is to be worked on in the cutting room and returning it there as quickly as possible after cutting.* *Maintain meat at or below the required temperatures during cutting, boning, trimming, slicing, dicing, wrapping and packaging. This may be achieved by different methods e.g. by means of an ambient temperature of not more than -12°C or use of chilled conveyors/tunnels or an alternative system having an equivalent effect.*

Freezing of red meat

CR8. Meat intended for freezing must be frozen without undue delay, taking into account where necessary a stabilisation period before freezing.

853/2004 Annex III Section I ***Storage and Transport:*** *Chapter VII point 4*

	Freezing of Red Meat
• **If it is to be frozen, freeze meat without undue delay.** ***CR8***	*See Chapter 8 (Temperature Controls) Section B4*

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See Chapter 8 (Temperature Controls) Section B for further information

CUTTING & BONING OF WHITE MEAT (CW)

CW1. … food business operators must ensure in particular that:

(a) meat intended for cutting is brought into the workrooms progressively as needed;

(b) during cutting, boning, trimming, slicing, dicing, wrapping and packaging, the meat is maintained at not more than 4°C, by means of an ambient temperature of not more than 12°C or an alternative system having an equivalent effect; and

CW2. However, meat may be boned and cut prior to reaching the temperature referred to in point 1(b) [CW1 - i.e. not more than 4°C] when the cutting room is on the same site as the slaughter premises, provided that it is transferred to the cutting room either:

(a) directly from the slaughter premises; or

(b) after a waiting period in a chilling or refrigerating room.

CW3. As soon as it is cut and, where appropriate, packaged, the meat must be chilled to the temperature referred to in point 1(b) [CW1 - i.e. not more than 4°C].

853/2004 Annex III Section II ***Hygiene During & After Cutting & Boning:*** *Chapter V points 1(a)(b), 2 & 3*

	Warm Cutting of White Meat at Co-located Premises
• **White meat may be boned and cut warm in a cutting room on the same site as the slaughterhouse.** ***CW2***	*If white meat is to be cut warm at a co-located cutting room, transfer carcases either directly from the co-located slaughterhouse or after a waiting period in a chilling or refrigerating room.*
	Chilling of White Meat
• **Chill the meat as soon as it is cut and where appropriate, packaged, to not more than 4°C.** ***CW3, C1, C2***	*Chill white meat as soon as possible after cutting and packaging down to at least 4°C throughout the meat and then maintain the required temperatures. Keep chiller door opening and closing to a minimum.*
	Cutting of Chilled White Meat
• **Bring meat into the cutting room progressively as needed.**	*Keep white meat packed and in chilled storage until it is to be worked on in the cutting room and return it there as quickly as possible after cutting.*

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• **Maintain the meat at not more than 4°C during cutting, boning, trimming, slicing, dicing, wrapping and packaging by means of an ambient temperature of not more than 12°C or an alternative system having an equivalent effect.** ***CW1***	*Maintain white meat at or below the required temperatures during cutting, boning, trimming, slicing, dicing, wrapping and packaging. This may be achieved by different methods e.g. by means of an ambient temperature of not more than -12°C or use of chilled conveyors/tunnels or an alternative system having an equivalent effect.*
See Chapter 8 (Temperature Controls) Section B for further information	

PRODUCTION ESTABLISHMENTS (CP)

Food business operators producing minced meat, meat preparations or MSM must ensure compliance with the following requirements.

CP1. The work on meat must be organised in such a way as to prevent or minimise contamination. To this end, food business operators must ensure in particular that the meat used is:

a) at a temperature of not more than 4°C for poultry, 3°C for offal and 7°C for other meat; and

b) brought into the preparation room progressively as needed.

853/2004 Annex III Section V ***Production Establishments:*** *Chapter III points 1a & 1b*

	Cutting in Production Establishments
• **Bring meat into the preparation room progressively as needed and make sure that the meat used is at a temperature of not more than 4°C for poultry, 3°C for offal and 7°C for other meat.** ***CW1***	*Keep interruptions to the cold chain to a minimum by keeping meat packed and in chilled storage until it is to be worked on.* *Maintain meat at or below the required temperatures during production.*
See Chapter 8 (Temperature Controls) Section B and Chapter 12 (Meat Processing) for further information	

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11.3.2 WHAT ARE THE OFFICIAL CONTROL REQUIREMENTS?

Audits by officials of good hygiene practices shall verify that meat plant operators apply pre-operational, operational and post-operational hygiene procedures, temperature controls and controls on food entering and leaving the establishment and any accompanying documentation, continuously and properly.

854/2004 Article 4 points 4c & 4h

Audits by officials of HACCP- based procedures shall verify that meat plant operators apply such procedures continuously and properly.

854/2004 Article 4 point 5

The official veterinarian shall carry out inspection tasks in … cutting plants placing fresh meat on the market in accordance with the general requirements of Section I, Chapter II, of Annex I, and with the specific requirements of Section IV, …

854/2004 Article 5 point 1

11.3.3 APPLYING PROCEDURES CONTINUOUSLY AND PROPERLY

The operator is responsible for food safety in the food business.

852/2004 Article 1 point 1a

Food business operators shall put in place, implement and maintain a permanent procedure or procedures based on the HACCP principles.

852/2004 Article 5 point 1

Food … business operators at all stages of production, processing, and distribution within the businesses under their control shall ensure that foods … satisfy the requirements of food law which are relevant to their activities and shall verify that such requirements are met.

178/2002 Article 17

	Operator Responsibilities for Cutting Meat
• **Operator responsibility includes applying and verifying the company's temperature control procedures and taking corrective action if those procedures fail.** • **Implement and maintain a**	***Operator Responsibility*** *includes maintaining and monitoring hygienic cutting procedures and taking corrective action if there is a failure.* ***These procedures should be based on HACCP principles*** *– see Section B4 above and PART THREE Chapter 1 (Application of HACCP Principles).* ***Delegation*** *– responsibility for applying and verifying the company's cutting and temperature control procedures*

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permanent procedure or procedures based on the HACCP principles.	*may be delegated to a nominated person to whom problems are reported, and who has sufficient authority to ensure that corrective action is taken when necessary.* ***Verification*** *– check at least daily that staff are following the company's temperature control procedures (including heat treatment if appropriate). Work of new or temporary people who are less familiar with the procedures and premises may need to be monitored more frequently.* ***Records*** *- keep an accurate, dated account (e.g. in a Food Safety Management diary/daybook) of each periodic check and of any corrective action taken.* ***Corrective action*** *- take action when failures of the company's temperature control procedures are identified. Such action may include:* ▪ *Dealing with any product that has been outside the cold chain;* ▪ *Dealing with equipment failures;* ▪ *Establishing the underlying cause and what needs to be done to prevent similar incidents in the future;* ▪ *Improving staff instructions and training.*

Warm Transport of Red Meat

The name and address of each establishment to be supplied and the intended end product(s) must be listed so that the OV can authorise each one listed (and any additions) in writing, having regard to normal travelling time being 2 hours or less.

Company Name	Intended products	Delivery address	*kms/ miles	Normal travel time	OV signature/date if authorised

* Write down the distance the meat is to be transported in kilometres **or** miles

PART TWO

12. MEAT PROCESSING

12.1 WHY IS HYGIENIC MEAT PROCESSING IMPORTANT?

Raw materials accepted for production should be free, as far as possible, from microbiological hazards, such as E. Coli O157 and *Salmonella*; from chemical hazards, such as grease and dirt, and from physical hazards such as metal and other foreign bodies. Temperature controls are important as bacteria can multiply quickly if meat is kept at too high a temperature. Poor hygiene will increase the potential for contamination of food, including transfer from meat to ready-to-eat products, and increase the possibility of food poisoning. Procedures are needed to minimise the risk of these hazards causing illness in consumers.

For example:

- Inadequate screening of incoming products will result in failure to spot objects such as needles, metal or glass shards that can cause harm to food handlers and consumers. Small items can be swallowed, larger items can cause physical injury.
- Insufficient training of staff responsible for further processing of meat will increase the risk of contamination of meat due to poor working premises.
- Food stored or transported under poorly cleaned or inadequate conditions may become physically contaminated by pests, or from the environment (dust, dirt etc.).
- Inadequately cleaned equipment may lead to cross-contamination between batches of meat-based products.
- Failure to maintain the cold chain will encourage the growth of bacteria on meat. The higher the storage temperature, the faster the bacteria will multiply, increasing the potential for a food safety hazard.

12.2 GENERAL INFORMATION

- **Definitions**
  - **'Processing'** means any action that substantially alters the initial product, including heating, smoking, curing, maturing, drying, marinating, extraction, extrusion or a combination of these processes;
  - **'Processed products'** means foodstuffs resulting from the processing of unprocessed products. These products may contain ingredients that are necessary for their manufacture or to give them specific characteristics.
  - **'Unprocessed products'** means foodstuffs that have not undergone processing, and includes products that have been divided, parted, severed, sliced, boned, minced, skinned, ground, cut, cleaned, trimmed, husked, milled, chilled, frozen, deep-frozen or thawed;

- **'Composite' Products**

  The production or assembly of food containing **both** products of plant origin **and** processed products of animal origin is subject to Regulation 852/2004 but not to the additional requirements of Regulation 853/2004.

  This means that the manufacture of products such as, for example, a pizza with ham and cheese, only has to comply with Regulation 852/2004, but the manufacture of ingredients that are of animal origin (i.e. the ham and the cheese) must comply with Regulation 853/2004 as well. Thus a pizza manufacturer who cooks meat before making a pizza requires approval under Regulation 853/2004. See PART ONE Chapter 7 (Approvals).

  - **Specific Characteristics**

    Ingredients can be added to processed products, e.g. garlic added to sausage, peppercorns added to salami, breadcrumbs added to ham, etc. to give specific characteristics without altering the products. Unless the addition of such ingredients, including products of plant origin, substantially alters the initial product, it is not considered to be a 'composite' product.

- **Approval of Processing Establishments**

  See PART ONE Chapter 7 (Approvals)

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12.3.1 WHAT ARE THE LEGAL REQUIREMENTS FOR HYGIENIC MEAT PROCESSING?

The following sections set out the regulations that apply to the processing of meat into mince, meat preparations, mechanically separated meat and meat products.

A. STRUCTURAL & PREREQUISITE HYGIENE REQUIREMENTS

Structural requirements for all establishments,
see: Chapter 1 (Design and Facilities)

- ***A. General rules for food premises and foodstuffs***
- ***B. Rooms where food is handled***
- ***C. Equipment***

Food business operators operating establishments producing minced meat, meat preparations or MSM must ensure that they:

A1. are constructed so as to avoid contamination of meat and products, in particular by:

(a) allowing constant progress of the operations; or

(b) ensuring separation between the different production batches;

A2. have rooms for the separate storage of packaged and exposed meat and products, unless stored at different times or in such a way that the packaging material and the manner of storage cannot be a source of contamination for the meat or products;

A3. have rooms equipped to ensure compliance with the temperature requirements laid down in Chapter III;

A4. have equipment for washing hands used by staff handling exposed meat and products with taps designed to prevent the spread of contamination; and

A5. have facilities for disinfecting tools with hot water supplied at not less than 82 °C, or an alternative system having an equivalent effect.

853/2004 Annex III Section V ***Production Establishments:*** *Chapter 1 points 1 - 5; Section VI* ***Meat Products:*** *point 2*

	Design & Layout
• **Comply with the requirements for production establishments.** ***A1, A2, A3, A4, A5***	*The requirements for establishments producing minced meat, meat preparations, and MSM are the same as for cutting plants. The meat used to produce meat products must meet the requirements for fresh meat, which includes the requirements for cutting and boning of meat.* *See Chapter 11 (Cutting of Meat) Section A (Structural*

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	Requirements) particularly A2, A3, A6, A9, A10.

A6. The layout, design, construction, siting and size of food premises ... (d) where necessary, provide suitable temperature-controlled handling and storage conditions of sufficient capacity for maintaining foodstuffs at appropriate temperatures and designed to allow those temperatures to be monitored and, where necessary, recorded. *852/2004 Annex II* ***Food Premises:*** *Chapter I point 2(d)*	
	Temperature Control Facilities
• **Provide temperature controlled handling and storage conditions of sufficient capacity, and designed to allow temperatures to be monitored and if necessary recorded.** ***A6***	*Take account of the need to comply with the temperature requirements for meat and to provide sufficient refrigerated capacity at every stage of production, storage and transport as well as the means of monitoring temperatures to be sure that chilling is adequate and that the cold chain is being maintained.* *See Chapter 8 (Temperature Controls)*

Hygiene prerequisites for all establishments, see:

- ***Chapter 2 (Water Supply)***
- ***Chapter 3 (Maintenance)***
- ***Chapter 4 (Cleaning)***
- ***Chapter 5 (Pest Control)***

Food business operators are to ensure: **A7. That food handlers are supervised and instructed and/or trained in food hygiene matters commensurate with their work activity.** **A8. That those responsible for the development and maintenance of the required procedures based on HACCP principles, or for the operation of relevant guides, have received adequate training in the application of the HACCP principles.** *852/2004 Annex II* ***Training:*** *Chapter XII points 1 & 2*	
	Training, Instruction & Supervision
• **Make sure that** ▪ **food handlers are instructed and/or trained in food hygiene matters**	*Instruct all food handlers, including temporary staff and those who inspect raw materials, in hygienic processing skills, about the food safety hazards associated with raw meat, awareness of food safety principles especially the*

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commensurate with their work activity. ***A7*** ▪ **staff responsible for the development and maintenance of the required procedures based on HACCP principles, or for the operation of relevant guides, have received adequate training in the application of the HACCP principles.** ***A8***	*need for temperature controls and personal hygiene, the need to follow instructions and to report failing controls promptly.* *Supervise staff as appropriate. Issue reminders if lapses occur. Keep accurate, dated individual training records to show what instruction/training has been given.* ***HACCP Training** - make sure that at least one person in the business has sufficient training in the application of HACCP principles to develop and maintain HACCP-based procedures or to follow guides to control the food safety hazards in the business. See PART THREE Chapter 1 (Application of HACCP Principles) Section A.* *See also Chapter 6 (Training).*

A9. Every person working in a food-handling area is to maintain a high degree of personal cleanliness and is to wear suitable, clean and, where necessary, protective clothing. *852/2004 Annex II **Personal Hygiene:** Chapter VIII point 1*	
	Personal Hygiene
• **Make sure that every person working in a food-handling area maintains a high degree of personal cleanliness.** ***A9***	*All staff, as well as managers, officials and visitors, need to comply with the company's personal hygiene procedures, particularly handwashing and wearing of protective clothing.* *See Chapter 7 (Personal Hygiene)*

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B. RAW MATERIALS & GENERAL PROCESSING

B1. Food business operators shall put in place, implement and maintain a permanent procedure or procedures based on the HACCP principles. *852/2004 Article 5 point 1*	
	HACCP-based Procedures
• **Implement and maintain a permanent procedure or procedures based on the HACCP principles.** ***B1***	*HACCP-based procedures are necessary to ensure that food safety hazards, including microbiological cross-contamination during processing and growth of bacteria through inadequate temperature control, is minimised. This is done by setting and applying operational limits and procedures for processing and maintenance of the cold chain (e.g. during storage and transport) and, where appropriate, freezing, thawing, and thermal processing.* *Set out in the HACCP plan, the procedures for controlling hazards, the limits that are to be monitored, the checks to be carried out, the corrective actions to be taken to ensure the safety of the meat and the records to be kept of those checks and actions.* *See 12.3.3 and PART THREE Chapter 1 (Application of HACCP principles).* ***Microbiological testing** – can help confirm (validate/ verify) the effectiveness of HACCP-based procedures – see process hygiene criteria. Food safety criteria have also been set for certain products. See PART THREE Chapter 2 (Microbiological Criteria)*

B2. A FBO is not to accept raw materials or ingredients, other than live animals, or any other material used in processing products, if they are known to be, or might reasonably be expected to be, contaminated with parasites, pathogenic micro-organisms or toxic, decomposed or foreign substances to such an extent that, even after the FBO had hygienically applied normal sorting and/or preparatory or processing procedures, the final product would be unfit for human consumption.

B3. Raw materials and all ingredients stored in a food business are to be kept in appropriate conditions designed to prevent harmful deterioration and protect them from contamination.

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B4. Raw materials, ingredients, intermediate products and finished products likely to support the reproduction of pathogenic micro-organisms or the formation of toxins are not to be kept at temperatures that might result in a risk to health.

Food businesses manufacturing, handling and wrapping processed foodstuffs are to have suitable rooms, large enough for the separate storage of raw materials from processed material and sufficient separate refrigerated storage.

B5. Hazardous and/or inedible substances, including animal feed, are to be adequately labelled and stored in separate and secure containers.

852/2004 Annex II ***Foodstuffs:*** *Chapter IX points 1, 2, 5, 8*

	Raw Materials for Processing
• **Do not accept raw materials if they are known, or reasonably expected, to be contaminated with parasites, pathogenic micro-organisms or toxic, decomposed or foreign substances to such an extent that, even after the hygienic application of normal sorting and/or processing, the final product would be unfit for human consumption.** ***B2*** • **Arrange for:** ▪ **the sorting of incoming raw materials including meat.** ▪ **suitable rooms, large enough for the separate storage of raw materials from processed material.** ▪ **sufficient separate refrigerated storage.** ▪ **separate storage of exposed meat from packaged meat and packaging.** ▪ **adequate storage for**	***Deliveries*** *- make adequate arrangements to accept deliveries of meat and other non-meat raw materials. Meat should be kept under temperature control (see Refrigerated Storage below).* ***Sorting*** *- inspect and sort raw materials on arrival to make sure that* ▪ *meat and other products of animal origin are sourced from approved establishments – see B7 below;* ▪ *all products of animal origin are correctly identified (e.g. health/id marked meat – see B7-B9 below;* ▪ *they meet temperature requirements;* ▪ *they are not contaminated by, for example, foreign bodies parasites, pests; and* ▪ *they meet company quality specifications and has any required documentation.* ***Action*** *– take action if your company's food safety and quality standards are not met. Depending on the problem, action may include:* ▪ *holding e.g. to await documentation;* ▪ *treatment e.g. trimming otherwise fit meat of visible contamination;* ▪ *divert to production of heat treated product;* ▪ *disposal;* ▪ *return to the originating premises - but note that where the meat received is not fit for human*

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inedible and hazardous materials in labelled, separate and secure containers. ***B2, B3, B4, B5, A2***	*consumption then it must be handled as an animal by-product. It cannot be returned to the supplier unless they are authorised to receive animal by-product.* ***Sampling -*** *if incoming raw materials are sampled for laboratory testing, and a positive release system is in place, these raw materials will need to be held until the results become available. In all cases, robust arrangements are needed so that test results can be matched to sampled products.* ***Batch identification*** *- preserve the identity of incoming batches for stock control and traceability purposes.* ***Stock rotation*** *– it is advisable to rotate stock to use the oldest first (FIFO – first in, first out).*
• **Keep food premises clean and maintained in good condition.** ***852/2004 Annex 1 Chapter I point 1*** • **Maintain suitable ventilation.** ***852/2004 Annex 1 Chapter I point 5*** • **Put adequate procedures in place to control pests.** ***852/2004 Annex II Chapter IX point 4***	***Storage*** *- areas and containers for storing meat and non-meat food stuffs need to be cleanable and be kept clean, well maintained and adequately ventilated so as to keep the raw materials in good condition and to minimise the risk of contamination, for example from pests. Include storage areas in company maintenance, cleaning and pest control arrangements.* ***Refrigerated storage*** *- the hygiene regulations set maximum temperature requirements for meat – see relevant sections below. Temperature control is important to minimise the growth of microbiological organisms that may spoil food or cause food poisoning - see Part One Chapter 6 (Hazards).* ***Separation*** *- keep all raw materials separately, in space or time, from processed and or packaged products. This may be done by keeping them in separate stores, or in the same store at a different time or at the same time with either a permanent barrier between them that can be cleaned and disinfected or by using an appropriately placed polythene covering to prevent air-borne cross-contamination. See also A2*

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	above. ***Hazardous or inedible materials*** *- keep meat for human consumption apart from such material. Storage containers need to be clearly labelled and secured in a way that avoids the risk of contaminating foodstuffs.*

B6. Food business operators must, … have in place systems and procedures to identify FBOs from whom they have received … products of animal origin.

853/2004 Annex II Section I ***Identification Mark:*** *point 4*

B7. FBOs shall place products of animal origin manufactured in the Community on the market only if they have been prepared and handled exclusively in establishments:

(a) that meet the relevant requirements of Regulation 852/2004, those of Annexes II and III of this Regulation and other relevant requirements of food law; and

(b) that the competent authority has registered or, where required in accordance with paragraph 2, approved.

853/2004 Article 4 point 1

B8. FBOs shall not place on the market a product of animal origin handled in an establishment subject to approval … unless it has either a health mark applied in accordance with Regulation 854/2004 ... or an identification mark … .

B9. FBOs may not remove a health mark … from meat unless they cut or process it or work upon it in another manner.

853/2004 Article 5 points 1 & 3

	Traceability
• **Keep adequate supplier records.** ***B6*** • **Use food products that come exclusively from registered or, for products of animal origin, come from approved premises with either identification and/or health markings as appropriate.** ***B7, B8*** • **Health marks are not removed from meat unless it is cut or processed or worked on in**	***Supply chain records*** *– keep details to enable product suppliers to be traced.* ***Sourcing of POAO*** *- make sure all products of animal origin used as raw materials come only from premises with the appropriate approval. When inspecting incoming products of animal origin check that the health mark (for red meat carcases and wholesale cuts) or identification mark appears genuine and corresponds with the source of the products. Confirm that these marks have not been tampered with or removed, except during the normal processing of meat (e.g. cutting).* *See Chapter 13 (Food Traceability etc.)*

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another manner. ***B9***	▪ *Section A (Traceability)* ▪ *Section B (Identification Marking)* ▪ *Section C (Health Marking).*

B10. At all stages of production, processing and distribution, food is to be protected against any contamination likely to render food unfit for human consumption, injurious to health or contaminated in such a way that it would be unreasonable to expect it to be consumed in that state *852/2004 Annex II* ***Foodstuffs:*** *Chapter IX point 5*	
	Meat Processing
• **Make sure that at all stages of production and processing, meat is protected against any contamination likely to make it:** ▪ **unfit for human consumption,** ▪ **injurious to health; or** ▪ **contaminated in such a way that it would be unreasonable to expect it to be consumed in that state.** ***B10***	*The following issues should be considered as part of the development of the HACCP plan for further processing of meat:* ***Process flow*** *– the process flow of raw meat awaiting processing and during processing should ensure uniform turnover of accumulated product and avoid possible cross-contamination, e.g. between raw materials and ready-to-eat products.* ***Non-meat ingredients*** *– the supply and addition of non-meat ingredients should be controlled to avoid possible microbiological, physical or chemical contamination.* ***Dropped meat policy*** *– procedures depend on the size of the piece of meat and the extent and nature of any possible contamination. Large pieces of red meat or in-skin poultry carcases should be trimmed immediately of visible contamination before processing is resumed. Pieces that are not suitable for trimming should be disposed of as unfit food.* ***Process control*** *– controls for non-commercially sterile products should prevent pathogen growth and toxin production during all processing activities e.g. during fermentation, partial heat treatment, drying, maturing and curing. Process criteria may include for example,* ▪ *correct pH after fermentation;*

	▪ *correct time/temperature schedules during and after heating or smoking;* ▪ *correct moisture / protein ratio after drying;* ▪ *correct formulation and application of nitrite as a cure ingredient.* *If heat and/or other processing treatments are not sufficient to ensure the stability of the product, the product should be cooled to an appropriate storage temperature and in a manner that ensures product safety is not compromised as a result of germination and subsequent growth of pathogenic sporeformers; product formulations e.g. distribution of antibacterial ingredients throughout cooked sausage emulsions, addition of cultures, adjustment of pH, should achieve required levels of pathogen control.* ***Validated criteria** - cooked products should achieve time/internal temperatures that are validated as achieving appropriate pathogen reduction, including meeting specified performance objectives, performance criteria and microbiological criteria.* *Pasteurisation values or other heat processes should be validated for all heat treated chilled products in hermetically sealed containers so as to ensure that product safety is maintained to the end of shelf life, taking into account all preservation factors that may be present.* ***Dried products** – protect from environmental contamination and from re-absorption of moisture.* ***Metal detection** - processes for products containing minced, comminuted or mechanically separated meat should have in-line magnets or other means of detecting contamination with metal fragments.* ***Technical advice** - production of meat products should not be undertaken without expert advice. Guidance is*

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	available from many sources including: *Campden & Chorleywood Food Research Association (www.campden.co.uk)* *Chipping Campden, Gloucestershire, GL55 6LD* *Tel: 0 1386 842000 Fax: 0 1386 842100* *Leatherhead Food International (www.lfra.co.uk)* *Randalls Road, Leatherhead, Surrey KT22 7RY* *Tel: 01372 376761 Fax: 01372 386228* *Emails: help@leatherheadfood.com*

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C. MINCED MEAT

- '**Minced meat'** means boned meat that has been minced into fragments and contains less than 1% salt.

Food business operators producing minced meat, … must ensure compliance with the following requirements.

C1. The work on meat must be organised in such a way as to prevent or minimise contamination. To this end, food business operators must ensure in particular that the meat used is:

(a) at a temperature of not more than 4°C for poultry, 3°C for offal and 7°C for other meat; and

(b) brought into the preparation room progressively as needed.

C2. (c) Immediately after production, minced meat … must be wrapped or packaged and be:

(i) chilled to an internal temperature of not more than 2°C … ; or

(ii) frozen to an internal temperature of not more than -18°C.

These temperature conditions must be maintained during storage and transport.

853/2004 Annex III Section V ***Hygiene During & After Production:*** *Chapter III points 1(a-b), 2(ci-ii)*

	Minced Meat Operations
• **Bring meat progressively into the workroom as needed, keeping it at a temperature of not more than 4°C for poultry, 3°C for offal and 7°C for other meat.** ***C1(b), C1(a)***	*Minimise the opportunity for contamination and keep interruptions to the cold chain to a minimum by keeping meat packed and in chilled storage until it is to be worked on in the cutting room.* *Where a combination of meat has been used the lowest temperature should be met.*
• **Immediately after production, wrap or package and chill minced meat to an internal temperature of not more than 2°C, or freeze to an internal temperature of not more than -18°C, and maintain these temperatures during storage and transport.** ***C2(c), C2***	*See Chapter 11 (Cutting of Meat) B9 and Chapter 8 (Temperature Controls).* *Chill minced meat to no higher than 2°C and maintain it during subsequent storage and transport, or freeze it to no higher than -18°C.*

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C3. The raw material used to prepare minced meat must meet the following requirements.

(a) It must comply with the requirements for fresh meat;

(b) It must derive from skeletal muscle, including adherent fatty tissues;

(c) It must not derive from:

(i) Scrap cuttings and scrap trimmings (other than whole muscle cuttings);

(ii) MSM;

(iii) Meat containing bone fragments or skin; or

(iv) Meat of the head with the exception of the masseters, the non-muscular part of the *linea alba*, the region of the carpus and the tarsus, bone scrapings and the muscles of the diaphragm (unless the serosa has been removed).

853/2004 Annex III Section V ***Raw Materials:*** *Chapter II point 1*

C4. The following requirements apply to the production of minced meat … .

(a) Unless the competent authority authorises boning immediately before mincing, frozen or deep-frozen meat used for the preparation of minced meat … must be boned before freezing. It may be stored only for a limited period.

(b) When prepared from chilled meat, minced meat must be prepared:

(i) in the case of poultry, within no more than 3 days of their slaughter;

(ii) in the case of animal other than poultry, within no more than 6 days of their slaughter; or

(iii) within no more than 15 days from the slaughter of the animals in the case of boned, vacuum-packed beef and veal.

853/2004 Annex III Section V ***Hygiene During & After Production:*** *Chapter III points 2(a) & (b)*

C5. … minced meat … must not be re-frozen after thawing.

853/2004 Annex III Section V ***Hygiene During & After Production:*** *Chapter III point 5*

	Permitted Raw Materials for Minced Meat
• **Use only permitted raw materials for the manufacture of minced meat.** ***C3***	*All meat used in the manufacture of minced meat should be, or come from, fresh meat that meets the legal requirements. This means the meat must have come from approved premises and be either health marked or bear an identification mark - see Section B (Traceability) above.* ***Use of scrap trimmings and scrap cuttings*** *- EC guidance notes that, while use of offcuts (i.e. small pieces) from meat that is fit for human consumption is acceptable, scraps (i.e. waste) designated 'inedible' or 'unfit for human consumption' or whose use would not allow the microbiological criteria for mince to be*

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• **(Unless the Competent Authority authorises boning immediately before mincing) bone frozen or deep-frozen meat used to make minced meat before freezing. Store it only for a limited period.** ***C4a*** • **When preparing minced meat from chilled meat, make sure that:** ▪ **poultry is within no more than 3 days of slaughter;** ▪ **other meat is no more than 6 days of slaughter; or** ▪ **boned, vacuum-packed beef and veal is no more than 15 days of slaughter.** ***C4b***	*achieved are not to be used.* ***Other raw materials*** *- MSM, meat containing bone fragments or skin; meat of the head with the exception of the masseters, the non-muscular part of the linea alba, bone scrapings, the muscles of the diaphragm (unless the serosa has been removed) and meat from the region of the carpus and the tarsus (i.e. small scraps derived from the joint region) is unsuitable as a raw material for minced meat production. Shins and shanks can be used.* ***Microbiological Criteria*** *- for minced meat see PART THREE Chapter 2 Section 2.* ***Use of frozen or deep-frozen meat*** *- boning can be carried out immediately before mincing if carried out hygienically. The process should be included in the HACCP plan as should the determination of the storage period for frozen meat, which is largely a quality issue See Chapter 8 (Temperature Controls) Section B4. Keep appropriate records to demonstrate that those storage periods have not been exceeded and when stored meat was deboned.* ***Use of Chilled Meat*** *– keep appropriate records to demonstrate compliance. The age of meat for the production of minced meat refers to date of slaughter plus a number of days. It does not apply to meat minced for use in heat treated products.* *[Note: a review of this requirement is underway with a view to seeking a UK derogation]* ***Labelling*** *see Section F below.*
	Re-freezing of Minced Meat
• **Do not refreeze meat preparations after thawing**. ***C5***	*Keep records to ensure that meat preparations that have been thawed are not re-frozen. See Chapter 8 (Temperature Controls) Section B5.*

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D. MEAT PREPARATIONS

- '**Meat preparations'** means fresh meat, including meat that has been reduced to fragments, which has had foodstuffs, seasonings or additives added to it or which has undergone processes insufficient to modify the internal muscle fibre structure of the meat and thus to eliminate the characteristics of fresh meat.

Definition of Meat Preparations

Meat preparations (see definition above) include:

- Minced meat to which ingredients other than 1% salt have been added e.g. flavourings, spices and so does not meet the definition of Minced Meat in Regulation 853/2004.

- Meat e.g. Baader meat, desinewed meat, not intended to be consumed without undergoing heat treatment, which is either:
(i) not from residual meat (i.e. flesh bearing bones after boning or from poultry carcases) or
(ii) retains most of its muscle fibre structure after using mechanical means,
and so does not meet the definition of MSM in Regulation 853/2004.

Food business operators producing … meat preparations … must ensure compliance with the following requirements.

D1. The work on meat must be organised in such a way as to prevent or minimise contamination. To this end, food business operators must ensure in particular that the meat used is:

(a) at a temperature of not more than 4°C for poultry, 3°C for offal and 7°C for other meat; and

(b) brought into the preparation room progressively as needed.

D2. (c) Immediately after production,… meat preparations must be wrapped or packaged and be:

(i) chilled to an internal temperature of not more than 4°C; or

(ii) frozen to an internal temperature of not more than -18°C.

These temperature conditions must be maintained during storage and transport.

853/2004 Annex III Section V ***Hygiene During Cutting & After Production:*** *Chapter III points 1(a-b) & 2(c i)(c ii)*

	Meat Preparation Operations
• **Bring meat progressively into the workroom as needed., keeping it at a temperature of not more than 4°C for poultry, 3°C for offal and 7°C for other meat.** ***D1(b), D1(a)***	*Minimise the opportunity for contamination and keep interruptions to the cold chain to a minimum by keeping meat packed and in chilled storage until it is to be worked on in the cutting room.* *Where a combination of meat has been used the lowest temperature should be met.*

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• **Immediately after production, wrap or package and chill meat preparations to internal temperatures of no more than 4°C, or freeze to an internal temperature of not more than - 18°C, and maintain these temperatures during storage and transport.** ***D2(c), D2***	*See Chapter 11 (Cutting of Meat) B9 and Chapter 8 (Temperature Controls).* *Chill meat preparations to no higher than 4°C and maintain it during subsequent storage and transport, or freeze it to no higher than -18°C.*

D3. The following raw material may be used to prepare meat preparations:

(a) fresh meat;

(b) meat meeting the requirements of point 1 [C3]; and

(c) if the meat preparation is clearly not intended to be consumed without first undergoing heat treatment:

(i) meat derived from the mincing or fragmentation of meat meeting the requirements of point 1 [C3] other than point 1(c)(i) [C3ci]; and

(ii) MSM meeting the requirements of Chapter III, point 3(d) [D5].

853/2004 Annex III Section V ***Raw Materials:*** *Chapter II points 2*

The following requirements apply to the ... use of MSM produced using techniques that do not alter the structure of the bones used in the production of MSM and the calcium content of which is not significantly higher than that of minced meat.

D4. If the FBO has carried out analyses demonstrating that MSM complies with the microbiological criteria for minced meat … it may be used in meat preparations that are clearly not intended to be consumed without first undergoing heat treatment and in meat products.

D5. The following requirements apply to the production of … meat preparations.

(a) Unless the competent authority authorises boning immediately before mincing, frozen or deep-frozen meat used for the preparation of … meat preparations must be boned before freezing. It may be stored only for a limited period.

853/2004 Annex III Section V ***Hygiene During & After Production:*** *Chapter III points 2(a) & 3d*

	Permitted Raw Materials for Meat Preparations
• **Use only permitted raw materials for the manufacture of meat preparations.** ***D3***	*All meat used in the manufacture of meat preparations, should be, or come from, fresh meat that meets the legal requirements. This means the meat must come from approved premises and be either health marked or bear an identification mark. See Section B*

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• **If MSM complies with the microbiological criteria for minced meat it may be used in meat preparations that are clearly not intended to be consumed without first undergoing heat treatment.** ***D4***	*(Traceability) above.* ***Use of MSM*** *- MSM with a low calcium content (see* ***E5*** *below) that complies with microbiological criteria for minced meat may be used in meat preparations that are clearly intended to undergo heat treatment before eating.* ***Other raw materials*** *– see C3.* ***Microbiological Criteria*** *see PART THREE Chapter 2.* ***Labelling*** *see Section F.*

D5. The following requirements apply to the production of … meat preparations.

(a) Unless the competent authority authorises boning immediately before mincing, frozen or deep-frozen meat used for the preparation of … meat preparations must be boned before freezing. It may be stored only for a limited period.

853/2004 Annex III Section V ***Hygiene During & After Production:*** *Chapter III points 2(a) & 3d*

D6. … meat preparations … must not be re-frozen after thawing.

853/2004 Annex III Section V ***Hygiene During & After Production:*** *Chapter III point 5*

	Use of Frozen Meat for Meat Preparations
• **(Unless the competent authority authorises boning immediately before mincing), bone frozen or deep-frozen meat used to make meat preparations before freezing. Store it only for a limited period.** ***D5***	***Use of frozen or deep-frozen meat*** *- boning can be carried out immediately before mincing if carried out hygienically. The process should be included in the HACCP plan, as should the determination of the storage period for frozen meat, which is largely a quality issue. See Chapter 8 (Temperature Controls) Section B4. Keep appropriate records to demonstrate that those storage periods have not been exceeded and when stored meat was deboned.*
	Re-freezing of Meat Preparations
• **Do not refreeze meat preparations after thawing**. ***D6***	*Keep records to ensure that meat preparations that have been thawed are not re-frozen. See Chapter 8 (Temperature Controls) Section B5.*

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E. MECHANICALLY SEPARATED MEAT (MSM)

- '**Mechanically separated meat'** means the product obtained by removing meat from flesh-bearing bones after boning or from poultry carcases, using mechanical means resulting in the loss or modification of the muscle fibre structure. (See also D. Meat Preparations)

Definition of MSM

The definition of MSM in this regulation is based on the physical structure of the end product. It is therefore necessary, before considering all the other requirements, to decide whether the material is in fact MSM (see Definition above).

Evaluation of whether the 'muscle fibre structure has been modified or lost' can be done using light microscopic examination.
(Note: A website reference and CD-rom on comparison of MSM with other mechanically obtained meat and mince raw materials will be available once a current research project is completed).

Types of MSM

- **MSM produced using techniques that do not alter the structure of the bones used in the production of MSM should be treated as different from MSM produced using techniques that alter the structure of the bones.**
- **MSM of the former type produced under specified conditions and of a specified composition should be permitted in meat preparations that are clearly not intended to be consumed without first undergoing heat treatment. These conditions are linked in particular to the calcium content of MSM.**

E1. The calcium content of MSM as referred to in Regulation 853/2004 shall:

1. **not exceed 0.1% (= 100 mg/100 g or 1 000 ppm) of fresh product;**
2. **be determined by a standardised international method.**

2074/2005 Annex IV ***Implementing Measures***

	Calcium Content of MSM
• **The calcium content of MSM shall not exceed 0.1% of fresh product.** ***E1***	*The calcium content of MSM is used as an indicator of whether the structure of the bones has been changed during mechanical separation. A level above 0.1% Ca on a fresh weight basis is also taken as an indication that the level of calcium in the MSM is higher than that of minced meat.*
	International Method
• **Use a standardised international method to determine the calcium content of MSM.**	*The calcium content can be determined by any internationally standardised method. The only method specifically standardised for calcium determination in*

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E1	*MSM is AOAAC (Association of American Analytical Chemists) method 983.19.* *This is a simple titration method of the acid digested MSM with EDTA (ethylene diamine tetra-acetate). It is more usual for calcium to be determined by atomic absorption spectroscopy (AAS), and provided this or any other method gives equivalent results, then it can be used.*

E2. The work on meat must be organised in such a way as to prevent or minimise contamination. To this end, food business operators must ensure in particular that the meat used is:

(a) at a temperature of not more than 4°C for poultry, 3°C for offal and 7°C for other meat; and

(b) brought into the preparation room progressively as needed.

853/2004 Annex III Section V ***Hygiene During & After Production:*** *Chapter III point 1*

	MSM Operations
• **Bring meat progressively into the workroom as needed keeping it at a temperature of not more than 4 °C for poultry, 3 °C for offal and 7 °C for other meat.** ***E2b, E2a***	*Minimise the opportunity for contamination and keep interruptions to the cold chain to a minimum by keeping meat packed and in chilled storage until it is to be worked on in the cutting room.* *See Chapter 8 (Temperature Controls) Section B3.*

E3. The raw material used to produce MSM must meet the following requirements.

(a) It must comply with the requirements for fresh meat;

(b) The following material must not be used to produce MSM:

(i) for poultry, the feet, neckskin and head; and

(ii) for other animals, the bones of the head, feet, tails, femur, tibia, fibula, humerus, radius and ulna.

853/2004 Annex III Section V ***Raw Material:*** *Chapter II point 3*

E4. Raw material for deboning from an on-site slaughterhouse must be no more than 7 days old; otherwise, raw material for deboning must be no more than 5 days old. However, poultry carcases must be no more than 3 days old.

853/2004 Annex III Section V ***Hygiene During & After Production:*** *Chapter III points 3(a) & 4(a)*

	Permitted Raw Materials for MSM

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• **Use only permitted raw materials for the manufacture of MSM.** ***E3*** • **Make sure that red meat for deboning from an on-site slaughterhouse is no more than 7 days old; otherwise, it is no more than 5 days old, and poultry carcases are no more than 3 days old.** ***E4***	*All meat used in the manufacture of Mechanically Separated Meat must come from fresh meat that meets the legal requirements. This means the meat must come from approved premises and be either health marked or bear an identification mark. See Section B (Traceability) above.* *Have adequate stock control procedures to ensure that raw material requirements are always met and keep adequate records in place to show that is the case.*

E5. The following requirements apply to the production and use of MSM produced using techniques that do not alter the structure of the bones used in the production of MSM and the calcium content of which is not significantly higher than that of minced meat.

(b) Mechanical separation must take place immediately after deboning.

(c) If not used immediately after being obtained, MSM must be wrapped or packaged and then chilled to a temperature of not more than 2°C or frozen to an internal temperature of not more than –18°C. These temperature requirements must be maintained during storage and transport.

(d) If the food business operator has carried out analyses demonstrating that MSM complies with the microbiological criteria for minced meat adopted in accordance with Regulation 852/2004 it may be used in meat preparations that are clearly not intended to be consumed without first undergoing heat treatment and in meat products.

(e) MSM not shown to comply with the criteria referred to in (d) may be used only to manufacture heat-treated meat products in establishments approved in accordance with this Regulation.

853/2004 Annex III Section V ***Hygiene During & After Production:*** *Chapter III points 3b-3e*

	MSM with Low Calcium Content
• **Make sure that:** ▪ **mechanical separation takes place immediately after deboning.** ▪ **if not used immediately after being obtained, MSM is wrapped or packaged and**	*Debone the meat immediately before MSM is to be produced.* *Wrap/package the MSM immediately after it is produced or chill it to no higher than 2°C and maintain it during subsequent storage and transport, or freeze it to no higher than -18°C.* *See Chapter 8 (Temperature Controls) Section B3.*

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then chilled to a temperature of not more than 2°C or frozen to an internal temperature of not more than –18°C. These temperatures are maintained during storage and transport. ▪ **if MSM complies with the microbiological criteria for minced meat it may be used in meat preparations that are clearly not intended to be consumed without first undergoing heat treatment and in meat products.** ▪ **MSM not complying with the criteria is used only to manufacture heat-treated meat products in approved establishments.** ***E5***	*MSM that meets the microbiological criteria for minced meat can be used in meat products and in meat preparations that are to be heat treated before being eaten; otherwise use it only to manufacture heat-treated meat products in approved establishments.* *See PART THREE (Microbiological Criteria) Chapter 2.* *Keep adequate records in place to show that the requirements are always met.*

E6. The following requirements apply to the production and use of MSM produced using techniques other than those mentioned in point 3 [E5]

(b) If mechanical separation does not take place immediately after deboning the flesh-bearing bones must be stored and transported at a temperature of not more than 2°C or, if frozen, at a temperature of not more than -18°C.

(d) If not used within one hour of being obtained, MSM must be chilled immediately to a temperature of not more than 2°C.

(e) If, after chilling, MSM is not processed within 24 hours, it must be frozen within 12 hours of production and reach an internal temperature of not more than –18°C within six hours.

(f) Frozen MSM must be wrapped or packaged before storage or transport, must not be stored for more than three months and must be maintained at a temperature of not more than –18°C during storage and transport.

(g) MSM may be used only to manufacture heat-treated meat products in establishments approved in accordance with this Regulation.

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853/2004 Annex III Section V ***Hygiene During & After Production:*** *Chapter III points 4b, 4d -4g*	
	MSM with High Calcium Content
• **Make sure that:** ▪ **if mechanical separation does not take place immediately after deboning, the flesh-bearing bones are stored and transported at a temperature of not more than 2°C or, if frozen, at a temperature of not more than -18°C.** ▪ **if not used within 1 hour of being obtained, MSM is chilled immediately to a temperature of not more than 2°C.** ▪ **if, after chilling, MSM is not processed within 24 hours, it is frozen within 12 hours of production so it reaches an internal temperature of not more than –18°C within six hours.** ▪ **frozen MSM is wrapped or packaged before storage or transport, is not stored for more than 3 months and is maintained at a temperature of not more than –18°C during storage and transport.** ▪ **MSM is used only to**	*Debone the meat immediately before MSM is to be produced or store and transport the bones at temperatures no higher than 2 ^{o}C or frozen to no higher than -18^{o}C.* *If the MSM is not used within an hour of being produced, chill it to a temperature no higher than 2 ^{o}C. If the MSM is not used within 24 hours of being chilled, freeze it to a temperature no higher than -18^{o}C within 6 hours.* *Wrap/package frozen MSM before storage or transport at temperatures no higher than -18^{o}C. Store it for up to 3 months* *See Chapter 8 (Temperature Controls) Section B3.* *Use the MSM only to manufacture heat-treated meat products in approved establishments.* *See PART THREE (Microbiological Criteria) Chapter 2.* *Keep adequate records in place to show that the requirements are always met.*

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manufacture heat-treated meat products in approved establishments. ***E6***	

E7. The following requirements apply to the production and use of MSM produced using techniques other than those mentioned in point 3 [E5]. **(c) Flesh-bearing bones obtained from frozen carcases must not be refrozen.** **E8. MSM must not be re-frozen after thawing.** *853/2004 Annex III Section V* ***Hygiene During & After Production:*** *Chapter III points 4(c) and 5*	
	Re-freezing (MSM Production)
• **Do not refreeze flesh-bearing bones obtained from frozen carcases.** ***E7*** • **Do not refreeze MSM after thawing.** ***E8***	*Keep records to ensure that MSM or flesh-bearing bones that have been thawed are not re-frozen. See Chapter 8 (Temperature Controls) Section B5.*

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F. LABELLING OF MINCED MEAT, MEAT PREPARATIONS & MSM

F1. In addition to the requirements of Directive 2000/13/EC, food business operators must ensure compliance with the requirement of point 2 if, and to the extent that, national rules in the Member State in the territory of which the product is placed on the market so require.

F2. Packages intended for supply to the final consumer containing minced meat from poultry or solipeds or meat preparations containing MSM must bear a notice indicating that such products should be cooked before consumption.

853/2004 Annex III Section V ***Labelling:*** *Chapter IV points 1 & 2*

F3. When the requirements for *Salmonella* in minced meat, meat preparations and meat products intended to be eaten cooked of all species set down in Annex I are fulfilled, the batches of those products placed on the market must be clearly labelled by the manufacturer in order to inform the consumer of the need for thorough cooking prior to consumption.

2073/2005 Article 6

	Labelling of Minced Meat, Meat Preparations & MSM
• **Label packages intended for supply to the final consumer containing** ▪ **minced meat from poultry or solipeds** ▪ **meat preparations containing MSM** **with a notice that such products should be cooked before consumption.** ***F1, F2*** • **For minced meat, meat preparations and meat products intended to be eaten cooked for which there is a salmonella criteria, inform the consumer of the need for thorough cooking by labelling.** ***C1***	*Label packages intended for supply to the final consumer with a notice that such products should be cooked before consumption.* *In the context of Salmonella , the advice of the Advisory Committee on the Microbiological Safety of Food is that it is sufficient to state clearly that the food requires cooking with cooking times and temperatures where appropriate, e.g. for burgers and sausages. The instructions should not include internal temperatures as they are not easily measured by the consumer.* *See PART TWO Chapter 2 (Microbiological Criteria) Section C.*

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	Directive 2000/13/EC
• **Comply with the requirements of Directive 2000/13/EC.** ***F1***	*Directive 2000/13/EC is implemented in the UK by The Food Labelling Regulations 1996 (SI 1499) (as amended) and the Food Labelling Regulations (Northern Ireland) 1996 (SR No. 383).* *The Regulations apply only to food ready for delivery to the ultimate consumer or catering establishment. They require that relevant pre-packed foods carry:* ▪ *a name;* ▪ *a list of ingredients,* ▪ *the amount of certain ingredients used;* ▪ *a date mark;* ▪ *any special storage conditions or conditions of use;* ▪ *the name and address of the manufacturer, packer or EC seller; instructions for use; and* ▪ *the place of origin of the food, if failure to give it might mislead.* *See also 'Compositional Labelling' below.* ***See guidance notes at*** *http://www.food.gov.uk/foodindustry/guidancenotes/labelregsguidance/foodlabelregsguid*

F4. The FBO must check the raw materials entering the establishment to ensure compliance with the name of the product in the table below in respect of the final product. **F5. The labelling must also display the following words: 'percentage of fat under …' 'connective tissue: meat protein ratio under …'** **F6. Member States may allow the placing on their national market of minced meat which does not comply with these criteria under a national mark that cannot be confused with the marks provided for in Article 5(1) of 853/2004.** *2074/2005 Implementing Measures: Article 10 points 1, 2 and 3*	
	Compositional Labelling of Minced Meat
• **Label with compositional information as set out <u>or</u> mark minced meat packages with a**	*Check that, if labelled as in the table below, raw materials entering the establishment comply with the required name and composition in respect of the final*

national identification mark.

F4, F5, F6

product. No national identification mark has been established.

	Fat Content	Connective tissue: meat protein ratio
Lean minced meat	*≤7%*	*≤12%*
Minced pure beef	*≤20%*	*≤15%*
Minced meat containing pig meat	*≤30%*	*≤18%*
Minced meat of other species	*≤25%*	*≤15%*

It should be noted however, that Public Analysts and Local Authorities apply a maximum limit of 25% fat for 'standard' minced beef (i.e. with no 'lean' claims) which has been widely established through case law of the general provisions of the Food Safety Act 1990.

In addition, EC / UK food labelling rules require: (i) nutrition labelling where a nutrition claim (e.g. fat claims) is being made for a product, and (ii) that the 'name of the food' is clear enough to let the consumer know its true nature and distinguish it from other products with which it might be confused - see Directive 2000/13/EC above.

OPERATOR'S OBLIGATIONS	*ADVICE*

G. MEAT PRODUCTS

- **'Meat products'** means processed products resulting from the processing of meat or from the further processing of such processed products, so that the cut surface shows that the product no longer has the characteristics of fresh meat.

Definition of Meat Products

The assembly of products that contain both processed products of animal origin and products of plant origin is no longer subject to approval. This process need only comply with Regulation 852/2004, but the processing of the ingredients that are of animal origin must comply with Regulation 853/2004. See 12.2 (Composite Products).

G1. Food business operators must ensure that the following items are not used in the preparation of meat products:

(a) genital organs of either female or male animals, except testicles;

(b) urinary organs, except the kidneys and the bladder;

(c) the cartilage of the larynx, the trachea and the extra-lobular bronchi;

(d) eyes and eyelids;

(e) the external auditory meatus;

(f) horn tissue; and

(g) in poultry, the head – except the comb and the ears, the wattles and caruncles - the oesophagus, the crop, the intestines and the genital organs.

G2. All meat, including minced meat and meat preparations, used to produce meat product must meet the requirements for fresh meat. However, minced meat and meat preparations used to produce meat products need not satisfy other specific requirements of Section V.

853/2004 Annex III Section VI ***Meat Products:*** *Section VI points 1 & 2*

G3. The following requirements apply to the production and use of MSM produced using techniques that do not alter the structure of the bones used in the production of MSM and the calcium content of which is not significantly higher than that of minced meat.

(d) If the food business operator has carried out analyses demonstrating that MSM complies with the microbiological criteria for minced meat adopted in accordance with Regulation 852/2004 it may be used in … meat products.

(e) MSM not shown to comply with the criteria referred to in (d) may be used only to manufacture heat-treated meat products in establishments approved in accordance with this Regulation.

G4. The following requirements apply to the production and use of MSM produced using techniques other than those mentioned in point 3 [E5]

MSM may be used only to manufacture heat-treated meat products in establishments approved in accordance with this Regulation.

853/2004 Annex III Section V ***Hygiene During & After Production:*** *Chapter III points 3(d-e), 4(g)*

OPERATOR'S OBLIGATIONS	ADVICE
	Meat for Producing Meat Products
• **Observe restrictions on parts of animals that may not be used in meat products.** ***G1*** • **Produce meat products using only meat (including minced meat and meat preparations) that meets the requirements for fresh meat.** • **However, minced meat and meat preparations used to produce meat products need not satisfy other specific requirements of 853/2004 Section V.** ***G2***	*All the meat for meat products must originate from approved slaughterhouses and, if appropriate, approved cutting plants, approved minced meat or approved meat preparation establishments, and bear a health mark (on red meat carcases and primal cuts) or identification mark. See Section B (Traceability) above.* ***Minced meat and meat preparations used to produce meat products*** *– do not have to meet the raw material requirements set out in Section V Chapter II points 1 and 2, i.e. they may derive from raw materials at C1(b) and (c), C2(b) and (c) and C3 above.* *Have adequate stock control procedures to ensure that raw material requirements are always met and keep adequate records in place to show that is the case.* ***Labelling of meat products*** *– Directive 2001/101 which amended Directive 2000/13 I (see Section F1) introduces an EU definition of meat for labelling purposes and concerns the compositional and labelling of meat products for delivery to the ultimate consumer and catering establishments. See guidance notes at www.food.gov.uk/multimedia/pdfs/meatguidance.pdf*
	MSM in Meat Products
• **MSM with a low calcium content that complies with the microbiological criteria for minced meat may be used in meat products.** ***G3d*** • **MSM with a low calcium content not complying with the microbiological criteria or MSM**	***MSM*** *- see* ***E5*** *above* *MSM with a high calcium content or with a low calcium content that does not comply with microbiological criteria for minced meat, may only be used in approved establishments to manufacture heat-treated meat products.* *See PART TWO Chapter 2 (Microbiological Criteria).* *Have adequate stock control procedures to ensure that the requirements are always met and keep adequate*

OPERATOR'S OBLIGATIONS	*ADVICE*
with high calcium content may only be used to manufacture heat-treated meat products in approved establishments. ***G3e, G4***	*records in place to show that is the case.*

OPERATOR'S OBLIGATIONS	*ADVICE*

H. EDIBLE CO-PRODUCTS

Rendered Animal Fats and Greaves

H1. Raw materials [for preparing rendered animal fats and greaves] must:

(a) Derive from animals which have been slaughtered in a slaughterhouse, and which have been found fit for human consumption following ante-mortem and post-mortem inspection;

(b) Consist of adipose tissues or bones, which are reasonably free from blood and impurities;

(c) Come from establishments registered or approved pursuant to Regulation 852/2003 or in accordance with this Regulation; and

(d) Be transported, and stored until rendering, in hygienic conditions and at an internal temperature of not more than 7ºC. However, raw materials may be stored and transported without active refrigeration if rendered within 12 hours after the day on which they were obtained.

853/2004 Annex III Section XII Chapter II: points 1(a)-(d)

Treated Stomachs, Bladders and Intestines

H2. Food business operators treating stomachs, bladders and intestines must ensure compliance with the following requirements. Animal intestines, bladders and stomachs may be placed on the market only if: (a) they derive from animals which have been slaughtered in a slaughterhouse, and which have been found fit for human consumption following ante-mortem and post-mortem inspection; … .

853/2004 Annex III Section XIII

Gelatine & Collagen

H3. For the production of gelatine intended for use in food, the following raw materials may be used: (a) bones; (b) hides and skins of farmed ruminant animals; (c) pig skins; (d) poultry skin; (e) tendons and sinews; (f) wild game hides and skins; and (g) fish skin and bones.

H4. Raw materials listed in point 1 (a) to (e) [at H3] must derive from animals which have been slaughtered in a slaughterhouse and whose carcases have been found fit for human consumption following ante-mortem and post-mortem inspection or, in the case of hides and skins from wild game, found fit for human consumption.

853/2004 Annex III Section XIV Chapter I points 1 & 3

H5. For the production of collagen intended for use in food, the following raw materials may be used: (a) hides and skins of farmed ruminant animals; (b) pig skins and bones; (c) poultry skin and bones; (d) tendons; (e) wild game hides and skins; and (f) fish skin and bones.

H6. Raw materials listed in point 1 (a) to (d) [at H5] must derive from animals which have been slaughtered in a slaughterhouse and whose carcases have been found fit for human consumption following ante-mortem and post-mortem inspection or, in the case of hides and skins from wild game, found fit for human consumption.

853/2004 Annex III Section XV Chapter I: points 1 & 3

H7. The use of hides and skins is prohibited if they have undergone any tanning process, regardless of whether this process was completed

OPERATOR'S OBLIGATIONS	*ADVICE*

H8. Raw materials must come from establishments registered or approved pursuant to Regulation 852/2004 or in accordance with this Regulation.

H9. Collection centres and tanneries may also supply raw material for the production of gelatine [or collagen] intended for human consumption if the competent authority specifically authorises them for this purpose … .

853/2004 Annex III Section XIV Chapter I and Section XV Chapter I: points 2, 4, 5

	Edible Co-Products
• **Permitted Raw Materials.** ***H1-9***	*See the separate Edible Co-Products Industry Guide available at www.food.gov.uk/foodindustry/guidancenotes/meatregsguid/coproductbyproductguide*

OPERATOR'S OBLIGATIONS	*ADVICE*

12.3.2 WHAT ARE THE OFFICIAL CONTROL REQUIREMENTS?

Audits by officials of good hygiene practices shall verify that meat plant operators apply pre-operational, operational and post-operational hygiene procedures, temperature controls and controls on food entering and leaving the establishment and any accompanying documentation, continuously and properly.

854/2004 Article 4 points 4c, 4h & 4(i)

Audits by officials of HACCP –based procedures shall verify that meat plant operators apply such procedures continuously and properly.

854/2004 Article 4 point 5

12.3.3 APPLYING PROCEDURES CONTINUOUSLY AND PROPERLY

The operator is responsible for food safety in the food business.

852/2004 Article 1 point 1(a)

Food business operators shall put in place, implement and maintain a permanent procedure or procedures based on the HACCP principles.

852/2004 Article 5 point 1

Food … business operators at all stages of production, processing, and distribution within the businesses under their control shall ensure that foods [ ] satisfy the requirements of food law which are relevant to their activities and shall verify that such requirements are met.

178/2002 Article 17

	Operator Responsibilities for Meat Processing
• **Operator responsibility includes applying and verifying the company's hygienic meat production procedures and taking corrective action if those procedures fail.** • **Implement and maintain a permanent procedure or procedures based on the HACCP principles.**	***Operator Responsibility*** *includes maintaining and monitoring the intake of raw materials and hygienic meat processing and taking corrective action if there is a failure.* ***These procedures should be based on HACCP principles*** *– see Section B1 above and PART THREE Chapter 1 (Application of HACCP Principles)* ***Delegation*** *- responsibility for maintaining and monitoring the company's procedures for the intake of raw materials and processing may be delegated to a nominated person to whom problems are reported, and who has sufficient authority to ensure that corrective action is taken when necessary.*

OPERATOR'S OBLIGATIONS	*ADVICE*
	Verification *- check periodically if company procedures for accepting, handling and storing raw materials and processing and record keeping are being followed by staff and that problems are being reported.* ***Frequency of verification*** *- this will depend on the likelihood of a problem being found. Once a month may be sufficient in premises where staff are experienced and procedures are unchanged.* ***Monitoring*** *- check on a daily basis that staff are following the company's procedures for processing, for example:* ▪ *Cleanliness of food handling areas, storage and transport,* ▪ *Meat handling procedures, including adequate tool cleaning and disinfection* ▪ *Meat temperatures in workrooms, storerooms, vehicles* ▪ *Effectiveness of heat treatment, if used* ▪ *Adequacy of personal hygiene practices* ▪ *Microbiological testing, if carried out* ***Records*** *- keep an accurate, dated account (e.g. in a diary/daybook) of observations, of issues requiring special attention, and of any corrective action taken.* ***Corrective action*** *- take action when evidence of failures of procedures are identified. Such action may include:* ▪ *Change suppliers;* ▪ *Dealing with any incoming raw materials or product that may be contaminated;* ▪ *Establishing the underlying cause and what needs to be done to prevent similar incidents in the future;* ▪ *Informing and, if necessary, changing suppliers; and* ▪ *Improving staff instructions and training.*

PART TWO

13. FOOD TRACEABILITY (IDENTIFICATION & HEALTH MARKING)

13.1 WHY IS TRACEABILITY OF FOOD IMPORTANT?

Information about suppliers and customers means that if a food safety emergency occurs, the food can be tracked backwards or forwards through the food chain. This information can be used to withdraw or recall food more quickly from the market and to target these actions to specific products. Emergencies may be due to concerns over microbiological contamination (e.g. E.coli O157), chemical contamination (e.g. veterinary medicines, dioxins) or physical contamination (e.g. glass) of the product, or if unfit meat has been released on to the market.

The application of a health mark or identification mark to products of animal origin, including meat, is an important part of the traceability system.

- The health mark indicates that red meat carcases (including farmed and wild game animals) and wholesale (primal) cuts have been subject to ante and post-mortem inspection and have not been found unfit for human consumption at the time of inspection.
- The identification mark, applied by the food business operator, indicates that white meat, all cut meat and processed meat has been produced in accordance with the legal requirements.

13.2 GENERAL INFORMATION

- **Definitions**

> - **'Traceability' means the ability to trace and follow a food, food producing animal etc. through all stages of production, processing and distribution.**
>
> *General Food Law Regulation 178/2002 Article 3 point 15*
>
> - **'Placing on the market' means the holding of food for the purpose of sale, including offering for sale or any other form of transfer, whether free of charge or not, and the sale, distribution, and other forms of transfer themselves.**
>
> *General Food Law Regulation 178/2002 Article 3 point 8*
>
> - **'Health mark' means a mark indicating that, when it was applied, official controls had been carried out in accordance with Regulation 854/2004.**
>
> *854/2004 Article 2* ***Definitions:*** *point 1*

- **General Food Law Guidance**

> FSA and European Commission guidance on the EU General Food Law Regulation 178/2002 may be found on the FSA website at:
> www.food.gov.uk/foodindustry/guidancenotes/foodguid/generalfoodsafetyguide

- **Health Mark & Identification Mark Charts**

  See the next two pages.

  Products of animal origin produced in approved premises are to be marked by either a health mark or an identification mark. Health marks are applied by, or under the supervision of, official veterinarians, while it is food business operators that apply identification marks.

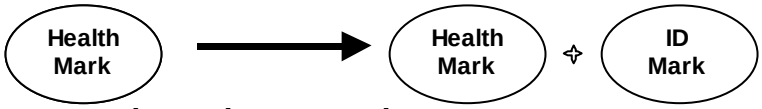
  Under previous legislation health marks were required on all meat produced under veterinary control, now only red meat carcases and wholesale cuts require a health mark. Different shape health marks distinguished between premises approved to produce products for export and products for the national market. Under the new regulations there is, in most cases, no distinction between export and national production. There is a transition period during which the old marks can continue to be used. More information is given in this Chapter.

REQUIREMENTS FOR HEALTH / IDENTIFICATION MARKING

TO 31.12.2005 **FROM 1.1.2006**

RED MEAT SLAUGHTERHOUSES

Former Full Throughput Premises



HM on carcases & primary cuts
ID Mark on other parts/offal
Square mark on emergency slaughter animals

Former Low Throughput Premises

Until approved, then Health + ID Mark

WHITE MEAT SLAUGHTERHOUSES

Former Full Throughput Premises

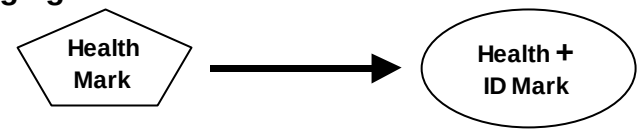
Former Low Throughput Premises

Until approved, then ID Mark

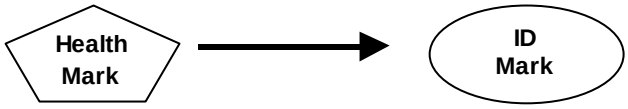
WILD GAME ESTABLISHMENTS

Former EU approved

- Large game

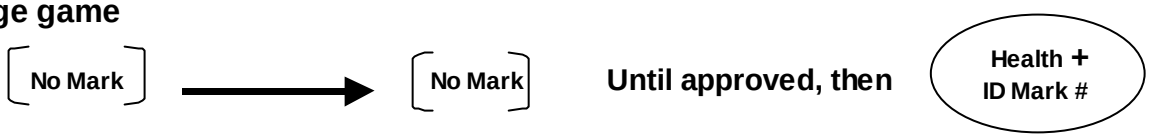


- Small game



Former National market

- Large game



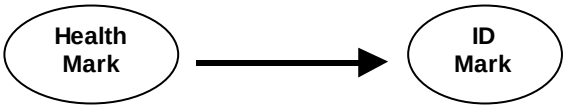
- Small game

Local mark to be considered

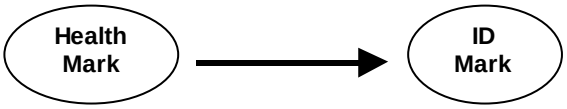
CUTTING PLANTS

Former Full Throughput Cutting Premises

- Red meat



- White meat



Former Low Throughput Cutting Premises

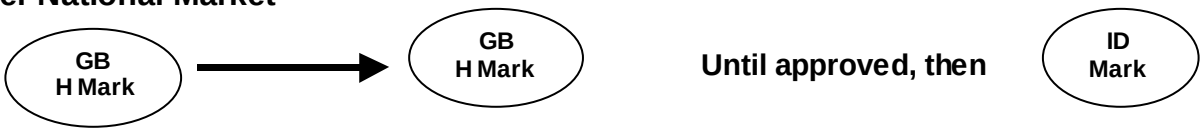
- Red meat

- White meat

MEAT PRODUCTS PLANTS

Former EU approved

Former National Market



MEAT PREPARATION / MINCED MEAT PLANTS

Former Approved

Former Registered

OPERATOR'S OBLIGATIONS	ADVICE

13.3.1 WHAT ARE THE LEGAL REQUIREMENTS FOR TRACEABILITY?

The following sections set out the traceability record keeping and marking requirements of the regulations that apply to slaughter, dressing and further processing of meat.

A. SUPPLIER AND CUSTOMER RECORDS

A1. Food business operators (FBOs) must, in accordance with Article 18 of Regulation 178/2002, have in place systems and procedures to identify FBOs from whom they have received and to whom they have delivered products of animal origin.

853/2004 Annex II ***Identification Marking:*** *Section I point A4*

A2. Food … business operators shall be able to identify any person from whom they have been supplied with a food, a feed, a food-producing animal, or any substance intended to be, or expected to be, incorporated into a food … . To this end, such operators shall have in place systems and procedures which allow for this information to be made available to the competent authorities on demand.

A3. Food … business operators shall have in place systems and procedures to identify the other businesses to which their products have been supplied. This information shall be made available to the competent authorities on demand.

A4. Food … which is placed on the market or is likely to be placed on the market in the Community shall be adequately labelled or identified to facilitate its traceability, through relevant documentation or information in accordance with … more specific provisions.

General Food Law Regulation 178/2002 Article 18

	Traceability of Suppliers & Customers
• **Have arrangements in place to identify suppliers and customers.** ***A1, A2, A3, A4***	*The requirement applies a '**one step back**, **one step forward**' approach. Keep information on paper or in electronic form about the products received from each supplier and the product supplied to each customer. As a minimum, records should include supplier's or customer's name and address, product description and date of receipt/delivery.* *Importers of food, food brokers etc. need to keep a record of products and suppliers from EU and 3rd countries.* ***Final consumers** - customers who are final consumers do <u>not</u> have to be identified. A final consumer is the ultimate consumer of a foodstuff who will not use the food as part of any food business operation or activity.*

OPERATOR'S OBLIGATIONS	ADVICE
	Office staff *– make sure that staff responsible for keeping supplier and customer records are aware of their importance for traceability.* ***Traceability of meat*** *- the meat chain traceability system includes the requirements for animal identification information (e.g. movement documents, ear tags), supply of food chain information, supplier declarations, veterinary certificates and correlation of carcases and offal, health and identification marking of products. See below and Chapter 9 (Acceptance & Slaughter of Animals).* ***Beef labelling*** *- beef offered for sale must be fully traceable and compulsory country of origin indications must be shown. The rules apply to all fresh and frozen beef and veal offered for sale at all stages in the supply chain from slaughterhouse to final sale to end consumer. For further information see www.defra.gov.uk/foodrin/beeflab/beeflab.htm or contact:* *Defra, Beef Labelling Section 5th Floor* *(Area E9) Millbank, c/o Nobel House* *17 Smith Square, London SW1P 3J.* *Tel: 020 7238 3158/3160* *For Scotland:* *www.scotland.gov.uk/Topics/Agriculture/Agricultural-Policy/LivestockAndLivestockProd/ beef/Labelling or contact: SEERAD, Room 251 Pentland House,* *47 Robb's Loan, Edinburgh, EH14 1TY.* *Tel: 0131-244-6408* *For Northern Ireland:* *Food Policy Branch, DARD, Dundonald House,* *Upper Newtownards Road, Belfast BT4 3SB.* *Tel: 02890 560844* ***Food packaging*** *– traceability of certain food packaging is covered by EC Regulation 1935/2004.*

OPERATOR'S OBLIGATIONS	*ADVICE*

B. IDENTIFICATION MARKING

POAO = Products of Animal Origin **FBOs = Food Business Operators**

B1. FBOs shall not place on the market a POAO handled in an establishment subject to approval … unless it has either (a) a health mark applied in accordance with Regulation (EC) No 854/2004… or (b) when that regulation does not provide for the application of a health mark, an identification mark applied in accordance with Annex II Section I of 853/2004.

B2. FBOs may apply an identification mark to a POAO only if the product has been manufactured in accordance with 853/2004 in establishments meeting the requirements of Article 4 (Approval & Registration).

853/2004 Article 5: points 1 and 2

When required … FBOs must ensure that POAO have an identification mark applied in compliance with the following provisions:

B3. The identification mark must be applied before the product leaves the establishment.

853/2004 Annex II Section IA: point 1

B4. However, when a product's packaging and/or wrapping is removed or it is further processed in another establishment, a new mark must be applied to the product. In such cases the new mark mist indicate the approval number of the establishment where these operations take place.

853/2004 Annex II Section IA: point 2 amended by 1662/2006 Annex I

B5. If an establishment manufactures both food to which this Regulation applies and food to which it does not, the … operator may apply the same identification mark to both types of food.

853/2004 Annex II Section IA: point 4

B6. Food business operators are to ensure that food handlers are supervised and instructed and/or trained in food hygiene matters commensurate with their work activity.

852/2004 Annex II Chapter XII: point 1

	Identification Marking of Relevant Products
• **Apply identification markings to POAO that are to be placed on the market (unless they are health marked) before the product leaves approved premises and the product has been manufactured in accordance with 853/2004.**	*Products of animal origin require identification marks except carcases or wholesale cuts of red meat species, farmed game mammals (other than lagomorphs) and large wild game that are health marked. See Section C 'Health Marking' below.* *Uneviscerated poultry carcases moving between the farm and approved premises may be unmarked but have to be accompanied by a declaration and veterinary certificate.*

OPERATOR'S OBLIGATIONS	ADVICE
B1, B2, B3, B4 • **Apply an identification mark to a product of animal origin only in establishments meeting the requirements of Article 4 (Approval & Registration).** ***B2*** • **If an establishment manufactures both food to which Regulation 853/2004 applies and food to which it does not, the same identification mark can be applied to both types of food.** ***B5***	***853/2004 Annex III Section II Chapter VI points 6 and 7.*** *See Chapter 9 (Acceptance & Slaughter of Animals) Section B.* *The option exists for products that are not required to be identification marked (e.g. foods such as pizzas with salami made from products of plant origin combined with processed products of animal origin), to be marked if they are made in the same establishment as products of animal origin (e.g. salami) that have to be identification marked.*
	New Identification Marks
• **Apply a new identification mark if a product has its packaging and/or wrapping removed or it is further processed in another establishment.** ***B4***	*Apply the identification mark of the establishment where meat is unwrapped, re-wrapped, re-packaged or re-processed in some way in place of the original mark. A new mark need not be applied if its wrapping/packaging is not opened.* *Even if a package is opened for checking by the operator or by an official a new mark should be applied. A note should be kept of which packages were opened and newly marked as well as the results of the checks.*
	Training, Instruction & Supervision
• **Make sure that food handlers are supervised and instructed and/or trained in food hygiene matters commensurate with their work activity.** ***B6***	*Instruct staff about the need to apply identification marks correctly and report problems promptly. Supervise as appropriate and issue reminders if lapses occur.* *Keep accurate, dated records to show what instruction/training individuals have received.* *See also Chapter 6 (Training).*

OPERATOR'S OBLIGATIONS	ADVICE

B7. **The mark must be legible and indelible, and the characters easily decipherable. It must be clearly displayed for the competent authorities.**

B8. **The mark must indicate the name of the country in which the establishment is located, which may be written out in full or shown as a two-letter code in accordance with the relevant ISO standard. In the case of Member States however these codes are BE, CZ, DK, DE, EE, GR, ES, FR, IE, IT, CY, LV, LT, LU, HU, MT, NL, AT, PL, PT, SI, SK, FI, SE and UK.**

B9. **The mark must indicate the approval number of the establishment. If an establishment manufactures both food to which this Regulation applies and food to which it does not, the … operator may apply the same identification mark to both types of food.**

B10. **When applied in an establishment located within the Community, the mark must be oval in shape and include the abbreviation CE, EC, EF, EG, EK, EY, ES, EÜ, EK, EB or WE.**

853/2004 Annex II Section IB: points 5 – 8

	Shape & Contents of Identification Marks
Make sure that: • **the mark is clearly displayed for the competent authorities** ***B7*** • **the identification mark is legible and indelible, and the characters are easily decipherable** ***B7*** • **the mark is oval and contains:** ▪ **the name or code of the Member State in which the establishment of production is located,** ▪ **the approval or registration number** ▪ **the abbreviation 'EC'.** ***B8, B9, B10***	*The identification mark is to be oval.* *There is no size requirement for identification marks but they must be readable. The size of the health mark may be a guide (see 11.3.4).* *Failure of automatic labelling equipment may lead to damaged labels and unclear identification marks. The identification mark may be illegible if the writing is too small or the surface it is used on is crumpled or wet.* *The country name may be written out in full in capitals or shown as a two-letter code. For the United Kingdom, the code letters are 'UK' plus the Community mark is 'EC'.* *'EEC' marks may be used for a transitional period see Section D below.*

OPERATOR'S OBLIGATIONS	*ADVICE*

B11. The mark may, depending on the presentation of different POAO, be applied directly to the product, the wrapping or the packaging, or be printed on a label affixed to the product, the wrapping or the packaging. The mark may also be an irremovable tag made of a resistant material.

B12. When the mark is applied directly to POAO, the colours used must be authorised in accordance with Community rules on the use of colouring substances in foodstuffs.

B13. When POAO are placed in a package destined for direct supply to the final consumer, it is sufficient to apply the mark to the exterior of that package only.

B14. In the case of packaging containing cut meat or offal, the mark must be applied to a label fixed to the packaging, or printed on the packaging, in such a way that it is destroyed when the packaging is opened. This is not necessary, however, if the process of opening destroys the packaging. When wrapping provides the same protection as packaging, the label may be affixed to the wrapping.

B15. For POAO that are placed in transport containers or large packages and are intended for further handling, processing, wrapping or packaging in another establishment, the mark may be applied to the external surface of the container or packaging.

853/2004 Annex II Section IC: points 9, 14, 13, 10 and 11

	Applying Identification Marks
• **Depending on the product, display the identification mark either:** ▪ **stamped directly on the product (using authorised colours), the wrapping or the packaging; or** ▪ **printed on a label fixed to the product, the wrapping or the packaging; or** ▪ **on an irremovable tag made of resistant material.** ***B11, B12*** • **The mark need only be applied to the exterior of packages of POAO destined for direct supply to the final consumer.** ***B13***	*Meat bearing your identification mark will, initially at least, be assumed to have come from your premises, so keep identification marks and labels secure. Control where they are used and by whom to minimise the risk of misuse.* ***Application of Id Marks Directly to Meat*** *- recommended food grade colours are Chocolate Brown HT, Brilliant Blue and Allura Red. See the Colour in Food Regulations 1995 (SI 3124) and the Colours in Food Regulations (Northern Ireland) 1996 (SR 1996 No. 49).* ***Tags*** *- use of tags may create a physical hazard, particularly where meat is to be used in further processing.* ***Direct supply to final consumers*** *- a final consumer is the ultimate consumer of foodstuff who will not use the food as part of any business or activity.*

OPERATOR'S OBLIGATIONS	ADVICE
	Wrapped/Packaged Cut Meat & Offal
• **In the case of packaging containing cut meat or offal, apply the id. mark to a label fixed to the packaging, or printed on the packaging, in such a way that it is destroyed when the packaging is opened, unless the process of opening destroys the packaging.** • **When wrapping provides the same protection as packaging, the label may be fixed to the wrapping.** ***B14*** • **The mark can be applied to the external surface of the container or packaging of POAO placed in transport containers or large packages and intended for further handling, processing, wrapping or packaging in another establishment,** ***B15***	*Maintain the traceability and integrity of the meat by making sure that the identification mark effectively seals the package so that any tampering will be evident.* *Place identification marks so they will be destroyed, for example, fix the label on the join of a box lid that is cut when the box is opened, or so that when wrapping (e.g. plastic bag) bearing the identification mark is opened, it cannot be re-used.* *If the meat is being sent to another establishment for cutting, processing, wrapping or packaging (or for intermediate storage before such work is carried out) the mark may be applied to the sealed containers or large packages. An approved establishment carrying out these activities is to apply its own identification mark to the product.*

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C. HEALTH MARKING

(NOTE: Health Marking is an official control (OC) - see OC references below)

C1. Food business operators shall not place on the market a product of animal origin handled in an establishment subject to approval … unless it has either (a) a health mark applied in accordance with Regulation 854/2004… or (b) when that regulation does not provide for the application of a health mark, an identification mark … .

853/2004 Article 5: point 1

OC1. Health marks shall be applied by, or under the responsibility of, the official veterinarian when official controls have not identified any deficiencies that would make the meat unfit for human consumption.

OC2. The health marking of carcases of domestic ungulates, farmed game mammals other than lagomorphs, and large wild game, as well as half-carcases, quarters and cuts produced by cutting half-carcases into three wholesale cuts, shall be carried out in slaughterhouses and game-handling establishments. In accordance with Section I, Chapter III of Annex I.

854/2004 Article 5: point 2

OC3. … the health mark is applied only to animals (domestic ungulates, farmed game mammals other than lagomorphs, and large wild game) having undergone ante-mortem and post-mortem inspection in accordance with this Regulation and when there are no grounds for declaring the meat unfit for human consumption.

OC4. Meat from unskinned wild game cannot bear a health mark unless, after skinning in a game handling establishment, it has undergone post-mortem inspection and been declared fit for human consumption.

854/2004 Annex I ***Health Marking:*** *Section I Chapter III point 2a, 8*

	Health Marking of Relevant Product
• **Carcases, half carcases, quarter and wholesale cuts of domestic ungulates (cattle, sheep, goats, pigs and horses), farmed game mammals (other than rabbits, hares and rodents), and large wild game, are only health marked by, or under OV supervision if, having undergone inspection they are not found unfit for human consumption at the time of post-mortem**	*The health mark is applied to carcases and wholesale cuts of:* ▪ *cattle, including buffalo and bison* ▪ *sheep and goats* ▪ *pigs* ▪ *horses* ▪ *farmed deer and wild boar* ▪ *large wild game (deer and feral wild boar).* ***Unfit meat*** *- meat that has not been passed fit for human consumption must not be health marked and must be disposed of as animal by-product under the Animal By-products (Identification) Regulations 1995 as amended*

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inspection in slaughterhouses and game handling establishments. ***C1, OC1, OC2, OC3*** • **Meat from unskinned wild game cannot bear a health mark unless, after skinning in a game handling establishment, it has undergone post-mortem inspection and been declared fit for human consumption.** ***OC4***	*and the Animal By-product (Identification) Regulation (Northern Ireland) 1999 as amended.* *See Chapter 5 (Animal By-products) of the Edible Co-Products Guide.* *Note that the health mark will not be applied when:* ▪ *the animal has not undergone ante and post mortem inspection in accordance with Regulation 854/2004 Annex I Section I Chapter III point 2(a);* ▪ *there are grounds for declaring the meat unfit for human consumption, e.g. it contains SRM, shows soiling, faecal or other contamination; indicates patho-physiological changes, or in the OVs opinion, after examination of all relevant information the meat constitutes a risk to public or animal health, or is not suitable for human consumption;* ***Reg.854/2004 Annex I Section II Chapter V*** ▪ *the meat fails to comply with Reg. 178/2002 Article 14.5, in that the food is unacceptable for human consumption according to its intended use, for reasons of contamination, whether by extraneous matter or otherwise, or through putrefaction, deterioration or decay.*

C2. Food business operators may not remove a health mark applied in accordance with Regulation (EC) No 854/2004 from meat unless they cut or process it or work upon it in another manner. *853/2004 Article 5: point 3*	
	Removal of Health Marks
• **Health marks are not removed from meat unless operators cut or process it or work upon it in another manner.** ***C2***	*See 'New Identification Marks' at B4 above*

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C3. … operators may not place meat from animals having undergone emergency slaughter on the market unless it bears a special health mark, which cannot be confused either with the health mark … or with the identification mark … . Such meat may be placed on the market only in the Member State where slaughter takes place ... .

853/2004 Annex III ***Emergency Slaughter:*** *Section I Chapter VI point 9*

OC5. Meat from animals having undergone emergency slaughter outside the slaughterhouse must bear a special health mark, which cannot be confused either with the health mark … or with the identification mark.

854/2004 Annex I ***Health Marking:*** *Section I Chapter III point 7*

	Meat from Emergency Slaughtered Animals
• **Meat from animals that have undergone emergency slaughter outside the slaughterhouse bears a special health mark that cannot be confused with other health or identification marks.** ***C3, OC5***	*A square health mark of 5.5 cm by 5.5 cm containing letters of 0.8 cm high and figures of 1 cm high is to be applied with, in the upper part, the letters 'UK', in the centre, the approval number of the premises, and in the lower part, the letter 'N'.*

OC6. However, the health mark may be applied before the results of any examination for trichinosis is available, if the official veterinarian is satisfied that meat from the animal concerned will be placed on the market only if the results are satisfactory;

854/2004 Annex I ***Health Marking:*** *Section I Chapter III 2a*

OC7. Where a procedure is in place in the slaughterhouse to ensure that no part of the carcase examined leaves the premises until the result of the *Trichinella* examination is found to be negative and the procedure is formally approved by the competent authority or where the derogation provided for in Art2.2(b) applies, the health mark … may be applied before the results of the *Trichinella* examination is available

1665/2006 ***Official Controls for Trichinella:*** *Article 1 (replaces Art4(3) of 2075/2005)*

	Health Marking of Trichinosis-tested Animals
• **The health mark may be applied before *Trichinella* test results are available, if the OV is satisfied that meat from the animal concerned will only be placed on the market if the results are**	*Health marks may only be applied before Trichinella test results are available if the OV has approved a written procedure that ensures that tested carcases remain identifiable and under control until negative results have been obtained.* *It is essential that the OV verifies that full traceability of the*

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satisfactory. ***OC6,OC7***	*released meat is in place at all times.* *Appropriate disposal arrangements need to be made for carcases with positive results.*

OC8. The official veterinarian is to supervise health marking and the marks used.

OC9. Health-marking takes place on the external surface of the carcase, by stamping the mark in ink or hot branding, and in such a manner that, if carcases are cut into half carcases or quarters, or half carcases are cut into three pieces, each piece bears a health mark.

OC10. The health mark must be an oval mark at least 6.5 cm wide by 4.5 cm high bearing the following information in perfectly legible characters:

The mark must indicate name of the country in which the establishment is located, which may be written out in full in capitals or shown as a two-letter code in accordance with the relevant ISO standard . In the case of Member States however these codes are BE, CZ, DK, DE, EE, GR, ES, FR, IE, IT, CY, LV, LT, LU, HU, MT, NL, AT, PL, PT, SI, SK, FI, SE and UK.

(a) The mark must indicate the approval number of the slaughterhouse; and

(b) when applied in a slaughterhouse within the Community, the mark must include the abbreviation CE, EC, EF, EG, EK, EY, ES, EÜ, EK, EB or WE.

OC11. Letters must be at least 0,8 cm high and figures at least 1 cm high. The dimensions and characters of the mark may be reduced for health marking of lamb, kids and piglets.

OC12. The colours used for health marking must be authorised in accordance with Community rules on the use of colouring substances in foodstuffs.

OC13. The health mark may also include an indication of the official veterinarian who carried out the health inspection of the meat.

854/2004 Annex I ***Health Marking:*** *Section I Chapter III points 1, 2b, 3, 4, 5 and 6*

	Shape, Size & Contents of Health Marks
• **The health mark is oval, at least 6.5 cm wide by 4.5 cm high, with letters at least 0.8 cm high and figures at least 1 cm high. A smaller mark may be used for lambs, kids and piglets.** ***OC10, OC11*** • **The health mark's characters are perfectly legible and include:** ▪ **the name or code of the**	*The shape and size of the health mark are laid out in the regulation.* *The size of health marks may be reduced for the small carcases of lambs, kids and piglets, but must not be so small they are illegible.* *Health marks may be illegible if the carcase surface is damp.* *The country name may be written out in full in capitals or shown as a two-letter code. For the United Kingdom, the*

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Member State in which the establishment is located, ▪ the approval number and ▪ 'EC' to show the meat is of EU origin. *OC10* • The health mark is applied either by use of indelible EU authorised ink or by hot branding, under the OV's control. *OC8, OC9, OC12* • The mark may also include an indication of the OV who carried out the inspection of the meat. *OC13*	*code letters are 'UK' plus the Community mark is 'EC'.* *'EEC' marks may be used for a transitional period, see Section D below.* ***Food Grade Colours** - recommended food grade colours are Chocolate Brown HT, Brilliant Blue and Allura Red. See the Colours in Food Regulations 1995 (SI 1995/3124) and the Colours in Food Regulations (Northern Ireland) 1996 (SR 1996 No. 49).*
	Number of Health Marks
• The external surface of carcases is health marked by stamping in such a way that, if they are cut into half carcases or quarters, or half carcases are cut into three pieces, each piece bears a health mark. *OC9* • Follow the OV's instructions to ensure that post-mortem inspection is carried out under suitable conditions. *853/2004 Annex III Section I Chapter IV point 12*	*Up to six marks may be required on a carcase if each half carcase is cut into three primal cuts. Only one health mark need be applied to each side of carcases that are to go direct from the slaughterhouse to a co-located cutting room, provided that the OV is satisfied with the controls over the unstamped meat.* *Make sure the line speed and inspection facilities allow the health mark to be applied to each carcase at the time of post-mortem inspection.*

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D. TRANSITIONAL ARRANGEMENTS

D1. Food business operators may continue until 31 December 2007 to use stocks of wrapping, packaging and labelling materials bearing pre-printed health or identification marks purchased by them before 1 January 2006.

2076/2005 Transitional Measures: Article 5

D2. Food business operators and competent authorities may continue to use marking equipment with which they are equipped on 31 December 2005 until its replacement or until [31 December 2009] at the latest, provided that the approval number of the establishment concerned remains unchanged.

D3. When that equipment is replaced, the competent authority shall ensure that it is withdrawn so that cannot be used any more.

2076/2005 Transitional Measures: Article 6

D4. By way of derogation from Article 4(1) of Regulation 853/2004, food business operators who before 1 January 2006 were allowed to place food of animal origin on their national market may continue to place such products on this market under a national mark that cannot be confused with the marks provided for in Article 5(1) of Regulation 853/2004 until such time as the competent authority, in accordance with Article 4(2) of Regulation 853/2004, has approved the establishments handling such products.

D5. Food of animal origin bearing such national marks may be marketed only in the national territory of the Member State where they are produced.

2076/2005 Transitional Measures: Article 4

OC12. Competent authorities and food business operators may continue to use equipment that they ordered before entry into force of this Regulation until it is exhausted or requires replacement.

854/2004 Annex I ***Health Marking:*** *Section I Chapter III point 6*

	Transitional Arrangements for Id & Health Marks
• **Equipment ordered before 1 January 2006 may be used until it is exhausted or requires replacement.** ***D1, D2, D3, OC12*** • **Operators who supplied only the national market before 1 January 2006 may continue to place such products on the UK market under a national mark until the establishment has been**	*Stamps marked 'EEC' instead of 'EC' may continue to be used until replaced or until 31.12.09. Use 'EEC' labels until stocks run out.* ***National marks*** *- product marked with the national mark from low throughput establishments licensed before 1 January 2006 can continue to be sold on the UK market while the premises await approval under the new regulations.* *In approved premises previously restricted to the national market, the oval mark replaces the square health mark and the pentagonal health mark will no longer be applied*

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approved. ***D4, D5***	*to wild game meat. Square health marks will be used for meat from animals that have undergone emergency slaughter.* ***See the charts at 13.2****.* ***Transitional derogation for Salmonella in mince, meat preparations and meat products -*** *see PART THREE Chapter 2 (Microbiological Criteria).*

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13.3.2 WHAT ARE THE OFFICIAL CONTROL REQUIREMENTS?

Audits by officials of good hygiene practices shall verify that meat plant operators apply controls on food entering and leaving the establishment and any accompanying documentation, continuously and properly.

854/2004 Article 4 point 4i

Audits by officials of HACCP-based procedures shall verify that meat plant operators apply such procedures continuously and properly.

854/2004 Article 4 point 5

Verification of compliance with the requirements of Regulation 853/2004 concerning the application of identification marks shall take place in all establishments approved in accordance with that Regulation, in addition to verification of compliance with other traceability requirements.

854/2004 Article 4 point 6

13.3.3 APPLYING PROCEDURES CONTINUOUSLY AND PROPERLY

The operator is responsible for food safety in the food business.

852/2004 Article 1 point 1a

Food business operators shall put in place, implement and maintain a permanent procedure or procedures based on the HACCP principles.

852/2004 Article 5 point 1

Food … business operators at all stages of production, processing, and distribution within the businesses under their control shall ensure that foods … satisfy the requirements of food law which are relevant to their activities and shall verify that such requirements are met.

178/2002 Article 17

	Operator Responsibilities for Traceability
• **Operator responsibility includes applying and verifying the company's traceability procedures and for taking corrective action if those procedures fail.** • **Implement and maintain a**	***Operator Responsibility*** *includes maintaining and monitoring traceability procedures and taking corrective action if there is a failure.* ***These procedures should be based on HACCP principles*** *– see PART THREE Chapter 1 (Application of HACCP Principles).* ***Delegation*** *– responsibility for applying and verifying the company's procedures for traceability (including identification marking where applicable) may be*

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permanent procedure or procedures based on the HACCP principles.	*delegated to a nominated person to whom problems are reported, and who has sufficient authority to ensure that corrective action is taken when necessary.* ***Verification** - check periodically to see if company traceability procedures are being applied by staff regarding customer and supplier records, recall/withdrawal procedures, identification marking (if relevant) and problems are being reported.* ***Frequency of verification** - this will depend on the likelihood of a problem being found. Once a month may be sufficient for checks on experienced staff and where procedures are unchanged.* ***Records** – keep an accurate, dated account (e.g. in a Food Safety Management diary) of the date and result of each periodic verification check and of any corrective action taken.* ***Corrective action** – take action when there is evidence of failures. Corrective action may include:* ▪ *Dealing with poorly / incorrectly marked / unmarked product;* ▪ *Improving customer/supplier records;* ▪ *Establishing the underlying cause and what needs to be done to prevent similar incidents in the future;* ▪ *Improving staff instructions and training.*

PART TWO

14. WRAPPING, PACKAGING & TRANSPORT HYGIENE

14.1 WHY IS WRAPPING, PACKAGING & TRANSPORT HYGIENE IMPORTANT?

Unprotected or poorly wrapped and/or packaged food will be vulnerable to physical damage as well as microbiological contamination and cross-contamination. Use of the wrong wrapping materials may lead to chemical contamination. Unhygienic storage and assembly of wrapping and packaging can contaminate the materials and therefore the food. Procedures are needed to prevent or minimise the risk of such hazards causing illness to consumers.

During transport food may be exposed to microbiological and physical hazards from the environment or through cross-contamination from other food. Poor cleaning or maintenance of transport vehicles may also give rise to chemical hazards. Procedures are needed to prevent or minimise the risk of such hazards causing illness or injury to consumers.

For example:

- Poor quality wrapping materials can tear and expose food to contamination.
- Inappropriate wrapping materials may contain chemicals that can taint food.
- Poor storage conditions can lead to deterioration of wrapping and/or packaging and contamination by dirt and pests.
- Cardboard cartons can absorb microbiological contamination and be a source of dust and paper fragments so need to be lined before use.
- Inadequate cleaning of reusable containers will allow cross-contamination between product batches.
- Wrapping and packaging can control microbial spoilage by, for example, packaging meat in protective atmospheres using varying the levels of oxygen (O_2), carbon dioxide (CO_2) and nitrogen (N_2).
- Inadequate separation between exposed and packaged meat during transport may result in cross contamination of food.
- Transport in poorly cleaned, maintained or unsuitable vehicles or containers can result in microbiological, physical or chemical cross contamination of food.

14.2 GENERAL INFORMATION

- **Definitions**

> - **'Wrapping' means the placing of a foodstuff in a wrapper or container in direct contact with the foodstuff concerned, and the wrapper or container itself.**
> - **'Packaging' means the placing of one or more wrapped foodstuffs in a second container, and the second container itself.**
>
> *852/2004 Article 2 (j) & (k)*

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14.3.1 WHAT ARE THE LEGAL REQUIREMENTS FOR WRAPPING, PACKAGING & TRANSPORT HYGIENE?

The following sections set out the wrapping, packaging and transport requirements of the regulations that apply to carcases, offal cut and processed meat.

A. WRAPPING & PACKAGING

A1. Wrapping materials are to be stored in such a manner that they are not exposed to a risk of contamination.

852/2004 Annex II ***Wrapping & Packaging:*** *Chapter X point 2*

A2. Adequate procedures are to be in place to control pests.

A3. Food businesses manufacturing, handling and wrapping processed foodstuffs are to have suitable rooms; large enough for the separate storage of raw materials from processed material … .

852/2004 Annex II ***Foodstuffs****: Chapter IX points 4 & 5*

	Design & Layout for Wrapping, Packaging & Transport Hygiene
• **Store wrapping materials in such a way that they are not contaminated.** ***A1*** • **Make sure that if processed foodstuffs are being wrapped, there are large enough rooms for the separate storage of raw materials from processed material.** ***A3*** • **Put adequate pest control procedures in place.** ***A1, A2***	*Consider the adequacy of the space allowance in the design and construction of premises or when buildings are rebuilt, altered or refurbished, in relation to throughput* ▪ *for storage of wrapping materials off the floor and free from dust and other contamination;* ▪ *for storage of packaging materials off the floor;* ▪ *for assembly of wrapping/packaging before use ;* ▪ *for wrapping and packaging of meat (including offal) and for its products; and* ▪ *for the separate storage of packaged and exposed meat and its products.* *See relevant topics below and also Chapter 1 (Design & Facilities).* ***Pest control*** *– wrapping and packaging materials can provide shelter and nesting material for pests, so make sure stores are kept pest free. See Chapter 5 (Pest Control).*

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A4. Food handling operators are to ensure that staff are supervised and receive instruction or training in food hygiene matters commensurate with their work activity. *852/2004 Annex II* ***Training:*** *Chapter XII point 1*	
	Training, Instruction & Supervision
• **Make sure that food handling staff are supervised and receive instruction or training in food hygiene matters commensurate with their work activity.** ***A4***	*Instruct staff about the food safety hazards associated with inadequate and unhygienic storage and use of wrapping and packaging materials, the need to follow instructions and to report failing control measures promptly. Supervise as necessary and issue reminders to staff if lapses occur.* ***Records*** *– keep accurate, dated individual training records to show what instruction/training has been given. See Chapter 6 (Training).*

A5. Material used for wrapping and packaging is not to be a source of contamination. **A6. Wrapping and packaging operations are to be carried out so as to avoid contamination of the products. Where appropriate, and in particular in the case of cans and glass jars, the integrity of the container's construction and its cleanliness is to be assured.** **A7. Wrapping and packaging material re-used for foodstuffs is to be easy to clean and, where necessary, to disinfect.** *852/2004 Annex II* ***Wrapping & Packaging:*** *Chapter X points 1, 3, 4* **A8. At all stages of production, processing and distribution, food is to be protected against any contamination likely to render the food unfit for human consumption, injurious to health or contaminated in such a way that it would be unreasonable to expect it to be consumed in that state.** *852/2004 Annex II* ***Foodstuffs****: Chapter IX point 3*	
	Wrapping & Packaging Materials
Make sure that • **material used for wrapping or packaging is not a source of contamination.** ***A5*** • **the integrity of the construction and cleanliness**	*Use only wrapping materials that are suitable for contact with food and that do not adversely effect the taste and smell of the product. Wrapping material must protect the meat during storage and handling. Polythene is the most common wrapping material although other materials may be suitable.* *If materials meeting the requirements of wrapping and are strong enough they may serve as both wrapping and*

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of containers is assured. ***A6***	*packaging, for example:* ▪ *'Polyboxes' – cardboard cartons with a plastic inner coating.* ▪ *Vacuum packaging such as rigid or flexible containers from which the majority of air can be removed.* ▪ *Modified atmosphere packages (MAP) in which a combination of gases such as oxygen, carbon dioxide and nitrogen are introduced into the package at the time of closure.* *Food can be placed directly into these containers without pre-wrapping and without the need for outer packaging. However, it is common for vacuum or MAP packaged products to be transported in plastic re-usable trays.* ***Receipt of inadequately wrapped/packaged meat** – if received, decide whether the meat is fit or unfit and take action , which may include:* ▪ *Trimming of visible contamination;* ▪ *Disposal as a by-product;* ▪ *Return to the originating premises suitably protected to prevent further deterioration.*
	Reusable Containers
Make sure that • **the cleanliness of reusable containers is assured.** ***A6*** • **wrapping and packaging materials re-used for foodstuffs are easy to clean and, where necessary, to disinfect.** ***A7***	*Only wrapping and packaging containers that are capable of being cleaned (e.g. hard plastic) may be reused for foodstuffs and then only if they are cleaned and disinfected before reuse.* *Plastic trays and dolavs need to be well maintained and not abused (e.g. by forklift truck damage, cracking, deep scoring) to keep them in a suitable condition for effective cleaning and disinfection.* *Containers supplied by customers must also be in a suitable condition before being accepted for use.*

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	Packing Operations
Make sure that • **wrapping and packaging operations are carried out so as to avoid contamination of the products.** ***A6, A8***	*Assemble boxes under hygienic conditions as close to the time of use as possible, and organise the flow of packaging into areas where exposed meat is present to limit the opportunity for cross-contamination.* *If lined or coated boxes are assembled and stored for later use, stack them on their sides or opening-to-opening, so that the wrapping (e.g. polythene liners) inside the boxes is not at risk of contamination. Shroud piles of assembled boxes if necessary.* *To avoid contamination of unwrapped meat during packing, the meat and staff handling the meat should touch only the inner, lined or coated surfaces where the meat is being placed, and not the outer surfaces of the packaging. Otherwise, staff handling unwrapped meat and then handling packaging materials (or vice versa) should wash their hands between the two operations.*

A9. Raw materials, ingredients, intermediate products and finished products likely to support the reproduction of pathogenic micro-organisms of the formation of toxins are not to be kept at temperatures that might result in a risk to health. The cold chain is not to be interrupted. However, limited periods outside temperature control are permitted, to accommodate the practicalities of handling during…transport, storage, ... of food, provided that it does not result in a risk to health. *852/2004 Annex II* ***Foodstuffs:*** *Chapter IX point 5*	
	Temperature Controls
• **Make sure that the cold chain is not interrupted, except for limited periods to accommodate the practicalities of handling, provided that it does not result in a risk to health.** ***A9***	*Wrap and package meat quickly so that the cold chain can be maintained. This will minimise the growth of microbiological organisms that may spoil food or cause food poisoning - see Part One Chapter 6 (Hazards). The hygiene regulations set maximum temperature requirements for raw meat, including carcases and for processed meat. See Chapter 8 (Temperature Controls).*

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A10. To avoid contaminating meat, [red meat slaughterhouses] must: (c) ensure separation in space or time of the following operations: (vi) packaging offal.

853/2004 Annex III ***Slaughterhouses****: Section I Chapter II point 2*

A11. Exposed meat must be stored … separately from packaged meat, unless stored … at different times or in such a way that the packaging material and the manner of storage … cannot be a source of contamination for the meat.

853/2004 Annex III ***Slaughterhouses:*** *Section I Chapter VII point 5 & Section II Chapter V point 4*

A12. Have rooms for the separate storage of packaged meat and exposed meat and products, unless stored at different times or in such a way that the packaging material and the manner of storage cannot be a source of the contamination for the meat.

853/2004 Annex III: ***Cutting:*** *Section I Chapter III & Section II Chapter III; /* ***Farmed Game:*** *Section III points 1 & 2; /* ***Production Establishments:*** *Section V Chapter I & Section VI point 2*

	Separation
• **To avoid contaminating meat, red meat slaughterhouses must separate the packaging of offal in space or time.** ***A10*** • **Store packaged meat and exposed meat separately (in time or space) so that the packaging material and storage arrangements are not a source of contamination.** ***A11, A12***	*To minimise the risk of contamination e.g. of unwrapped meat from packaging or from packaged meat, store them in separate rooms, or in the same room at a different time or at the same time with either a permanent barrier between them that can be cleaned and disinfected or by using an appropriately placed polythene covering to prevent air-borne cross-contamination.*

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B. TRANSPORT OF FOOD INCLUDING MEAT

- **LIVESTOCK TRANSPORT see PART TWO Chapter 9 (Acceptance & Slaughter of Animals) Section A**
- **TRANSPORT OF ANIMAL BY-PRODUCTS see Chapter 5 of the separate Edible Co-Products Industry Guide on available at: www.food.gov.uk/foodindustry/guidancenotes/meatregsguid/coproductbyproductguide**

B1. At all stages of production, processing and distribution, food is to be protected against any contamination likely to render the food unfit for human consumption, injurious to health or contaminated in such a way that it would be unreasonable to expect it to be consumed in that state.

852/2004 Annex II ***Foodstuffs:*** *Chapter IX point 3*

B2. Conveyances and/or containers used for transporting foodstuffs are to be kept clean and maintained in good repair and condition to protect foodstuffs from contamination and are, where necessary, to be designed and constructed to permit adequate cleaning and/or disinfection.

852/2004 Annex II ***Transport:*** *Chapter IV point 1*

	Design & Layout for Transport
• **Make sure that at all stages of distribution, food is protected against any contamination likely to render the food unfit for human consumption, injurious to health or contaminated in such a way that it would be unreasonable to expect it to be consumed in that state.** ***B1***	*Consider the requirements for transport hygiene in relation to throughput, including suitable access, delivery and dispatch arrangements, with loading/unloading areas designed to avoid contamination and facilities for cleaning vehicles and containers between clean and dirty loads to avoid cross contamination.* ***Loading and Unloading Operations*** *- prevent contamination of meat from fumes, dust, rain, pests, birds, leaves etc. during loading and unloading between premises and vehicles.* *See relevant topics below and Chapter 1 (Design & Facilities).*
	Vehicle Design
• **Use food transport vehicles that are designed and constructed to allow easy**	*Use vehicles that are enclosed and watertight with internal surfaces that are smooth and uniform for easy cleaning and have few crevices or sharp corners in which dirt can*

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cleaning and/or disinfection. ***B2, B1***	*accumulate.* *It should be possible to clean inside and outside of the vehicles using a hose or pressure wash.*
	Maintenance and Cleaning of Vehicles
• **Make sure that vehicles and/or containers used for transporting foodstuffs are maintained in good repair and condition.** ***B2, B1, B3***	***Maintenance*** *- include company vehicles and food containers in the company's maintenance regime so they are inspected, maintained and repaired as necessary. See Chapter 3 (Maintenance).* ***Cleaning*** *- include company vehicles and transport containers in the company's cleaning regime so they are cleaned regularly and/or whenever they become soiled with, for example, wood from pallets, nails, dust, cardboard, plastic or metal from containers, leaves and any other waste. See Chapter 4 (Cleaning).* *It may also be necessary to clean vehicles between loads – see 'Separation of Products' below.* *Keep doors of cleaned vehicles and containers closed until loading takes place to minimise the opportunities for contamination.*

B3. Food business operators are to ensure food handlers are supervised and instructed and/or trained in food hygiene matters commensurate with their work activity. *852/2004 Annex II* ***Training:*** *Chapter XII point 1*	
	Training, Instruction & Supervision
• **Make sure that food handlers are supervised and instructed and/or trained in food hygiene matters commensurate with their work activity.** ***B3***	*Instruct staff, especially company drivers and loading/unloading staff about the food safety hazards associated with transport, including the need for effective cleaning, separation of clean/dirty loads and exposed/packaged meat, the need to follow instructions and to report failing controls promptly. Supervise as appropriate and issue reminders if lapses occur.* *Keep accurate individual training records to show what instruction/training has been given. See also Chapter 6*

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	(Training).

B4. Where conveyances and/or containers are used for transporting anything in addition to foodstuffs or for transporting different foodstuffs at the same time, there is, where necessary, to be effective separation of products.

B5. Where conveyances and/or containers have been used for transporting anything other than foodstuffs or for transporting different foodstuffs, there is to be effective cleaning between loads to avoid the risk of contamination.

B6. Foodstuffs in conveyances and/or containers are to be so placed and protected as to minimise the risk of contamination.

852/2004 Annex II ***Transport:*** *Chapter IV points 3, 5 & 6*

B7. Exposed meat must be … transported separately from packaged meat, unless … transported at different times or in such a way that the packaging material and the manner of … transport cannot be a source of contamination for the meat.

853/2004 Annex III Section I Chapter VII point 5 and Section II Chapter V point 4

B8. Vehicles … must be (a) cleaned, washed and disinfected after each use; (b) maintained in a clean condition; and (c) clean and dry before use.

1774/2004 (ABP) Annex II Chapter II points 2

	Separation of Products in Transport
• **Make sure that:** ▪ **where vehicles and/or containers are used for transporting anything in addition to foodstuffs or for transporting different foodstuffs at the same time, products are effectively separated where necessary;** ***B4*** ▪ **where vehicles and/or containers have been used for transporting anything other than foodstuffs or for transporting different**	*To minimise the risk of contamination of exposed meat from packaged meat or other goods, transport them separately, or in the same vehicle at a different time or at the same time with either a permanent barrier between them that can be cleaned and disinfected or by using an appropriately placed polythene covering to prevent air-borne cross-contamination.* *Clean and disinfect vehicles and containers used to transport exposed meat between each load to minimise cross-contamination.* *Hang carcases high enough and securely enough so that there is no contact with the floor.* *Use barriers inside the container or vehicle to separate exposed meat from other contents. Wrapping pallets with shrink film is only a temporary solution as it is quickly damaged, exposing dirty, cracked wood again.*

OPERATOR'S OBLIGATIONS	ADVICE
foodstuffs, there is effective cleaning between loads to avoid the risk of contamination; ***B5, B8*** ▪ **foodstuffs in vehicles and/or containers are placed and protected so as to minimise the risk of contamination;** ***B6*** ▪ **exposed meat is transported separately from packaged meat, unless transported at different times or in such a way that the packaging material and the manner of transport cannot be a source of contamination for the meat.** ***B7***	*Where viscera accompany the carcase, transport them in clean, watertight covered containers. Use tags or labels to identify each set of viscera with its carcase. See Chapter 9 (Acceptance & Slaughter of Animals) Section B.*

B9. Raw materials, ingredients, intermediate products and finished products likely to support the reproduction of pathogenic micro-organisms of the formation of toxins are not to be kept at temperatures that might result in a risk to health. The cold chain is not to be interrupted. However, limited periods outside temperature control are permitted, to accommodate the practicalities of handling during…transport … of food, provided that it does not result in a risk to health. *852/2004 Annex II* ***Foodstuffs:*** *Chapter IX point 5*	
	Temperature Controls in Transport
• **Make sure that the cold chain is not interrupted, except for limited periods to accommodate the**	*Load and unload carcases and exposed meat quickly so that the cold chain can be maintained. This will minimise the growth of microbiological organisms that may spoil food or cause food poisoning – see Part One Chapter 6 (Hazards).*

OPERATOR'S OBLIGATIONS	*ADVICE*
practicalities of handling during transport, provided that it does not result in a risk to health. ***B9***	*The hygiene regulations set maximum temperature requirements for raw meat, including carcases and for processed meat. See Chapter 8 (Temperature Controls).*

OPERATOR'S OBLIGATIONS	*ADVICE*

14.3.2 WHAT ARE THE OFFICIAL CONTROL REQUIREMENTS?

Audits by officials of good hygiene practices shall verify that meat plant operators apply … post-operational hygiene procedures and controls on food entering and leaving the establishment continuously and properly.

854/2004 Article 4 points 4c and 4l

Audits by officials of HACCP –based procedures shall verify that meat plant operators apply such procedures continuously and properly.

854/2004 Article 4 point 5

14.3.3 APPLYING PROCEDURES CONTINUOUSLY AND PROPERLY

The operator is responsible for food safety in the food business.

852/2004 Article 1 point 1a

Food business operators shall put in place, implement and maintain a permanent procedure or procedures based on the HACCP principles.

852/2004 Article 5 point 1

Food … business operators at all stages of production, processing, and distribution within the businesses under their control shall ensure that … foods satisfy the requirements of food law which are relevant to their activities and shall verify that such requirements are met.

178/2002 Article 17

	Operator Responsibilities for Wrapping, Packaging & Transport
• **Operator responsibility includes applying and verifying the company's wrapping, packaging and transport procedures and taking corrective action if those procedures fail.** • **Implement and maintain a permanent procedure or procedures based on the HACCP principles.**	***Operator Responsibility*** *includes maintaining and monitoring wrapping, packaging and transport control procedures and taking corrective action if there is a failure.* ***These procedures should be based on HACCP principles -*** *see PART THREE Chapter 1 (Application of HACCP Principles).* ***Delegation*** *- responsibility for applying and verifying the company's wrapping, packaging and transport procedures may be delegated to a nominated person to whom problems are reported, and who has sufficient authority to ensure that corrective action is taken when necessary.* ***Verification*** *- put in place periodic management checks to see if company wrapping and packaging procedures are*

OPERATOR'S OBLIGATIONS	*ADVICE*
	being followed regarding quality of materials, storage of materials, hygienic wrapping and packaging by staff and reporting of problems. Check periodically if transport staff, including contract hauliers if used, are meeting the transport hygiene requirements. Where vehicles are company owned, checks may be carried out as part of the company's cleaning and maintenance programme. Where contract hauliers are used, the service contract may cover vehicle inspections and associated record keeping. ***Frequency of verification*** *- this will depend on the likelihood of a problem being found. Once a month may be sufficient for checking if experienced staff are following longstanding company procedures. More frequent checks may be needed if there are new staff or procedures.* ***Records*** *- keep an accurate, dated account (e.g. in a suitable notebook or the Food Safety Management diary) of the date and result of each periodic verification check, notes for cleaners, loaders/unloaders or drivers, of issues requiring special attention, and of any corrective action taken.* ***Corrective action*** *- take action when evidence of failure of wrapping and packaging procedures is identified. Corrective action may include:* ▪ *Dealing with any product that may be contaminated;* ▪ *Establishing the underlying cause and what needs to be done to prevent similar incidents in the future;* ▪ *Improving staff instructions and training;* ▪ *Advise non-company hauliers of transport requirements.*

PART TWO

15. WASTE MANAGEMENT

15.1 WHY IS WASTE MANAGEMENT IMPORTANT?

Food waste, inedible by-products and other waste materials can be a significant source of microbiological and physical contamination of food. Care must be taken to ensure that waste products do not re-enter the food chain. Waste material is a potential source of food for pests, which may give rise to further microbiological contamination. Such hazards could cause illness or injury to consumers and so must be prevented or minimised. Environmental contamination is a hazard which other legislation seeks to control.

For example:

- The digestive tract of animals may contain bacteria that can cause food poisoning. Gut spillage during evisceration can lead to contamination of a carcase and then cross-contamination of other carcases.
- Inappropriate storage and handling of waste may encourage pests that can carry contamination around a food establishment.
- The disposal of animal by-products, including Specified Risk Material, must be carried out according to specific legislation and the category of product, to ensure protection of animal and human health.

15.2 GENERAL INFORMATION

- **'Duty of Care' with regard to Waste**

  Any substance or object that a business discards, intend to discard, or is required to discard is waste and is subject to legal requirements, including 'a duty of care'. Even if material is sent for recycling or undergoes treatment in house, it can still be waste. Commercial, industrial, household wastes and Special Wastes are classified as 'controlled waste'. The Duty of Care applies to all 'Controlled Waste'.

  In meat plants much of the waste material will be categorised as animal by-products and must be disposed of appropriately (see Animal By-products below), although they are presently not treated as controlled waste for the purposes of the Duty of Care. Other waste material includes discarded packaging, wrapping and general office refuse such as paper, glass, plastic.

  Duty of Care Code of Practice - a copy may be obtained from:
  www.defra.gov.uk/environment/waste/management/doc/pdf/waste_man_duty_code.pdf
  or for Northern Ireland:
  www.ehsni.gov.uk/pubs/publications/Duty_of_Care_Code_of_Practice.doc.

  For more information:

  - **In England and Wales:**

    Contact: *Environment Agency*
    (www.environment-agency.gov.uk) *Tel: 08708 506506*

  - **In Scotland:**

    Contact: *Scottish Environment Protection Agency*
    SEPA Corporate Office, Erskine Court,
    Castle Business Park, Stirling FK9 4TR
    (www.sepa.org.uk) *Tel: 01786-457700*

  - **In Northern Ireland:**

    Contact: *Waste Management and Contaminated Land Unit*
    Commonwealth House, 35 Castle Street, Belfast BT1 1GU
    (www.ehsni.gov.uk) *Tel: 028 9054 6446*

- **Animal By-products**

  'Animal By-Products Not Intended for Human Consumption' are classified as Category 1, 2 or 3. They must be handled and processed in compliance with both the Animal By-Products Regulations (1774/2002/EC) and the Animal By-Products (Identification) (ABPI) Regulations

1995 as amended (1999 in Northern Ireland).

The three categories of animal by-products must be kept separate from the point where they arise. If materials from two categories are mixed, that mixture must be treated as the highest risk category (e.g. a mixture of Category 2 and 3 material must all become Category 2 material).

- **For more information:** see Chapter 5 (Animal By-Products) of the separate Edible Co-Products Industry Guide, available at: www.food.gov.uk/foodindustry/guidancenotes/meatregsguid/coproductbyproductguide

OPERATOR'S OBLIGATIONS	*ADVICE*

15.3.1 WHAT ARE THE LEGAL REQUIREMENTS FOR WASTE MANAGEMENT?

The following sections set out the waste management requirements of the regulations that apply to slaughter, dressing and further processing of meat.

A. WASTE MANAGEMENT

A1. The layout, design, construction, siting and size of food premises are to (c) permit good food hygiene practices, including protection against contamination and, in particular, pest control.

852/2004 Annex II ***Food Premises:*** *Chapter IX point 2(c)*

A2. At all stages of production, processing and distribution, food is to be protected against any contamination likely to render the food unfit for human consumption, injurious to health or contaminated in such a way that it would be unreasonable to expect it to be consumed in that state.

A3. Hazardous and/or inedible substances, including animal feed, are to be stored in separate and secure containers.

852/2004 Annex II ***Foodstuffs:*** *Chapter IX points 3 & 8*

A4. Adequate provision is to be made for the storage and disposal of food waste, non-edible by-products and other refuse. Refuse stores are to be designed and managed in such a way as to enable them to be kept clean and, where necessary, free of animals and pests.

852/2004 Annex II ***Food Waste:*** *Chapter VI point 3*

	Design & Layout for Waste Management
• **Organise the premises so as to permit good food hygiene practices, including protection against contamination, particularly pest control.** ***A1, A2*** • **Design refuse stores so they can be kept clean and, where necessary, free of animals and pests.** ***A4*** • **Make adequate provision for separate and secure storage**	*Allow sufficient space for waste management equipment (e.g. chutes, feather flumes, containers) to be installed, and for procedures (e.g. removal from work areas, storage, disposal) to be carried out hygienically and without the risk of contamination of products for human consumption.* *Allocate suitable places for the storage of waste before disposal, that is away from food rooms and readily cleanable and which prevent pests having access to the waste. Do not allow the build up of waste materials that can attract, harbour and sustain pests. See Chapter 5 (Pest Control)* *Where skips or trailers are used for the holding of waste in the yard, these need to be kept covered to prevent birds having access except at times when contents are being added to them or they are being emptied.*

OPERATOR'S OBLIGATIONS	*ADVICE*
of containers for hazardous and/or inedible substances and for storage and disposal of food waste, inedible by products and other refuse. ***A3, A4***	
	Management of Waste
• **Make adequate provision for the storage and disposal of food waste, inedible by-products and other refuse.** ***A4*** • **Manage refuse stores so they can be kept clean and, where necessary, free of animals and pests.** ***A4***	*Put in place adequate procedures and staff instructions for the collection, storage and disposal of food waste, inedible by-products and other refuse, including how effective cleaning, maintenance and pest control are to be achieved.* *Staff handling waste must wash their hands before handling food.* *See Chapter 3 (Maintenance), 4 (Cleaning), 5 (Pest Control) and 7 (Personal Hygiene).*

A5. Food business operators are to ensure that food handlers are supervised and instructed and/or trained in food hygiene matters commensurate with their work activity. *852/2004 Annex II* ***Training:*** *Chapter XII point 1*	
	Training, Instruction & Supervision
• **Supervise and instruct and/or train food handlers in food hygiene matters related to their work activity.** ***A5***	*Instruct staff about the food safety hazards associated with waste and the need to report problems promptly. Supervise as necessary and issue reminders if lapses occur. Keep accurate individual training records to show what instruction/training has been given. See Chapter 6 (Training).* *Everyone with waste management responsibilities needs to be aware of the company's procedures for ensuring that waste storage, handling and disposal arrangements do not contaminate food.*

OPERATOR'S OBLIGATIONS	*ADVICE*

A6. Food waste, non-edible by-products and other refuse are to be removed from rooms where food is present as quickly as possible, so as to avoid their accumulation. *852/2004 Annex II* ***Food waste:*** *Chapter V point 1*	
	Accumulation of Waste
• **Avoid accumulation of food waste, inedible by-products and other refuse by removing it from rooms where food is present as quickly as possible.** ***A6***	*Make sure that food waste is removed regularly from areas where it is produced or is placed in containers provided for the purpose. Provide sufficient containers to hold the quantity of food waste normally produced. Empty or remove containers from the room once they become full and at the end of the working day to facilitate cleaning.*

A7. Food waste, non-edible by-products and other refuse are to be deposited in closable containers, unless food business operators can demonstrate to the competent authority that other types of containers or evacuation systems used are appropriate. These containers are to be of an appropriate construction, kept in sound condition, be easy to clean and, where necessary, to disinfect. *852/2004 Annex II* ***Food waste:*** *Chapter V points 1 – 4* **A8. Hazardous and/or inedible substances, including animal feed, are to be stored in separate and secure containers.** *852/2004 Annex II* ***Foodstuffs:*** *Chapter IX point 8* **A9. …reusable containers, and all reusable items of equipment or appliances that come into contact with animal by-products or processed products, must be (a) cleaned, washed and disinfected after each use; (b) maintained in a clean condition; and (c) clean and dry before use.** **A10. Reusable containers must be dedicated to the carriage of a particular product to the extent necessary to avoid cross-contamination.** *1774/2004 (ABP) Annex II Chapter II points 2 & 3*	
	Containers for Waste
• **Deposit food waste, inedible by-products and other refuse in closable containers, unless other types of containers or evacuation systems can be demonstrated as appropriate to the competent authority.**	***Animal By-Product legislation*** *– see 15.2 (General Information).* *Use separate secure containers for storing hazardous waste or inedible substances. Refuse such as paper cardboard, or packing materials need not be placed in closed containers provided they are kept separate from other waste. Containers in food handling areas need not be closed while in*

OPERATOR'S OBLIGATIONS	ADVICE
A7 • **Use containers for waste that are of an appropriate construction, are easy to clean and, where necessary, to disinfect and keep them in sound condition.** ***A7, A9*** • **Store hazardous and/or inedible substances, including animal feed, in separate and secure containers.** ***A8*** • **If used, reusable containers must be dedicated to the carriage of a particular product to the extent necessary to avoid cross-contamination.** ***A10***	*use to avoid contamination. Containers for the storage of other refuse or waste should be closed with lids, ties or seals before removal from the premises.* *Unless they are disposable, refuse containers need to be made of durable material (e.g. plastic, metal) that is easy to clean and disinfect. They should be kept in sound condition, secure from leaks and pests. Where wet waste is produced containers can be lined with plastic bags.* ***Cleaning** – cleaning schedules should include refuse stores and containers, which need to be cleaned and disinfected frequently. See Chapter 4 (Cleaning).* ***Marking** - containers/bins used for holding specific types of waste, including APBs need to be clearly marked. Labels can get dirty, drop off, or be misread, so colour coding is recommended to assist correct use.*

A11. All waste is to be eliminated in a hygienic and environmentally friendly way in accordance with Community legislation applicable to that effect, and is not to constitute a direct or indirect source of contamination. *852/2004 Annex II **Food waste:** Chapter V point*	
	Disposal of Waste
• **Eliminate all waste in a hygienic and environmentally friendly way in accordance with relevant Community legislation, and so it does not constitute a direct or indirect source of contamination.**	*Waste disposal arrangements must comply with relevant legislation. In particular, the handling and disposal of animal by products (see Section B below).* *The frequency with which waste is removed from the premises will depend on the nature and quantity of the material. Do not allow containers and stores to overflow, to litter the surrounding area or, if liquid, to leak into drains or*

OPERATOR'S OBLIGATIONS	ADVICE
A11	*streams.* ***Waste Management Duty of Care*** *- this requires that businesses ensure all waste is handled, recovered or disposed of responsibly, that it is only handled, recovered or disposed of by individuals or businesses that are authorised to do so, and that a record is kept of all wastes received or transferred through a system of signed Waste Transfer Notes. See 15.2 (General Information).*

OPERATOR'S OBLIGATIONS	*ADVICE*

B. SLAUGHTERHOUSE REQUIREMENTS

B1. This Regulation [853/2004] shall apply without prejudice to (a) relevant animal and public health rules, including more stringent rules laid down for the prevention, control and eradication of certain transmissible spongiform encepalopathies (TSEs).

853/2004 Article 1 point 6(a)

B2. After post-mortem examination:

(i) parts unfit for human consumption must be removed as soon as possible from the clean sector of the establishment;

(ii) meat detained or declared unfit for human consumption and inedible by-products must not come into contact with meat declared fit for human consumption.

853/2004 Annex II Section I Chapter IV point 16(b) & (c); Section II Chapter IV point 7(a) & (b)

B3. There must be lockable facilities for the refrigerated storage of detained meat and separate lockable facilities for the storage of meat declared unfit for human consumption.

853/2004 Annex II Section I Chapter II point 5; Section II Chapter II point 5

	SRM and Animal By Products Legislation
• **Comply with other relevant animal and public health rules.** ***B1***	*Other regulations apply to the removal of Specified Risk Material (SRM) and the rules relating to Animal By-Products (ABP) which need to be categorised stained, kept separate and disposed of correctly.* ***SRM** - see PART THREE Chapter 3.* ***APB** - see 15.2 above and Chapter 5 of the separate Edible Co-Products Industry Guide on available at: www.food.gov.uk/foodindustry/guidancenotes/meatregsguid/coproductbyproductguide*
	Detained & Unfit Meat
• **After post-mortem examination remove those parts that are unfit for human consumption from the clean area of the slaughterhouse as soon as possible;** ***B2(i)*** • **After post-mortem**	*Detained meat and offal, and by-products not intended for human consumption must not come into contact with meat that has passed or is still awaiting inspection.* *See Chapter 9 (Acceptance & Slaughter of Animals)* ***Facilities** – appropriate storage is needed for detained meat and for meat that is declared unfit for human consumption, before its disposal as an animal by-product. See Chapter 1 (Design & Facilities) D10.*

OPERATOR'S OBLIGATIONS	*ADVICE*
examination meat detained or declared unfit for human consumption and inedible by-products must not come into contact with meat declared fit for human consumption. ***B2(ii)*** • **Provide lockable facilities for the refrigerated storage of detained meat and separate lockable facilities for the storage of meat declared unfit for human consumption.** ***B3***	

OPERATOR'S OBLIGATIONS	*ADVICE*

15.3.2 WHAT ARE THE OFFICIAL CONTROL REQUIREMENTS?

Audits by officials of good hygiene practices shall verify that meat plant operators apply pre-operational, operational and post-operational hygiene procedures continuously and properly.

854/2004 Article 4 point 4c

Audits by officials of HACCP – based procedures shall verify that meat plant operators apply such procedures continuously and properly.

854/2004 Article 4 point 5

The official veterinarian is to verify continuous compliance with food business operators' own procedures concerning any collection, transport, storage, handling, processing and use or disposal of animal by-products, including specified risk material for which the food business operator is responsible.

854/2004 Annex I Chapter I point 1

15.3.3 APPLYING PROCEDURES CONTINUOUSLY AND PROPERLY

The operator is responsible for food safety in the food business.

852/2004 Article 1 point 1(a)

Food business operators shall put in place, implement and maintain a permanent procedure or procedures based on the HACCP principles.

852/2004 Article 5 point 1

Food … business operators at all stages of production, processing, and distribution within the businesses under their control shall ensure that foods … satisfy the requirements of food law which are relevant to their activities and shall verify that such requirements are met.

178/2002 Article 17

	Operator Responsibilities for Waste Management
• **Operator responsibility includes applying and verifying waste management procedures and taking corrective action if those procedures fail.** • **Implement and maintain a permanent procedure or**	***Operator Responsibility*** *includes maintaining and monitoring waste management procedures and taking corrective action if there is a failure.* ***These procedures should be based on HACCP principles -*** *see PART THREE Chapter 1 (Application of HACCP Principles).* ***Delegation*** *- responsibility for the application and verification of waste management procedures may be delegated to a nominated person, to whom problems are reported and who has sufficient authority to ensure that corrective action is*

OPERATOR'S OBLIGATIONS	*ADVICE*
procedures based on the HACCP principles.	*taken when necessary.* ***Verification*** *- check periodically if staff / contractors who are responsible for dealing with waste are following company procedures/contract arrangements so that any problems can be identified quickly and corrective action taken before any product is affected. E.g. check for evidence of waste build up on floors and work surfaces, bins not removed promptly, blocked chutes and conduits.* ***Frequency of verification*** *- this will depend on the circumstances and likelihood of a problem being found. The work of experienced staff /contractors can be checked less frequently than that of others.* ***Records*** *- keep an accurate, dated account (e.g. in the Food Safety Management diary) of the date and result of each periodic verification check, of problems raised, and of any corrective action taken.* ***Corrective action*** *- take action when failures of the company's waste management control procedures are identified. Corrective action may include:* ▪ *Dealing with any product that has been contaminated;* ▪ *Establishing the underlying cause and what needs to be done to prevent similar incidents in the future;* ▪ *Ending the service contract;* ▪ *Improving staff instructions and training.*

PART THREE

1. APPLICATION OF HACCP* PRINCIPLES

*(HAZARD ANALYSIS AND CRITICAL CONTROL POINT)

Section **Page**

1.1 WHY ARE THE HACCP PRINCIPLES IMPORTANT?

All Food Business Operators are responsible for making sure that, as far as possible, the food produced by their business is safe to eat[1]. To do this the operator has to put in place food safety management procedures and working practices and show that this has been done.

To produce safe food for consumers, all the important safety hazards that are associated with the production of food need to be prevented, eliminated or reduced to an acceptable level. These food safety hazards may be biological, physical or chemical (see PART ONE Chapter 6).

The seven HACCP (Hazard Analysis and Critical Control Point) principles provide a systematic way of identifying food safety hazards, making sure that they are being managed responsibly and showing that this is being done day-in, day-out.

In short this involves the following steps:

PLAN… ***what needs to be done to maintain food safety and write it down.***

DO… ***what you planned to do to maintain food safety.***

CHECK… ***that you are doing what you planned to do to maintain food safety and write down what was checked and when.***

ACT… ***to correct any food safety problems and write down what has been done about the problem and when***

[1] Regulation (EC) No 178/2002 Article 14.2 states that "food shall be deemed to be unsafe if it is considered to be: (a) injurious to health; (b) unfit for human consumption. Article 14 3. states that "In determining whether any food is unsafe, regard shall be had: (a) to the normal conditions of use of the food by the consumer and at each stage of production, processing and distribution, and …

1.2 GENERAL INFORMATION

- EU food hygiene legislation requires Food Business Operators to establish, implement and maintain a food safety management system based on the seven HACCP Principles[2] **- this chapter explains the requirements.**
- Using the structured HACCP approach can improve productivity and customer confidence - **see 'Business benefits of applying HACCP principles' below.**
- It is vital that Food Business Operators have reliable hygiene procedures in place before starting to apply HACCP principles - **see 'Good Hygiene Practices' below.**
- This guide incorporates EC guidance on applying HACCP principles and flexibility for certain businesses - **see 'Flexibility in implementing HACCP principles' below.**
- Documentation is an important part of a HACCP-based system and may be kept in the '**Food Safety Management Diary for Meat Producers'** available from the Food Standards Agency website at www.food.gov.uk/foodindustry/meat/haccpmeatplants/

- **HACCP Principles**

The 7 HACCP principles are:

1. **Identify any hazards that must be prevented, eliminated, or reduced to acceptable levels;**
2. **Identify the critical control points at the step or steps at which control is essential to prevent or eliminate a hazard or to reduce it to acceptable levels;**
3. **Establish critical limits at critical control points which separate acceptability from unacceptability for the prevention, elimination or reduction of identified hazards;**
4. **Establish and implement effective monitoring procedures at critical control points;**
5. **Establish corrective actions when monitoring indicates that a critical control point is not under control;**
6. **Establish procedures, which shall be carried out regularly, to verify that the above measures are working effectively;**
7. **Establish documents and records commensurate with the nature and size of the food business to demonstrate the effective application of the above measures.**

[2] Set out in the Codex Alimentarius document CAC/RCP 1-1969, rev. 4-2003 (www.codexalimentarius.net)

- **Business Benefits of Applying HACCP Principles**
  - The step by step approach helps ensure that all food safety issues are identified, considered and dealt with, not ignored or forgotten until an incident occurs.
  - The focus on planning means that problems are anticipated so that they can be avoided and, if they occur, they can be handled quickly and the costs minimised. Any food that may have become unsafe can be dealt with properly and quickly.
  - Attention is focussed on the most important steps in the production process to help achieve food safety efficiently and economically with best use of staff.
  - Effective implementation of HACCP-based procedures demonstrates operator and employee responsibility and company commitment to food safety i.e. 'due diligence'.
  - Accurate and timely records provide evidence of effective food safety management.
  - A HACCP-based system can accommodate change or technological developments, such as advances in equipment design, new processing procedures.
  - Food handlers can be motivated when the importance of their efforts to maintain food safety are recognized.
  - As an internationally accepted tool for food safety management, customers regard the implementation of HACCP-based procedures as a basic requirement for trade.

- **Good Hygiene Practices (GHP)**

  Management of food safety is achieved by a combination of good hygiene practices (also called prerequisite procedures) **and** operational procedures based on HACCP principles.

  Good hygiene practices are set out in Regulation 852/2004 and are covered in PART TWO of this Guide:

  - **Water (Chapter 2)**
  - **Maintenance (Chapter 3)**
  - **Cleaning (Chapter 4)**
  - **Pest Control (Chapter 5)**
  - **Personal hygiene (Chapter 6)**
  - **Training (Chapter 7)**
  - **Raw materials (Chapter 8)**
  - **Temperature Controls (Chapter 9)** Note 1
  - **Traceability (Chapter 11)** Note 2
  - **Wrapping and packaging (Chapter 12)**
  - **Waste Management (Chapter 13)**
  - **Transport hygiene (Chapter 14)**

  Note 1 ***Temperature controls can also be CCPs*** *[EC Guidance Annex II point 10]*
  Note 2 ***Traceability can be considered to be a prerequisite*** *[EC Guidance Annex II point 5]*

  HACCP-based procedures for controlling hazards throughout the food production process **will not be effective** unless good hygiene practices are also being followed.

- **Flexibility in implementing HACCP principles (EC guidance 16/11/05[3])**
  - In food businesses involving no preparation, manufacturing or processing of food (e.g. grocery shops or the storage and transport of pre-packed food at ambient temperature), hazards may be controlled through good hygiene practices alone *[Annex II point 6.1]*.
  - **Where food is prepared, manufactured or processed**, operators can develop their own food safety management procedures by following a traditional HACCP process, or by following Guides to Good Practice, including generic HACCP guides *[Annex II points 7.3, 14].* See below
  - **Documentation** is an important part of the HACCP process, providing evidence of the operator's thinking and decisions that can be audited. However, flexibility includes the possibility of 'exception reporting' of visual monitoring checks *[Annex II point 8.4]*. That means making a record only when there is such a problem or something unusual happens and recording the corrective action taken as a result - see Section C7 for more information.

- **Generic HACCP Guides**

  The meat production process is similar enough across the industry to justify a 'generic' approach for implementing HACCP principles. This approach helps to provide uniformity in training, implementation, and enforcement but cannot reflect the individual features of each plant and how it operates. So, if they want to follow generic guidance, operators need to adapt it to reflect their own circumstances.
  - A partial generic HACCP plan is included at Annex 3.
  - Model HACCP template documents are at Annex 2.
  - 'Food Safety Management Diary for Meat Producers' is available from the FSA (020 7276 8384).

[3] http://europa.eu.int/comm/food/food/biosafety/hygienelegislation/guidance_doc_haccp_en.pdf

1.3.1 WHAT ARE THE LEGAL REQUIREMENTS FOR HACCP?

The following sections set out the requirements of the hygiene regulations for applying HACCP principles to the slaughter and further processing of meat.

- **Overview of HACCP Requirements**

<table>
<tr><td rowspan="6">PLAN</td><td rowspan="6">Plan what needs to be done to maintain food safety and write it down.
It is particularly important to:
▪ minimise the likelihood of food poisoning bacteria contaminating meat and associated products.
▪ avoid physical and chemical contamination of meat.
▪ reduce the potential for growth of food poisoning bacteria on meat and associated products.
▪ minimise the potential for cross contamination of ready-to-eat foods by food poisoning bacteria on meat during further processing or in the kitchen.</td><td>Hazards</td><td>Biological, Chemical, Physical</td></tr>
<tr><td rowspan="3">Controls</td><td>Good Hygiene Practices</td></tr>
<tr><td>Maintenance, cleaning, pest control, training, personal hygiene, traceability, waste management, wrapping & packaging, transport</td></tr>
<tr><td>Operational hygiene controls</td></tr>
<tr><td>Raw materials, animal welfare & transport, slaughter, dressing, storage, cutting, processing</td></tr>
<tr><td>Documentation</td><td>HACCP plans,
Staff instructions,
Monitoring procedures,
Corrective action procedures,
Daily records</td></tr>
</table>

DO	***Do what you planned to do to maintain food safety.***	***Documentation*** *(see above)*

CHECK	***Check that you are doing what you planned to do to maintain food safety and write down what was checked and when.***	***Supervision*** ***Monitoring*** ***Verification*** *incl. Micro testing* ***Review***	***Documentation*** *(see above)*

ACT	***Act to correct any food safety problems and write down what has been done about the problem and when.***	***Corrective actions***	***Documentation*** *(see above)*

Food business operators responsible for the slaughter of animals and dressing of carcases need to make sure that:

- biological, physical and chemical hazards are identified and minimised by following good practice;
- where carcases are subject to a critical process (e.g. steam pasteurisation) to eliminate or reduce biological hazards to an acceptable level, this process is carried out in a way that ensures the desired effect;

- control points required by the regulations are applied effectively, notably :
    - animals admitted are clean and healthy, with dressing procedures adapted as necessary;
    - dressing, particularly hide/ fleece /skin /feather removal and evisceration, is carried out hygienically and carcases are free from visible contamination;
    - SRM controls are carried out as required by the relevant legislation;
    - temperature requirements for meat are complied with;
- adequate records are kept to show that permanent food safety management procedures:
    - animals admitted are clean and healthy, with dressing procedures adapted as necessary;
    - have been established and implemented;
    - are being maintained and monitored on a daily basis;
    - are subject to corrective action when necessary
    - are confirmed to be operating effectively by the operator;

Food business operators responsible for transporting meat need to make sure that:

- physical, chemical and biological hazards are identified and minimised by following good practice;
- control points required by the regulations are applied effectively, notably
    - temperature requirements for meat are complied with;
- adequate records are kept to show that permanent food safety management procedures:
    - have been established and implemented;
    - are being maintained and monitored on a daily basis;
    - are subject to corrective action when necessary; and
    - are confirmed to be operating effectively by the operator.

Food business operators responsible for cutting or processing raw meat need to make sure that:

- physical, chemical and biological contamination are identified and minimised through good hygiene practices; including metal detection where appropriate.
- where meat is subject to critical heat or other treatments to eliminate or reduce biological hazards to an acceptable level, these processes are carried out in a way that ensures the desired effect;
- control points required by the regulations are applied effectively, notably
    - SRM controls are carried out as required by the relevant legislation;
    - temperature requirements for meat are complied with;
- adequate records are kept to show that permanent food safety management procedures:
    - have been established and implemented;
    - are being maintained and monitored on a daily basis;
    - are subject to corrective action when necessary; and
    - are confirmed to be operating effectively by the operator.

KEY TO DOCUMENTATION

Keeping food safety management documentation is a legal requirement (see Sections C8, C9 below). The following symbols indicate in the text where there is a need for:

🕮 **Documentation to show that the HACCP principles have been applied.**

Written hygiene policies, procedures and instructions for staff to follow.

Records to show what checks and actions have been carried out and when.

A. HACCP TRAINING

A1. That those responsible for the development and maintenance of the procedure referred to in Article 5 (1) of this Regulation or for the operation of relevant guides have received adequate training in the application of the HACCP principles;

852/2004 Annex II ***Training:*** *Chapter XII point 2*

OPERATOR'S OBLIGATION	
Training	*As a minimum, one person in the business must have adequate training in the application of HACCP principles or in the use of generic guides if these are used by the business (see 'Flexibility' below). Ideally, all staff working on the HACCP plans should have such training. See PART TWO Chapter 6 (Training).* **Record training and any qualifications obtained by individuals**.
Flexibility (training)	***Training does not necessarily involve attendance at formal courses. Training can also be achieved through trade or professional organisations or from the competent authorities, guides to good practice etc.***
TRAINING – ADVICE	
Training providers	*Training is available from local colleges, food safety training companies and consultants, or may be provided in-house. Training is more effective if it is related to meat production. The FSA Meat Plant HACCP Manual includes a syllabus for a 2 day training course.*
Qualification	*The Intermediate Certificate in HACCP Practice (Meat Plant) is a QCA Level 2 qualification awarded on successful completion of a 2 day course and a short written project. Contact the Meat Training Council (Telephone: 01908 231062; E-mail: info@meattraining.org.uk) or the Food & Drink Training Council (Northern Ireland) (Telephone: 028 9032 9296; E-mail: geofflamb@fdtc.co.uk).*

Awareness training	*Supervisors and staff responsible for day to day checking and/or taking corrective action should have some training to better understand the importance of their work in maintaining HACCP-based hygiene procedures and the hazards that these procedures are aiming to control.*
Common problems	▪ *HACCP training is general and not related to meat plant operations.* ▪ *Potentially unsafe decisions on how to manage food safety are made because no-one has enough knowledge or understanding to apply HACCP procedures correctly.*

B. HACCP-BASED PROCEDURES

B1. Food businesses operators shall put in place, implement and maintain a permanent procedure or procedures based on the HACCP principles. *852/2004 Article 5 point 1*	
OPERATOR'S OBLIGATION	
HACCP-based procedures	*Put in place a permanent programme of good hygiene practices and operational procedures to minimise food safety hazards and produce food safely. For more detailed information see Sections C and D below.* 🕮 **Document the application of the seven HACCP principles (e.g. by completing a HACCP Plan see Annex 2), including:** - *the hazard analysis that identifies all significant food hazards associated with each production process;* - *the good hygiene practices and operational hygiene procedures that are the control measures that prevent, eliminate or reduce the hazards;* - *the planned monitoring and corrective action procedures, records and responsibilities.* - *the way in which the plan is to be validated, verified and reviewed to confirm that procedures will work and are working to produce food safely.*
Flexibility (guides)	*Operators may choose to implement HACCP principles by following industry guides adapted to reflect company conditions. A partial Generic Plan and suggested HACCP template documents are available at Annex 2 and 3 of this Chapter.*

HACCP documentation	🕮 **From the start, keep a HACCP file or folder including:** *- A list of HACCP team members and their area(s) of expertise;* *- The documents noted in each section below; and* *- Key decisions made, by whom, on which date.* *This information will demonstrate that all necessary steps have been followed and the thinking behind decisions and the arrangements that are in place.*
Preliminary steps	***Before** any HACCP-based procedures can be established make sure **good hygiene practices** are in place (see 1.2 above), then:* ▪ ***SET UP A HACCP TEAM*** ▪ ***DECIDE THE SCOPE OF THE HACCP PLAN*** ▪ ***PRODUCE A PROCESS FLOW DIAGRAM*** ▪ ***COLLECT TECHNICAL DATA*** *For more information see the advice sections under these headings below.*
ADVICE	
Management commitment	*Successful implementation of HACCP-based procedures depends on the commitment of company management. It is useful to have a 'HACCP Champion' at senior level with the authority and the determination to make sure the food safety management system is seen as fundamental to the success of the business and is properly implemented and maintained.*
How many plans?	*A plant slaughtering a single species, then cutting it and producing a single end product may cover all these operations in a single process flow diagram (see topic below) and a single plan, or may choose to have three. Where operations are more complex and the resulting process flow diagram becomes unduly complicated, separate plans are advisable.*
HACCP certification	*There is no requirement for HACCP procedures to be certified (e.g. under quality assurance schemes). Any such initiative is a business decision.*
SET UP A HACCP TEAM – ADVICE	
HACCP team members	*A HACCP team is a group of people who between them have knowledge of all aspects of the product, the production process, hygiene procedures and food safety management. Try to have a mix of management and operational staff.* *The HACCP team leader needs knowledge of HACCP principles, the determination and authority to complete the HACCP process, and preferably team leadership and project management skills.*

	Include relevant specialists with a knowledge of: *- The company's products from raw materials to consumption,* *- The potential biological, chemical and physical hazards connected with the particular food product (e.g. microbiology/food technology/quality assurance/engineering)* *- The production process including manufacture, storage, and distribution* *- The operation of the plant and equipment (e.g. production staff),* *- The application of HACCP principles.*
Flexibility (HACCP team)	*One person may cover more than one of these 'specialist' roles, provided all relevant information is available to the team. A business with few staff may have an in-house team of only two people. Where in-house expertise is not available, obtain advice from guides or other sources.*
External advisers	*If bringing in external advisers, do not allow them to write and 'own' the company's HACCP plan, but use them as part of the HACCP team. This brings knowledge into the company and means you don't have to keep asking the advisers back when questions are asked or changes are needed. To be useful, advisers need to be knowledgeable about the meat industry, have suitable HACCP qualifications and practical experience of HACCP systems, and an awareness of the food hygiene regulations and this guidance.*
Planning for implementation	*While the plan is being produced consider:* *- What the implementation timetable will be;* *- What day-to-day hygiene practices, operating procedures and instructions are in place, whether they need to be amended or written down;* *- What procedures and records for monitoring and corrective actions might be needed;* *- Whether extra staff training is needed;* *- Who will validate the plan before implementation and verify it after implementation, and how (see Principle 6).*
Common problems	▪ *HACCP plans are worthless because good hygiene practices are not in place.* ▪ *Generic plans are used without taking account of each plant's unique circumstances and so are inaccurate and do not control hazards effectively.* ▪ *HACCP plans are not completed because the operator does not see it as part of his food safety management responsibility, or inadequate support from company management to provide enough staff time or access to expert*

	advice to prepare, produce, check or implement the HACCP plan. ▪ *The team suffers from a lack of leadership, support or cooperation or does not include production line staff who are expert on the production process.* ▪ *The company's HACCP-based procedures are ineffective and difficult for staff to follow because an external adviser was used without the involvement of company staff. This can also mean that company staff will not understand the food safety hazards associated with their production process and will be unable to explain the plan to managers, staff or auditors or to review or amend it as needed.* ▪ *When only one person develops and maintains the HACCP-based procedures there may be no one to make sure that the procedures are being followed on a day-to-day basis when that person is not present.*
DEFINE THE SCOPE OF THE HACCP PLAN - ADVICE	
Scope or 'terms of reference' of the plan	🕮 **Document the 'scope' - a written summary describing what each plan is to cover, i.e.:** *- the start and end points of the process being covered;* *- the type of food safety hazards to be addressed;* *- the product;* *- the intended use of the product;* *- the customers and end users of the product;* *- how the product is to be packaged, stored and distributed;* *- processing and safety information.* *The scope provides the 'terms of reference' for the HACCP team. The team should take time to discuss, agree, and record the scope of the plan(s).*
Start and end points	*Describe the start and end points of the plan (e.g. from receiving of animals or raw materials to dispatch, and possibly transport, of the end product).*
Type of hazards	*Describe the type of hazards to be addressed in the plan, i.e. biological and/or chemical and/or physical hazards. See also C1 'A' below.*
Product description	*Describe the product, its nature (e.g. moisture content, pH), composition (e.g. raw materials, ingredients, additives) and required shelf life.*
Intended use of the product	*Describe the expected use(s) of the product by the customer and the target consumer group (e.g. raw meat intended to be cooked before consumption).*
Consumers including 'at	*Describe the suitability of the product for particular groups of consumers, such as institutional caterers, air travellers, etc. and for vulnerable groups of the population*

risk' groups	*that may have to be considered. People particularly at risk from food poisoning or food-related health problems include the elderly, people with low immunity levels or allergies, pregnant women, very young children, etc.*
Packaging, storage and distribution	*Describe the packaging (e.g. hermetic, vacuum, modified atmosphere) and conditions of storage and distribution of the product (e.g. frozen, chilled below x°C or at ambient temperature).*
Processing and safety information	*Describe relevant food safety information, such as:* *- processing (e.g. any heating, freezing, drying, salting, smoking, etc., and to what extent)* *- required shelf life (e.g. 'use by' and 'best before' dates)* *- instructions for use / customer information (e.g. label instructions on handling to avoid contamination of ready-to-eat-food, cooking time/temperatures, cooling times, allergens)* *– any microbiological or chemical criteria applicable.* *Review and amend this information if changes occur to the composition of the product, the process, potential consumers, customer complaints, changes to legislation, or because of new information about hazards.*
Common problems	▪ *Technical information is not properly recorded or is incomplete or inaccurate. The scope may contain too much or too little detail to be useful. This may indicate that extra training or advice is needed.* ▪ *Inadequate food safety information or advice is given on or with the product for customers and consumers to handle and consume the food safely.*
PRODUCE A PROCESS FLOW DIAGRAM - ADVICE	
A process step	*A process step is each individual operation in the production of a product. Examples include stunning; sticking & bleeding (red meat slaughterhouses), immersion chilling (poultry plant), receiving and dispatch of meat (cutting plants).*
Process flow	*The process flow is a step-by-step 'life story' of the production of a product as described by the scope (see above). It is important to include:* *- all inputs into the process, e.g. packaging, labels, water.* *- intended delays during or between steps,* *- procedures that are operated differently by different work shifts,* *- the return of product to the process for re-work (even if only occasionally), &* *- all outputs from the process, e.g. by-products.*

Official controls	*For completeness, official ante and post-mortem inspections should be included on a slaughterhouse process flow diagram. However, as 'official controls', these process steps need not be considered further in the operator's HACCP plan.*
Process flow diagram	🕮 **Complete a flow diagram (the description of production process) by listing each process step in the order that it is undertaken.** *The list of process steps must be correct for the next stage of the HACCP process, so check that the list is complete and in the right order. It is very easy to make assumptions and miss out process steps. Keep an accurate and dated process flow diagram on the HACCP file.* *Note: If the production process changes and the process flow diagram needs to be redrawn, the HACCP plan will need to be reviewed (see Section D below).*
Confirmation of the process flow	*Physically follow ('walk-through') the route that the product takes during production to confirm that each process step is properly shown on the process flow diagram. Check whether procedures vary during different shifts or other situations. Correct any mistakes on the diagram.*
Common problems	▪ *The flow diagram does not reflect the actual production process, it leaves out some inputs and/or outputs, or it is out of date. This may mean potential hazards have not been taken into account and company hygiene procedures need review.* ▪ *The flow diagram is confused - make the chart as easy to follow as possible.*
COLLECT TECHNICAL DATA – ADVICE	
Technical production data	🕮 **Collect information to inform the work of the HACCP team, such as:** *- a floor plan of production and ancillary work areas within the curtilage of the premises, identifying 'clean' and 'dirty' areas (or high/low risk areas)* *- equipment layout and characteristics* *- staff and vehicle flows, potential areas for cross-contamination, reworking of product, any variations between different shifts, etc.* *- processing criteria, such as time and temperature requirements* *- timing and management of cleaning and disinfection procedures* *- personal hygiene practices* *- other hygiene practices* *- product storage and distribution conditions.* *Keep this technical information about the product on the HACCP file.*

Common problems	▪ *Technical information is out of date, incomplete, has too much or too little detail to be useful.*

C. APPLICATION OF HACCP PRINCIPLES

HACCP PRINCIPLE 1: IDENTIFYING HAZARDS

C1. The HACCP principles referred to in paragraph 1 consist of the following;
a. Identifying any hazards that must be prevented, eliminated, or reduced to acceptable levels;

852/2004 Article 5 point 2

OPERATOR'S OBLIGATION	
HACCP Principle 1	***Hazard analysis has two elements: A - identify hazards and assess their importance; and B – identify control measures.*** *All sizes of business need to carry out a hazard analysis, as hazards vary with the type of process not with size. The analysis will help the operator understand the hazards associated with their production process and the best points in the process where control can be applied. However, although all control measures must meet the legal requirements, they will be applied differently in each food business.*
Flexibility – guidance	***Generic HACCP Plans may be used as long as they are adapted to reflect each businesses' operations and procedures – see the partial generic plan at Annex 3.***
Hazard Analysis (PART A)	🕮 **List all potential biological, chemical or physical hazards that may be reasonably expected to occur at each step of the production process.** *- Identify the food safety hazards that are present at each process step (using the process flow diagram as a guide) and must therefore be prevented, eliminated or reduced to acceptable levels.* *- Assess the significance of the hazards, in terms of likelihood and severity.* *- Record all the conclusions reached, and the reasoning behind them.* *- See advice at A then go on to PART B below.*
HAZARD ANALYSIS (A) – ADVICE	
Hazards	*A hazard is 'a biological, chemical or physical agent in, or condition of, food with the potential to cause an adverse health effect'. The main hazards in fresh meat production are biological, (mainly food poisoning bacteria), but the possible presence of prions, chemical (e.g. oil), physical hazards (e.g. metal, plastic) and allergens should also be considered in the analysis. See PART ONE Chapter 6 (Hazards).*
Factors to be	*The HACCP team needs to 'brainstorm' the issues at each process step to*

considered	*consider the possibility of:* *- the contamination or recontamination of raw materials, intermediate products, or final products by biological, chemical or physical hazards;* *- the multiplication or survival of food poisoning bacteria;* *- the source or cause of the hazard;* *- the production or persistence in foods of (i) toxins, (ii) other undesirable products of microbial metabolism, (iii) chemicals, (iv) physical agents or (v) allergens;* *- the significance of these hazards (see below).* *Company/industry experience, including audit reports/customer complaints, may also be taken into account. The microbiological criteria set in Regulation (EC) 2073/2005 may inform the setting of acceptable levels for the reduction of microbiological hazards.* *Working through this hazard analysis will identify and focus attention on the important food safety hazards that need to be controlled.*
Significance of hazards	*A significant hazard is one that would cause a serious adverse health effect and is reasonably likely to occur. Significance may be assessed by considering:* *(i) the likelihood that the hazard will actually occur (the 'risk')* *(ii) the level of potential harm that the hazard would do to consumers if they were to be exposed to it (the 'severity').*
Common problems	▪ *Not all process steps, or inputs, are considered (perhaps because the process flow diagram is incomplete or inaccurate).* ▪ *Generic guidance is followed without considering the individual nature of the company's suppliers, raw materials, ingredients, customers, hygiene procedures or production process.* ▪ *Not all potential biological, chemical or physical hazards or conditions of food that are likely to occur at each process step are considered.* ▪ *Unrealistic hazards are selected for control (i.e. those very unlikely to occur or which have negligible impact on consumers) or significant ones are neglected.* ▪ *Conclusions and reasons are not recorded so the justification for decisions is unknown.*
OPERATOR'S OBLIGATION	
Hazard Analysis	🕮 **Consider which control measures (good hygiene practices and**

(PART B)	**operational hygiene procedures) will control each identified hazard. Document all decisions.**
HAZARD ANALYSIS (B) – ADVICE	
A control measure	*A control measure is an action or activity that can prevent a hazard, eliminate a hazard, or reduce the impact or the occurrence of the hazard to acceptable levels. They are measures that will control specific hazards effectively.* *More than one control measure may be needed to control an identified hazard. Alternatively, one control measure may control more than one hazard. For example, pasteurisation may provide sufficient assurance of reduction of the level of both Salmonella and Listeria.* *Most control measures are good hygiene practices (GHP) and many are required by the hygiene regulations. See section 1.2 above.*
Example 1	***Process step:*** *Evisceration of red meat carcases* ***Hazard:*** *Contamination of carcases by food poisoning bacteria (e.g. Salmonella) due to ruptured stomach/intestine contents.* ***Control measures:*** *Effective sealing of the rectum and oesophagus (weasand) to minimise gut spillage during evisceration. Follow work instructions for evisceration to minimise the possibility of gut spillage.* ***Note:*** *The regulation requires that red meat carcases do not contain visible faecal contamination and that, if present, it is trimmed without delay.*
Example 2	***Process steps:*** *Receipt, storage, cutting and transport of poultry meat.* ***Hazard****: The growth of food poisoning bacteria (e.g. Salmonella) due to inadequate temperature control.* ***Control measure****: Chill and maintain poultry meat at 4°C or below. Follow work instructions for maintenance of the cold chain.* ***Note:*** *The regulations set specific temperature requirements for meat and general requirements for maintaining and monitoring food storage temperatures.*
Control measures specifications	*Make sure that the control measures are documented, for example in:* *policy documents, performance standards / specifications and staff instructions, such as cleaning schedules, carcase dressing procedures or heat treatment specifications, and that the equipment used is working properly. It may be necessary to confirm that specifications achieve the necessary control by reference to scientific literature or by practical trial and error.* 🕮 **Note that details of control measure specifications, standards or staff instructions do not have to be repeated in the HACCP plan. Instead simply refer to these documents, e.g. by a unique number**

	or description.
Common problems	▪ *Control measures do not control the hazard.* ▪ *Control measures are confused with corrective actions. Control measures are preventative and are implemented to maintain control, while corrective actions are taken if there are indications that control is being lost.* ▪ *Control measures in the plan do not reflect the real workplace situation.* ▪ *References to company documents about control measures are inaccurate or out of date. The documents may no longer exist.* ▪ *Unnecessary detail about the control measure is included in the HACCP plan instead of referring to other company documentation.*

HACCP PRINCIPLE 2: IDENTIFYING CRITICAL CONTROL POINTS **C2. The HACCP principles referred to in paragraph 1 consist of the following;** **b. identifying the critical control points at the *step or steps* at which control is essential to prevent or eliminate a hazard or to reduce it to acceptable levels;** *852/2004 Article 5 point 2*	
OPERATOR'S OBLIGATION	
CCPs	🕮 **Select control points that are critical to food safety (CCPs). Document all conclusions so that the information is available for validation, verification, audit and review.** *Take each process step in order, using the process flow diagram as a guide and applying the knowledge of the product and operations gathered at the start of the HACCP process. Decide if control of each significant hazard identified is essential to prevent or eliminate a hazard or reduce it to an acceptable level, and/or to meet legal requirements. Each CCP will need at least one critical limit that will show that the hazard is being controlled; plus monitoring and corrective action procedures that ensure that potentially unsafe food is not placed on the market.* 🕮 **IMPORTANT NOTE: Even if a process step has not been identified as a CCP it may be a control point. Some control points (CPs) are process steps at which control is required by regulations - see 'Flexibility' below. Each of these CPs will need at least one 'legal' limit, plus monitoring and corrective action procedures and records. Include this information in the HACCP plan.**
Flexibility	***CCPs are steps at which the prevention, elimination or reduction of hazards***

(control points required by regulations)	***to an acceptable level can be achieved, pasteurisation of milk being the classic example. While businesses may determine CCPs for their own operations, there are process steps in meat production at which legal requirements are laid down to control hazards, notably:*** ▪ ***Animals admitted are clean and healthy, with dressing procedures adapted as necessary*** *(see PART TWO Chapter 9 Acceptance & Slaughter of Animals);* ▪ ***Dressing, particularly hide/ fleece/ pelt / skin/ feather removal and evisceration, is carried out hygienically and carcases are free from visible contamination*** *(see PART TWO Chapter 10 Dressing of Carcases);* ▪ ***SRM controls are carried out as required by the relevant legislation*** *(see PART THREE Chapter 3 SRM removal);* ▪ ***Temperature requirements for meat are complied with*** *(see PART TWO Chapter 8 Temperature Controls).* ***At each of these control points 'legal' limits, monitoring procedures, corrective actions and records must be established.***
CCPs – ADVICE	
Decision tree / CCP questionnaire	*The determination of CCPs can be helped by use of a 'decision tree' (e.g.* ***Annex 1****) or by answering the questions below. Training may be needed to ensure that the chosen method is used correctly and that the selection of CCPs and control points is soundly based, avoiding, for example, unnecessary critical points.* ***<u>QUESTION 1</u> – Does this process step prevent, eliminate or reduce contamination to an acceptable level?*** *If* ***YES*** *this step is a CCP, if NO move on to Q2* ***<u>QUESTION 2</u> – Could contamination of the product occur in excess of acceptable levels or increase to unacceptable levels if control is lost?*** *If NO this step is not a CCP, if* ***YES*** *move on to Q3* ***<u>QUESTION 3</u> – Will a subsequent process step prevent, eliminate or reduce contamination to an acceptable level?*** *If* ***YES*** *this step is NOT a CCP, if* ***NO*** *this step is a CCP*
Uncontrolled hazards	*Valid control measures need to be identified for each CCP and control points required by the regulations. If a significant hazard is identified at a step where control is necessary to reduce that hazard to an acceptable level, but no control measure exists at that step or at a subsequent step, then the product or process must be modified to remove or control the hazard.*
Quality Control Points (QCPs)	*Distinguish 'Quality Control Points' (QCPs) from control points that are in place for food safety or legal reasons (e.g. through use of colour coding in company*

	documentation). Customers may promote the use of QCPs in their suppliers' HACCP plans but they are not a legal requirement.
Common problems	▪ *Failure to identify that a particular step <u>is</u> a CCP because a hazard <u>is not</u> dealt with at a subsequent step in the process under the operator's control.* ▪ *Failure to identify that a particular step <u>is not</u> a CCP because a hazard <u>is</u> dealt with at a subsequent step in the process under the operator's control.* ▪ *Failure to identify control points required by the regulations.* ▪ *Inappropriate CCPs are identified through lack of training or knowledge about the hazards, or incorrect use of decision trees or questionnaires.* ▪ *Inadequate distinction between Quality Control Points and control points that are in place for food safety reasons in the documentation, in the workplace and in the minds of staff.*

HACCP PRINCIPLE 3: ESTABLISHING CRITICAL LIMITS **C3. The HACCP principles referred to in paragraph 1 consist of the following;** ***c.* establishing critical limits at critical control points which separate acceptability from unacceptability for the prevention, elimination or reduction of identified hazards;** *852/2004 Article 5 points 1, 2 and 3*	
OPERATOR'S OBLIGATION	
Critical limits	🕮 **Decide on at least one critical limit for each control measure at each Critical Control Point. Document this information in the HACCP plan.** *A critical limit is the highest or lowest value that is acceptable for product safety; beyond which control is lost (e.g. temperature or time). Critical limits separate acceptability from unacceptability or safe from unsafe food. Critical limits must be at least as strict as any legal limits that apply at that process step - see 'Nature of limits' below.* 🕮 **Important Note: Where a control point is required by the regulations decide on at least one 'legal' limit at each point. Include this information in the HACCP plan.**
Flexibility (limits)	***It is not always necessary to fix a numerical value that requires measurement, i.e. where monitoring procedures are based on visual observation (e.g. the faecal contamination of carcases in a slaughter-house, the boiling temperature of liquid food, the change of physical properties of***

	food during processing such as cooking in a restaurant).
CRITICAL LIMITS – ADVICE	
Nature of Limits	*Use limits based on legislation or on evidence that they will result in safe food production (i.e. the values are valid) using, for example, guides to good manufacturing practice, reference books, research or academic studies.* *Limits must be capable of being monitored i.e. measured or observed and so be clear to staff whether the process is under control or is moving out of control. Examples include time/temperature combinations, pH, moisture content, additive, preservative or salt level, and sensory parameters such as visual appearance (e.g. freedom from visible faecal contamination).* ***Legal limits** – values set out in legislation e.g. 7°C is the temperature below which red meat is to be chilled.* ***Microbiological criteria** – where regulations set food safety criteria, HACCP procedures should ensure that these are met. See PART THREE Chapter 2 (Microbiological Criteria).*
Example	***CCP**: Pasteurisation of beef carcases* ***Hazard:** Survival of food poisoning bacteria (e.g. Salmonella) due to inadequate pasteurisation temperature* ***Control measure**: Treat each side with steam/hot water for a pre-set time* ***Critical limit**: Each side exposed to > 82^{O}C for at least 10 seconds* ***Monitor**: steam/hot water temperature, exposure time* ***Corrective action:** (depending on circumstances) pass carcases through pasteuriser again, repair defective equipment* ***Verification:** microbiological test results*
Target Levels	*In some cases (e.g. chilling) a stricter 'target level' may be set as an 'early warning' so that action is taken before a critical and/or 'legal' limit is reached.*
Common problems	• *Critical limits are inappropriate (e.g. do not relate to the hazard to be controlled and do not separate safe from unsafe food.* • *Limits are difficult to measure or observe*

HACCP PRINCIPLE 4: MONITORING PROCEDURES

C4. The HACCP principles referred to in paragraph 1 consist of the following;

(d) establishing and implementing effective monitoring procedures at critical control points; *852/2004 Article 5 points 1, 2 and 3*	
OPERATOR'S OBLIGATION	
Monitoring procedures	🕮 **Set out a monitoring procedure for each CCP. Include this information in the HACCP plan.** 🕮 **IMPORTANT NOTE: Where a control point is required by the regulations decide on the monitoring procedure at each point to ensure compliance. Include this information in the HACCP plan.** *Monitoring is a pre-arranged programme of checks (observations or measurements) of critical and/or 'legal' limits that can show whether control measures are in danger of failing and trigger corrective action if needed. If used, target levels must be monitored too.* ***Decide*** *(a)* ***how*** *the monitoring of critical and/or 'legal' limits will be done;* *(b)* ***when and how often*** *the checks will be done;* *(c)* ***who*** *will monitor (staff should not normally check their own work);* *(d)* ***what and where*** *information is to be recorded; and* *(e)* ***who*** *will check that monitoring is being carried out properly and* ***where*** *and* ***how*** *this check is to be recorded.* ✎ **Make sure staff responsible for monitoring and for recording results have clear instructions and understand what they must do if there is a problem.** ✍ **Record the measurements or observations in a diary/other record at the time a check is made, <u>but see</u> 'Exception reporting' below**. *It may become obvious from looking at a series of results (e.g. temperature records, microbiological test results) that action will soon be needed to avoid a critical and/or 'legal' limit being breached.*
Flexibility (monitoring)	*Monitoring may be a simple procedure, e.g. a regular visual check of the temperature of cooling/freezing facilities using a calibrated thermometer.*
MONITORING – ADVICE	
Automated monitoring	*If possible, monitoring should be carried out automatically and continuously (e.g. temperature monitoring). Carry out regular checks on control equipment (e.g. calibration of thermometers) to have confidence in its accuracy.*
Frequency of non-automated	*Where monitoring is not continuous, decide on a realistic frequency at which checks are carried out (e.g. 3 x a day; hourly; each carcase). It is better to plan*

checks	*and do one check an hour than to plan four checks an hour and only do one.* *Note: the interval between a check that was satisfactory and the next check where a critical and/or 'legal' limit is found to have been breached, will dictate the amount of product (which may be an entire batch) that may have to be checked, reworked, disposed of or recalled.*
Common problems	▪ *Monitoring checks are not carried out as often as planned. This may be because the monitoring frequency is unrealistic or because staff have not been given the correct or clear instructions.* ▪ *Monitoring records are incomplete or inaccurate. This may be because staff are relying on memory rather than recording results at the time of the check.* ▪ *Monitoring checks are confused with control measures.*

HACCP PRINCIPLE 5: CORRECTIVE ACTION PROCEDURES

C5. The HACCP principles referred to in paragraph 1 consist of the following;
(e) Establishing corrective actions when monitoring indicates that a critical control point is not under control;

852/2004 Article 5 point 2

OPERATOR'S OBLIGATION	
Corrective actions	🕮 **For each critical control point, anticipate any problems that could possibly occur and decide on corrective actions in each case. Include this information in the HACCP plan.** 🕮 **IMPORTANT NOTE: Where a control point is required by the regulations decide on the corrective actions needed at each point to ensure compliance. Include this information in the HACCP plan.** *Corrective actions are planned measures, triggered by evidence from monitoring checks that critical/'legal' limits have been breached, to be taken to restore control, prevent potentially unsafe food from reaching customers or consumers, and prevent re-occurrence. Prompt corrective action is evidence of operator responsibility.* ***Decide** (a) **what** corrective actions are to be taken to (i) restore control, (ii) deal with affected product produced while the process was out of control and (iii) investigate the cause to avoid a repetition of the problem. Then decide* *(b) **who** is responsible for carrying out all the corrective actions;* *(c) **what** information is to be recorded, **where** and **by whom**; and*

	(d) ***who*** *will check that corrective action is being carried out properly and* ***where*** *and* ***how*** *this check is to be recorded.* **Make sure staff responsible for corrective actions have clear instructions and understand what they must do if there is a problem so that corrective action can be taken without delay.** **The manager/supervisor/designated member of staff should record in a diary/other records the corrective action that has been taken and sign that it has been carried out correctly.** *It is good practice to give line staff the responsibility for correcting, as well as spotting and reporting problems, but a supervisor should be in overall charge. These records will be useful for deciding (verifying) whether the HACCP system is working well or if some changes or review will be required.*
CORRECTIVE ACTION - ADVICE	
Example	***CCP or control point required by the regulations:*** *Chilling of carcases* ***Critical or 'Legal' limit****: Carcase temperature at or below 7°C (red meat) 3°C(offal) or 4°C (white meat) (Add timetable for temperatures to be reached).* ***Monitoring****: Air and carcase temperatures* ***Corrective action****: where monitoring shows the limit has been breached, e.g.* • *Reduce chiller temperature further; move product to another chiller.* • *Hold the product while waiting for the results of a critical evaluation of batch involved, which may include microbiological sampling.* • *Investigate, identify and rectify the cause of the failure to prevent it happening again.*
Repeated corrective actions	*If corrective actions have to be taken repeatedly there is clearly something seriously wrong with the company's food safety management system. This requires urgent investigation of possible causes, for example, unclear staff instructions, failing or difficult to use equipment, insufficient training.*
Common problems	▪ *Corrective actions focus on technical matters, e.g. repairing the refrigeration units and not on the disposition of the potentially unsafe food.* ▪ *Corrective action is not taken or is deliberately postponed. When control is lost and corrective action is not taken, food safety is endangered and potentially unsafe product may reach the customer/consumer.* ***Inactivity is unacceptable****.* ▪ *Corrective action is delayed. This may be due to confusion between line staff, supervisors and management as to who is responsible for which element of*

	the necessary corrective action or what that action should be. A review of instructions and/or training may be needed. ▪ *Corrective action records are not kept or are incomplete or inaccurate. This may give management a false impression that there are no problems. It is in the interests of all parties that the operator should understand the pressures on food safety and how these may be better managed.* ▪ *Corrective action is initiated but not completed.* ▪ *Corrective actions occur repeatedly, suggesting that food safety management procedures and/or the HACCP plan are seriously flawed.*

HACCP PRINCIPLE 6: VERIFICATION PROCEDURES
C6. The HACCP principles referred to in paragraph 1 consist of the following; **f. establishing procedures, which shall be carried out regularly, *to* verify that the measures outlined in subparagraphs (a) to (e) are working effectively;** *852/2004 Article 5 points 1, 2 and **3*** **C7. Food … business operators at all stages of production, processing, and distribution within the businesses under their control shall ensure that foods [ ] satisfy the requirements of food law which are relevant to their activities and shall verify that such requirements are met.** *178/2002 Article 17*

OPERATOR'S OBLIGATION	
Verification principle	🕮 **Validate and verify the HACCP plan.** *Verification means checking or confirming that the HACCP-based procedures are achieving the intended effect i.e. controlling food safety hazards. Carry out these checks either:* *1st – before the plan is implemented – called 'Validation', see '**A**' below', or* *2nd – after implementation – called 'Verification', see '**B**' below.* ***Decide** (a) **what** validation and verification checks are to be performed and when;* *(b) **who** is responsible for carrying them out;* *(c) **what** information is to be recorded, **where** and by **whom**; and* *(d) **who** will check that validation and verification has been carried out properly and **where** and **how** this check is to be recorded.* ✍ **Record the validation and verification checks carried out in a diary or other records. The manager/supervisor should sign that the**

	checks have been carried out correctly. *Annex 2 includes validation and verification checklists.*
VERIFICATION - ADVICE	
A: Validation	*Validation of the HACCP plan is the confirmation before implementation that all the elements of the HACCP plan are 'fit for purpose', i.e. that the plan, once implemented, should control food safety satisfactorily. Validation should be repeated before each change to a HACCP plan is implemented.*
Coverage of validation checks	*To validate the accuracy and completeness of the plan, check the scope, technical data, flow diagram, hazard analysis, and the effectiveness of control measures (i.e. hygiene practices such as cleaning, training) in eliminating food safety hazards or controlling them to an acceptable level, and that control point identification, critical/'legal' limits, monitoring and corrective action plans are appropriate and effective.*
Scientific validation	*Production may involve complex technical issues, such as the chilling of large quantities of meat or heat treatment, where time/temperature or other parameters must be established and applied accurately to achieve a safe result. To confirm that the process is safe it may be enough to apply relevant legal limits or refer to industry guides to manufacturing or to scientific publications. Where the procedure or product is unusual, it may be necessary to get specialist scientific advice.*
Who validates?	*It is recommended that, after the team has carried out its own validation checks an independent expert is involved to provide an objective view.*
B: Verification	*Verification of the HACCP plan is the confirmation after implementation that the plan is being followed and that food safety hazards are under control.*
Frequency	*Verification checks should be carried out often enough to maintain confidence in the HACCP-based procedures. The frequency of verification will depend on factors such as the nature of the food safety hazards, throughput, monitoring frequency, end-use, the competence of staff, and the number of times critical/ 'legal' limits have been breached. Microbiological test results or customer complaints may also trigger verification checks.*
Flexibility (verification)	***As a minimum, if there have been no serious problems, the whole of the HACCP-based system should be verified once a year, but note that all aspects do not have to be checked at the same time.***

Microbiological criteria	*Microbiological criteria can be used in the validation and verification of HACCP-based procedures, including control measures based on good hygiene practices. See PART THREE Chapter 2 (Microbiological Criteria).*
Coverage of checks	*To verify all aspects of a HACCP-based system:* • ***Check the adequacy of:*** *- the documentation, scope, process flow, hazard analysis, control measures, determination of control points, monitoring procedures, corrective action procedures, validation and verification procedures)* *- hygiene procedures and records (e.g. cleaning, maintenance, staff training)* *- monitoring and corrective action records* *- validation and verification records* *- calibration records of instruments used for monitoring,* *to determine whether the HACCP plan appears likely to be effective and to provide a basis for checking the procedures that are actually being operated.* • ***Analyse:*** *- microbiological results and trends* *- customer complaints* *- 3rd party audit reports* *- occasions when critical/ 'legal' limits were breached and corrective actions taken* *to see where problems with the hygiene procedures may have arisen and any management action taken.* • ***Physically inspect (walk-through) the production process:*** *- check if the hygiene procedures and management checks referred to in the plan are being carried out, especially at control points* *- check whether the process flow diagram is correct* *- carry out random or targeted checks on a sample of product before, during and after production, which may include visual inspection, temperature measurements, microbiological tests, and traceability and label checks on products on sale* *- check that monitoring instruments have been calibrated.* • ***Assess:*** *- the appropriateness of staff instructions relating to the hygiene procedures, control measures, monitoring and corrective actions set out in HACCP-based*

	procedures *- the competency of the staff responsible for monitoring and corrective actions (by observation and questioning of staff).*
Who verifies?	*Unless there is no option, people responsible for carrying out monitoring and corrective actions should not also verify the plan. HACCP trained and/or experienced people should be used. External advisers can be used if sufficient in-house expertise is not available.*
3rd party audits	*HACCP verification is also carried out by auditors by or on behalf of customers, the competent authority or other 3rd parties, such as assurance bodies.*
Common problems	▪ *Validation and/or verification checks are not carried out or are not carried out properly. This may be because staff do not know what to do or how to do it. Training or expert advice may be needed. As a result, the operator may think that food safety hazards are being controlled when they are not.*

HACCP PRINCIPLE 7: DOCUMENTATION

C8. The HACCP principles referred to in paragraph 1 consist of the following;
g. establishing *documents and records* commensurate with the nature and size of the food business to demonstrate the effective application of the measures outlined in sub-paragraphs (a) to (f).

852/2004 Article 5 points 1, 2 and 3

C9. FBOs shall

a. provide the competent authority with evidence of their compliance with paragraph 1 in the manner that the competent authority requires, taking account of the nature and size of the food business;
b. ensure that any documents describing the procedures developed in accordance with this Article are up-to date at all times;
c. retain any other documents and records for an appropriate period.

852/2004 Article 5 points 4 and 5

OPERATOR'S OBLIGATION	
Documentation	*The company's HACCP-based system, hygiene procedures, checks and actions need to be documented. They provide written evidence for the operator, customers, and officials. All documents should be signed off by a responsible company official. Records should identify the persons who complete them.* *The paperwork should be easy to complete and keep up-to-date.*

	*Smaller businesses should use the **'Food Safety Management Diary for Meat Producers'** if they do not have alternative arrangements in place. Large and/or complicated businesses need more sophisticated systems.* *To be sure that the plan, policy documents and record forms being used are up to date, control documents by dating each amended version and preferably by giving each one a unique version number.*
🕮 ***HACCP Documents***	*Includes the HACCP plan(s), the HACCP team notes and conclusions concerning the scope, process flow diagram, hazard analysis, control point and critical/'legal' limit decisions, arrangements for monitoring, corrective actions, validation, verification review and any changes.*
🖉 ***Policy Documents***	*Includes the company's good hygiene policies, procedures and staff instructions. These should include instructions for staff to complete monitoring and corrective action records.*
🖉 ***Records***	*Includes monitoring results (e.g. temperature readings), corrective actions; validation, verification checks and the review. Includes calibration results, microbiological test results, customer complaints, audit reports.*
Flexibility (exception reporting)	***In the case of visual monitoring procedures it can be acceptable to record results only when there is a problem or something out of the ordinary happens with the corrective action that has been taken - see 'exception reporting' below. A diary can be a suitable method of record keeping.***
Access to records	*Documents and records can be created, recorded and kept on computer, but will need to be available for reference either on screen or in printed form. Policy documents and HACCP-based system documents can be kept on ring binders. Records of checks and actions can be kept in a diary.*
Retention of documents and records	*Documents and records must be kept for a sufficient time to allow the operator to verify the HACCP-based system and the competent authority to audit it.* 🕮 **HACCP-based plans and documents and records relating to previous policies, systems and procedures and records supporting them (e.g. validation, verification and review records).** *Keep them at least until the next official audit and for as long as the food that was produced under those arrangements is still for sale or potentially in storage.* 🖉 **Day-to-day records of monitoring and corrective actions.** *Keep them at least until the next official audit and so the information is available in case of a food safety alert that can be traced back to the food in question e.g. two*

	months after the date of consumption. This period should be extended for food that consumers may freeze. If these records are kept in a diary, keep the completed diary for at least two years after the last entry.
DOCUMENTATION – ADVICE	
Exception reporting	*When checks are carried out once or a few times a day (e.g. manual checks on chiller temperature) record the result of each specific check (i.e. temperature readings).* *When daily checks are more frequent (e.g. observation of carcase contamination) the results only need to be written down when there is a problem or something out of the ordinary happens, with a record of the corrective action taken. This is called 'exception reporting'.*
Model documents	*Model documents and records may be used as long as they are properly adapted to reflect the circumstances of each individual business.*
Document control	*Give responsibility for HACCP-based documents, issuing authorised versions and keeping a full set of up-to-date HACCP-based documents on file to a named person or persons.*
Common problems	▪ *HACCP-based paperwork is too complicated for staff to complete or for auditors to verify.* ▪ *Documents are not properly managed, dated or numbered, so it is not clear which are the up-to-date versions that should be used or checked.* ▪ *Records are ignored, forgotten or not completed properly or too late after the check or action taken. This may be due to lack of training, poor instruction, misunderstandings, mistakes, or deliberate actions. At worst it provides misleading information that may be relied on by management and may lead to incorrect action or no action being taken to the detriment of food safety and/or non-compliance with legal requirements. Records should be reviewed and signed by a supervisor or manager.*

D. REVIEW OF HACCP-BASED PROCEDURES

D1. The HACCP principles referred to in paragraph 1 consist of the following; **When any modification is made in the product, process, or any step, food business operators shall review the procedure and make the necessary changes to it.** *852/2004 Article 5 point 2*	
OPERATOR'S OBLIGATION	
Review	🕮 **Review the HACCP-based system at least once a year or when there are changes. Keep the procedure and records with the HACCP plan.** *If there are changes it is necessary to review the HACCP-based system to make sure that it is, or will be, still valid and food safety procedures remain effective. The review may indicate that aspects of the HACCP plan need to be changed, such as, the scope, the process flow diagram, the technical data, and hazard analysis, control measures, decisions on control points, critical/'legal' limits, monitoring checks, corrective actions and records.* *The Food Safety Management Diary has a review checklist.*
REVIEW – ADVICE	
Review triggers	*Changes that would lead to a review of the HACCP-based system include:* *- changes in raw material or in product,* *- changes in processing conditions (factory layout and environment, process equipment, cleaning and disinfection programme),* *- changes in packaging, storage or distribution conditions,* *- changes in consumer use,* *- new information on an existing hazard or information on a new hazard,* *- changes in relevant legislation.*
Staff awareness	*The HACCP team must be made aware of changes that would trigger a review so they can consider the potential impact on food safety and the HACCP plan. All staff need to be made aware of any changes that affect them, of revised staff instructions and, if necessary, be retrained to operate revised procedures.*
Common problems	▪ *Reviews do not take place, are delayed or are limited in scope. The food safety procedures that are in place may not be effective if there have been significant changes to the product, production arrangements etc. and these have not been reflected in the HACCP-based procedures.* ▪ *New procedures are not communicated to everyone who needs to know or*

	who needs to be re-trained.

1.3.2 WHAT ARE THE OFFICIAL CONTROL REQUIREMENTS?

Audits of HACCP-based procedures shall verify that food business operators apply such procedures continuously and properly, having particular regard to ensuring that the procedures provide the guarantees specified in Section II of Annex II to Regulation 853/2004.

They shall, in particular, determine whether the procedures guarantee, to the extent possible, that products of animal origin;

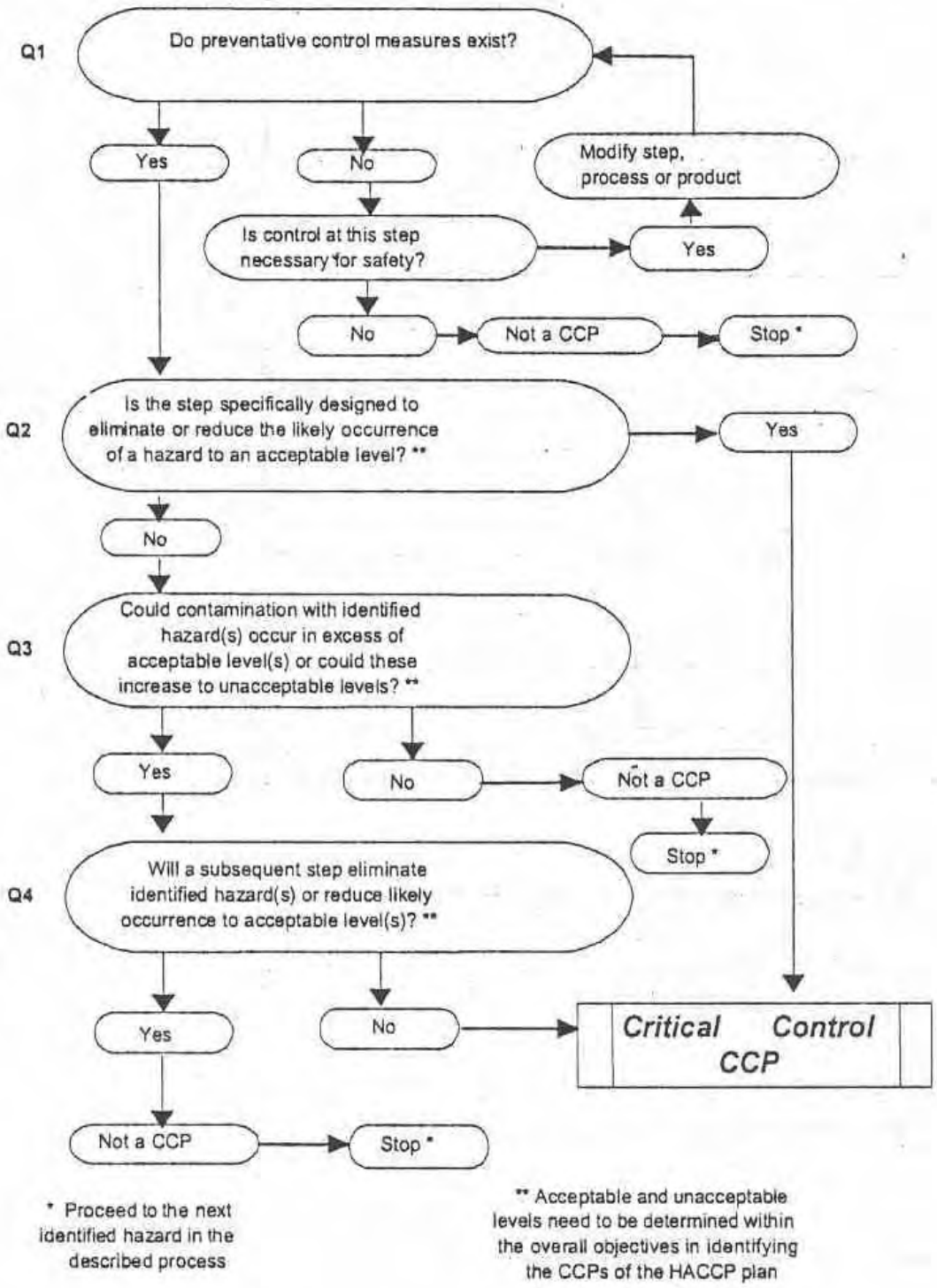
- **(a) comply with microbiological criteria laid down under community legislation;**
- **(b) comply with Community legislation on residues, contaminants and prohibited substances; and**
- **(c) do not contain physical hazards, such as foreign bodies.**

When, in accordance with Article 5 of Regulation 852/2004, a food business operator uses procedures set out in guides to the application of HACCP principles rather than establishing its own specific procedures, the audit shall cover the correct use of these guides.

854/2004 Article 4

EXAMPLE OF A DECISION TREE TO IDENTIFY CRITICAL CONTROL POINTS (CCPs)

The questions must be answered in sequence



HACCP Plan Template

Company Name:

Address:

HACCP Plan for:*

Start Date: ..... / ..... / .....

Completion Date: ..... / ..... / .....

Plan agreed by:

Name: **Signed:**

Position: **Date:** / /

HACCP TEAM

Team Leader:	
Team Member 1:	
Team Member 2:	
Team Member 3:	

* State process (e.g. beef slaughter, cutting of poultry meat)

HACCP Plan Template

SCOPE

HACCP PLAN FOR:

Hazards:

- **Biological Safety:** to prevent, eliminate or reduce the microbiological contamination of meat and to reduce the potential for growth.
- **Physical and Chemical Safety:** to avoid the physical and chemical contamination of meat.

Product:

Intended use:

Process:

Packaging, Storage, Distribution:

Customers:

Shelf life, Conditions of use:

PROCESS STEPS

1

2

3

4

5

6

7

8

9

10

11

12

HACCP Plan Template

CONTROL POINT IDENTIFICATION – IMPORTANT: COMPLETE A COPY OF THIS PAGE FOR EACH PROCESS STEP

Process Step:		Notes
Food Safety Hazards and Causes	**Control Measures**	A Critical Control Point (CCP) is a process step at which control is essential to prevent, eliminate or reduce a hazard to an acceptable level. The decision tree annexed to PART THREE Chapter 1 of the Meat Industry Guide may be used to help determine CCPs. If this process step is a CCP establish at least one critical limit, monitoring procedures and corrective actions for this step. If this process step is one of these: ☐ Acceptance of animals (visual contamination) ☐ Acceptance of raw meat (visual contamination/temperature) ☐ Dressing Procedures (visual contamination) ☐ SRM Removal ☐ Chilling/storage/dispatch (temperature) it is a control point required by the regulations. If not identified as a CCP, establish a 'legal' limit, monitoring procedures and corrective actions for this step.

CCP/ CP No	CRITICAL/'LEGAL' LIMIT(S)	MONITORING PLAN				CORRECTIVE ACTION PLAN		
		Procedures	**Frequency**	**Responsibility**	**Records**	**Procedures**	**Responsibility**	**Records**

Version:	Date:	Completed By:	Checked:

HACCP Plan Template

HACCP VALIDATION CHECK

A validation check should be carried out before the plan is first implemented to make sure it is thorough and accurate. If the Plan is in any way incomplete or inaccurate it must be amended. Validation checks should also be carried out whenever the Plan is reviewed.
***The HACCP Team or an external expert may carry out validations.**

	Yes	No
Is the scope an accurate description of the process?	☐	☐
Does the flow chart correctly identify each step in the process?	☐	☐
Are all significant hazards correctly identified and addressed?	☐	☐
Are adequate control measures in place?	☐	☐
Have the CCPs/CPs been correctly identified justified?	☐	☐
Are the critical/legal limits acceptable?	☐	☐
Are there procedures in place for monitoring?	☐	☐
Are corrective actions in place and understood by relevant staff?	☐	☐
Are there adequate records in place?	☐	☐
Will the plan control all the significant hazards if followed correctly?	☐	☐

NOTES

VALIDATION RECORD

Validation carried out by: Position:

Signed: Date of Validation: / /

HACCP Plan Template

VERIFICATION OF THE HACCP PLAN

Look back at how your good hygiene practices and operational procedures have been working since the last time you reviewed your HACCP Plan(s) to make sure they are still effective in managing food safety

Answer these questions to help complete the HACCP Plan Review checklist on the next page.

Evidence	YES	NO	If YES what have you done about this? Refer to other documents if necessary
			How have you changed your HACCP plan(s)?
Has information been received about new hazards, legislation or best practices that need to be reflected in your HACCP plan(s)?			
			Are these changes reflected in your HACCP plan(s)?
Do your daily diary records show that, where action was needed, changes have been made to hygiene procedures, checks carried out, staff instruction etc?			
			Are these changes reflected in your HACCP plan(s)?
Do your records of 4-weekly checks indicate that, where action was needed, changes have been made to hygiene procedures, checks carried out, staff instruction, etc?			
			How have you changed your HACCP plan(s)?
Do OV audit reports indicate that your HACCP plan(s) need to be changed?			
			How have you changed your HACCP plan(s)?
Do other audit reports indicate that your HACCP plan(s) need to be changed?			
			How have you changed your HACCP plan(s)?
Do OV audit reports indicate that your HACCP plan(s) have not been put into practice properly?			
			How have you changed your HACCP plan(s)?
Do other audit reports indicate that your HACCP plan(s) have not been put into practice properly?			

HACCP Plan Template

VERIFICATION OF THE HACCP PLAN continued

Evidence	YES	NO	If YES what have you done about this? Refer to other documents if necessary
			What do your investigations suggest caused the complaint?
Have you received customer complaints?			
			What does this mean for your procedures or HACCP plan(s)?
			What changes are you making as a result?
Have you received microbiological test results that indicate your hygiene procedures need to be improved?			
			What changes are you making as a result?
Has a walk-through of the production process shown that the scope, process flow diagram, product/process details are incorrect?			
			What changes are you making as a result?
Having followed a sample of product from before, during and after processing, does it show that company procedures are not being followed correctly, including inspections, traceability records, and labels?			

NOTES

HACCP Plan Template

HACCP PLAN REVIEW CHECKLIST

You need to make sure your HACCP plan(s) are still accurate. It may be necessary to change the plan, when there are changes to your product, procedures, legislation or perhaps as a result of customer complaints or an audit report.

Use the answers to the questions on the previous page (Verification of the HACCP plan) to help complete this HACCP Plan Review checklist

	Yes	No
Does the scope accurately describe the process? If No – amend Plan	☐	☐
Do the process steps correspond to the flow diagram? If No – amend Plan	☐	☐
Are controls valid for each hazard (Biological, Chemical and Physical)? If No – amend Plan	☐	☐
Do the CCPs/CPs remain the same? If No – amend Plan	☐	☐
Are critical/legal limits adequate? If No – amend Plan	☐	☐
Are monitoring procedures still effective? If No – amend Plan	☐	☐
Are appropriate corrective actions identified? If No – amend Plan	☐	☐

AMENDMENT REQUIRED:	**Details of Amendment(s)**
Yes ☐ **or No?** ☐ (If Yes, amend Plan then carry out validation)	

REVIEW CARRIED OUT BY:

Name: Position:

Signed: Date: / /

Date of Next Review: / /

GENERIC HACCP PLAN FOR SLAUGHTER & CUTTING OF MEAT (selected steps)

Note: all entries below are examples - use them to help complete a HACCP Plan based on actual company procedures, processes, procedures and records. There will be several steps below that are not relevant to your business and other steps that will need to be added.

(Process step numbered for reference purposes only)

PROCESS STEP: 1. Acceptance of animals for slaughter/ dressing

PROCESS STEP: 1A. Acceptance of meat/ carcases

PROCESS STEP: 2. Scalding of pigs/ birds

PROCESS STEP: 3. Head removal

PROCESS STEP: 4A. Hide/Fleece/Pelt Removal

PROCESS STEP: 4B. De-hair (mechanical) (pigs)

PROCESS STEP: 4C. Pluck (incl. head/feet removal) (birds)

PROCESS STEP: 5. Pre-wash (birds)

PROCESS STEP: 6. Evisceration

PROCESS STEP: 7. Carcase split (cattle/sheep)

PROCESS STEP: 8. Vertebral column wash (red meat)

PROCESS STEP: 9. Final wash / inspection (white meat)

PROCESS STEP: 10. Chilling and chilled storage

PROCESS STEP: 11. Inspect, butcher and trim

PROCESS STEP: 12. Metal detection

PROCESS STEP: 13. Package and dispatch

A Critical Control Point (CCP) is a process step at which control is essential to prevent, eliminate or reduce a hazard to an acceptable level. The decision tree annexed to PART THREE Chapter 1 of the Meat Industry Guide may be used to help determine CCPs.

If this process step is a CCP establish at least one critical limit, monitoring procedures and corrective actions for this step.

If this process step is one of these:

- ☐ Acceptance of animals (visual contamination)
- ☐ Acceptance of raw meat (visual contamination / temperature)
- ☐ Dressing Procedures (visual contamination)
- ☐ SRM Removal
- ☐ Chilling/storage/dispatch (temperature)

it is a control point required by the regulations. If not identified as a CCP, establish a 'legal' limit, monitoring procedures and corrective actions for this step.

THE FOLLOWING PAGES SHOW EXAMPLE ENTRIES FOR THE HIGHLIGHTED COLUMNS ON THE HACCP PLAN TEMPLATE, EXCLUDING DETAILS OF WHO IS RESPONSIBLE FOR ACTIONS OR WHAT RECORDS ARE KEPT

IMPORTANT: COMPLETE A COPY OF THIS PAGE FOR EACH PROCESS STEP - AMEND LOWER COLUMN HEADINGS# AS APPROPRIATE

PROCESS STEP: 1			**NOTES**
FOOD SAFETY HAZARDS AND CAUSES	**CONTROL MEASURES**		A Critical Control Point (CCP) is a process step at which control is essential to prevent, eliminate or reduce a hazard to an acceptable level. The decision tree annexed to PART THREE Chapter 1 of the Meat Industry Guide may be used to help determine CCPs. If this process step is a CCP establish at least one critical limit, monitoring procedures and corrective actions for this step. If this process step is one of these: ☐ Acceptance of animals (visual contamination) ☐ Acceptance of raw meat (visual contamination / temperature) ☐ Dressing Procedures (visual contamination) ☐ SRM Removal ☐ Chilling/storage/dispatch (temperature) it is a control point required by the regulations. If not identified as a CCP, establish a 'legal' limit, monitoring procedures and corrective actions for this step.

# CP / CCP No	**# CRITICAL / LEGAL LIMIT(S)**	**MONITORING PLAN**				**CORRECTIVE ACTION PLAN**		
		Procedure	**Frequency**	**Responsibility**	**Records**	**Procedures**	**Responsibility**	**Records**
				Named person or job description	**Complete as appropriate**		**Named person or job description**	**Complete as appropriate**

PROCESS STEP: 1 Acceptance of animals for slaughter/ dressing.		**CRITICAL / LEGAL LIMIT(S)**	**MONITORING PLAN**		**CORRECTIVE ACTION PLAN**
HAZARDS AND CAUSES	CONTROL MEASURES		Procedure	Frequency	Procedures
Contamination of carcases due to contact with [salmonella infected] animals. (poultry/pigs)	*Animals bought from assured farm suppliers. Reputable haulier used. [Salmonella test results checked before purchase]. Food chain information (birds) checked.*	*[Levels of salmonella]*	*[Check test results]*	*[Each delivery]*	*[]*
Contamination of carcases from faecal material on hides/ skins/ feathers, feet of animals	*Animals checked for excessive faecal contamination. Company policy for clean livestock carried out (e.g. dirty/ wet animals separated, washed / dried, held back for slaughter at end of day at low line speed [ ].*	*Company clean livestock standards*	*Pre-slaughter check that standards are being met*	*[Each delivery]*	*Inform OV. Re-clean animal/s. Retrain/instruct staff. Report to/change supplier/ haulier. [Reject delivery.]*
Contamination of carcases due to animals being contaminated with faecal material from vehicle and/or bedding and/or other animals.	*Vehicle cleaned before use. New bedding used. Clean crates used (birds). Correct loading density [ ] to prevent overcrowding*	/	*[Refer to operating instructions including livestock transport hygiene [ ] and usual supervisory activities/ records]*		

PROCESS STEP: 1A Acceptance of meat/ carcases		**CRITICAL / LEGAL LIMIT(S)**	**MONITORING PLAN**		**CORRECTIVE ACTION PLAN**
HAZARDS AND CAUSES	CONTROL MEASURES		Procedure	Frequency	Procedures
Growth of pathogenic bacteria on meat due to too high transport/ delivery temperature.	*Meat bought from assured suppliers. Correct/adequate information supplied. Reputable haulier used. Meat delivered chilled to at least [x]ºC.*	*Product temperature [7ºC/4ºC]*	*Check on meat temperature using calibrated disinfected temperature probe.*	*[Sample from each load.]*	*[Hold and carry out microbiological testing] Reject product /delivery. Inform supplier. Change supplier. Retrain/instruct staff*
Contamination of meat by pathogenic bacteria, physical, chemical contaminants (including metal) from delivery vehicle	*Visual check of delivery for damage/contamination.* *Visual check against agreed specification. Health mark/ identification mark checked.*	*No visible contamination*	*Visual check that standard is being met.*	*[Sample from every delivery]*	*As above*

	Metal detection at process step 12.				
PROCESS STEP 2. Scalding of pigs/poultry		**CRITICAL / LEGAL LIMIT(S)**	**MONITORING PLAN**		**CORRECTIVE ACTION PLAN**
HAZARDS AND CAUSES	CONTROL MEASURES		Procedure	Frequency	Procedures
Contamination of carcase by pathogenic bacteria due to incorrect scalding procedure (dirty water/incorrect water temperature)	*Trained staff instructed to ensure pigs are fully bled before immersion into scald water to avoid involuntary inhalation.* *Potable water used (see water quality procedures [ ]) temperature maintained between [x] and [y] ℃.* *Scald water replenished /changed as necessary to avoid excessive build up of debris.*	*Pigs fully bled out before entering scald tank* *Water temperature at least [x]° C.*	*Visual check that standard is being met.* *Check on water temperature with probe thermometer*	*[At start of kill, and halfway through kill]*	*Do not proceed with kill until correct water temperature is reached. Investigate the cause, amend procedures as necessary. Adjust/repair water heater. Retrain/instruct staff.*
PROCESS STEP: 3. Head removal (Cattle/sheep)		**CRITICAL / LEGAL LIMIT(S)**	**MONITORING PLAN**		**CORRECTIVE ACTION PLAN**
HAZARDS AND CAUSES	CONTROL MEASURES		Procedure	Frequency	Procedures
Contamination of carcases by pathogenic bacteria from spilled gut contents	*Trained staff instructed to tie off/clip oesophagus*	*/*	*[Refer to operating instructions [ ] and usual supervisory activities/ records]*		
Contamination of carcases by pathogenic bacteria from dirty knives	*Knives/blades rinsed and disinfected between each carcase. Sanitiser water temperature [at least 82ºC]. Two-knife system used.*	*/*	*[Refer to operating instructions including cleaning and disinfection procedures [ ] and usual supervisory activities/ records]*		
Entry into the food chain of potentially positive TSE infected material	*Trained staff instructed in the removal of heads in accordance with SRM Regulations.*	*No visible SRM*	*Visual check that standard is being met.*	*[Each carcase]*	*Remove SRM. Investigate the cause, amend procedures as necessary. Retrain /instruct / discipline staff*
PROCESS STEP: 4A. Hide / Fleece/ Pelt Removal		**CRITICAL / LEGAL LIMIT(S)**	**MONITORING PLAN**		**CORRECTIVE ACTION PLAN**
HAZARDS AND CAUSES	CONTROL MEASURES		Procedure	Frequency	Procedures

Contamination of carcases by faecal material / pathogenic bacteria on the hide / fleece / pelt	*Trained staff instructed in correct hide removal technique including prevention of in-rolling using clips. Two-knife system used. Knife rinsed and disinfected between each carcase following cleaning disinfection procedures. Sanitiser water temperature [at least 82ºC]. Any visible contamination removed.*	*No visible faecal contamination of the carcase.* *Water temperature 82°C.*	*Visual check that standard is being met.* *Check on water temperature with probe thermometer.*	*[Each carcase]* *[At start up]*	*Trim affected carcases. Investigate the cause, amend procedures as necessary* *Adjust/repair water heater. Retrain/instruct staff*
Contamination of carcases by physical contaminants (e.g. hair) from equipment / surfaces	*Plant and equipment cleaning and maintenance schedule followed.*	*/*	*[Refer to operating instructions including cleaning procedures [] and usual supervisory activities/ records]*		
Contamination of carcases by bacteria on hands, arms, aprons of dressing staff.	*Trained staff instructed to wash/rinse hands, arms and aprons to be washed/rinsed between handling each carcase.*	*/*	*[Refer to operating instructions including personal hygiene procedures [ ] and usual supervisory activities/ records]*		
PROCESS STEP: 4B. De-hair (mechanical) (pigs)		**CRITICAL / LEGAL LIMIT(S)**	**MONITORING PLAN**		**CORRECTIVE ACTION PLAN**
HAZARDS AND CAUSES	CONTROL MEASURES		Procedure	Frequency	Procedures
Contamination of carcases by pathogenic bacteria from de-hairer equipment.	*Trained staff instructed to clean and maintain de-hairing equipment.*	*No visual contamination from bristles/hair*	*Visual check that standard is being met.*	*[Each carcase]*	*Remove visible contamination. Re-set/ repair de-hairer. Review and correct cause of problem. Retrain/instruct staff.*
Contamination of carcases by pathogenic bacteria on hands, arms, aprons of dressing staff.	*Trained staff instructed to wash/rinse hands, arms and aprons between handling each carcase.*	*/*	*[Refer to operating instructions including personal hygiene procedures [ ] and usual supervisory activities/ records]*		
PROCESS STEP: 4C. Pluck (incl. head/feet removal) (birds)		**CRITICAL / LEGAL LIMIT(S)**	**MONITORING PLAN**		**CORRECTIVE ACTION PLAN**
HAZARDS AND CAUSES	CONTROL MEASURES		Procedure	Frequency	Procedures
Contamination of carcases by pathogenic bacteria from plucking machine.	*Company cleaning schedule followed. Visual inspection before start-up.*	*/*	*[Refer to operating instructions including cleaning procedures [] and usual supervisory activities]*		

Contamination of carcase by pathogenic bacteria from badly adjusted plucking machine.	*Trained staff instructed to adjust plucking machine to prevent physical damage to carcase and subsequent bacterial contamination of carcase tissue.*	*/*	*[Refer to operating instructions [ ] and usual supervisory activities]*	
PROCESS STEP: 5. Pre-Wash (birds)		**CRITICAL / LEGAL LIMIT(S)**	**MONITORING PLAN**	**CORRECTIVE ACTION PLAN**
HAZARDS AND CAUSES	CONTROL MEASURES		Procedure / Frequency	Procedures
Contamination of carcases by faecal/ bacterial material from plucking process.	*Pre evisceration wash/ spray with potable water. Water quality tested [monthly]*	*/*	*[Refer to operating instructions including water quality procedures [ ] and usual supervisory activities/ records]*	
PROCESS STEP: 6. Evisceration (incl. bunging/bagging of red meat species)		**CRITICAL / LEGAL LIMIT(S)**	**MONITORING PLAN**	**CORRECTIVE ACTION PLAN**
HAZARDS AND CAUSES	CONTROL MEASURES		Procedure / Frequency	Procedures
Contamination of carcases by pathogenic bacteria /faecal material from ruptured stomach/ gut/ crop contents.	*Trained staff instructed in evisceration techniques / procedures.* *Red meat carcases rodded and oesophagus clipped or tied to prevent leakage from stomach contents.* *Red meat carcases bunged and sealed to prevent leakage of gut contents.* *Automatic poultry evisceration machinery correctly calibrated and adjusted to prevent damage to viscera /carcase.*	*No visual contamination i.e. faeces/ blood/ viscera.*	*Visual check of carcases to see standard is being met.* *Visual check of evisceration technique.* / *[Each carcase / sample of poultry carcases]* *[Hourly]*	*Carcase correctly trimmed. Check and, if necessary, trim carcases produced since the last time monitoring showed this process was under control. Investigate the cause of the failures, amend procedures as necessary. Adjust/ repair equipment. Retrain/ instruct staff.*
Contamination of carcase from damage / injury	*Damaged carcases removed from process line for reworking.*	*No visual damage*	*[Refer to operating instructions [ ] and usual supervisory activities/ records]*	

Contamination of carcases by pathogenic bacteria/ faecal material from dirty knives/ evisceration equipment.	*Knives/blades rinsed and disinfected [between each carcase (red meat)]. Sanitiser water temperature [at least 82ºC]. Two-knife system used.* *Automatic spray wash of probes on crop and lung equipment between carcases (birds).*	*Water temperature 82°C.*	*Check on water temperature with probe thermometer*	*[Twice a day.]*	*Adjust/repair. Remove knives to a correctly operating sanitizer. Retrain/instruct staff*
Contamination of carcases by pathogenic bacteria on hands, arms, aprons of dressing staff.	*Trained staff instructed to wash/rinse hands, arms and aprons regularly.*	*/*	*[Refer to operating instructions including personal hygiene procedures [ ] and usual supervisory activities/ records]*		
PROCESS STEP: 7. Carcase split/SRM removal (cattle/sheep)		**CRITICAL / LEGAL LIMIT(S)**	**MONITORING PLAN**		**CORRECTIVE ACTION PLAN**
HAZARDS AND CAUSES	CONTROL MEASURES		Procedure	Frequency	Procedures
Contamination of carcases by pathogenic bacteria from dirty saw.	*Saw rinsed and disinfected in steriliser with a water temperature at least 82ºC.*	*/*	*[Refer to operating instructions including cleaning and disinfection procedures [ ] and usual supervisory activities/ records]*		
Contamination of carcases by metal from badly maintained saw blade.	*Company procedures for maintenance of saw and blade followed. Visual check before and after use*	*/*	*[Refer to operating instructions including maintenance procedures [ ] and usual supervisory activities/ records]*		
Contamination of carcases by pathogenic bacteria on hands, arms, aprons of dressing staff.	*Trained staff instructed to wash/rinse hands, arms and aprons regularly.*	*/*	*[Refer to operating instructions including personal hygiene procedures [ ] and usual supervisory activities/ records]*		
Contamination of carcases by potentially positive TSE infected material.	*Trained staff instructed in the removal of SRM in accordance with SRM Regulations.*	*No visible SRM*	*Visual check that standard is being met.*	*[Each carcase]*	*Remove SRM from carcase and check/correct carcases produced since the last time monitoring showed this process was under control. Investigate the cause, amend procedures as necessary. Retrain / instruct / discipline staff.*

PROCESS STEP: 8. Vertebral column wash (red meat)		**CRITICAL / LEGAL LIMIT(S)**	**MONITORING PLAN**		**CORRECTIVE ACTION PLAN**
HAZARDS AND CAUSES	CONTROL MEASURES		Procedure	Frequency	Procedures
Contamination of carcases with pathogenic bacteria from cross spray or contaminated water used for carcase washing.	*Trained staff instructed in carcase washing procedure to avoid cross spraying. Potable water used. Water quality tested [monthly]*	/	*[Refer to operating instructions [ ] and usual supervisory activities/ records]*		
PROCESS STEP: 9. Final wash / inspection (white meat)		**CRITICAL / LEGAL LIMIT(S)**	**MONITORING PLAN**		**CORRECTIVE ACTION PLAN**
HAZARDS AND CAUSES	CONTROL MEASURES		Procedure	Frequency	Procedures
Contamination of carcases by pathogenic bacteria /faecal material following evisceration.	*Inspected and passed carcases are washed inside and out with potable water. All carcases checked for visible contamination. Water quality tested [monthly]*	*No visual contamination from faeces/ blood/ viscera*	*Visual check that the standard is being met.*	*[Ongoing]*	*Carcase trimmed, or declared unfit. Check/correct carcases produced since the last time monitoring showed this process was under control. Investigate the cause of failures, amend procedures as necessary. Retrain/instruct staff.*
Contamination of carcases with pathogenic bacteria from contaminated water used for carcase washing.	*Trained staff instructed in carcase washing procedure to avoid cross spraying. Potable water used. Water quality tested [monthly]*	/	*[Refer to operating instructions [ ] and usual supervisory activities/ records]*		
PROCESS STEP: 10. Chilling and chilled storage		**CRITICAL / LEGAL LIMIT(S)**	**MONITORING PLAN**		**CORRECTIVE ACTION PLAN**
HAZARDS AND CAUSES	CONTROL MEASURES		Procedure	Frequency	Procedures
Growth of pathogenic bacteria on carcases/product due to too high chilling and storage temperature.	*Carcases chilled on chill line at an air temperature of [x to y^{o}C] within [x] hours (birds)* *Air temperature of chill store maintained at [x]^{o}C (red meat).*	*Carcase temperature reduced to []^{o}C* *Chiller temperature*	*Check the automatic log of air temperature / speed and humidity of chill*	*[ ] times a day.* *Test alarm [once a week]*	*Investigate the cause, amend procedures as necessary.* *If needed, move carcases to a correctly functioning chill store. Check/correct*

	Internal muscle temperature of chilled stored carcases kept below [z]ºC (all species). *Chiller alarms set at []ºC*	*below []ºC*	*line and chill store.*		*carcases produced since the last time monitoring showed this process was under control. Retrain/ instruct staff.*
Growth of pathogenic bacteria on carcases/product due to too slow chilling process / too long in chilling hall / close spacing of carcases during cooling / poor stock rotation in chill store.	*Carcases stored in food grade polypropylene crates (birds)* *Trained staff instructed in chill and storage procedures, including correct carcase spacing, FIFO stock rotation.*	*Carcases do not touch during cooling.* *Carcase temperature below [x]ºC within [y] hours.* *Stock dispatched within [] days of kill date.*	*Check on carcase temperature before loading using calibrated disinfected temperature probe.* *Visual check of carcase spacing during cooling.* *Check stock rotation*	*[ ] times a day* *[Once a day]* *[Once a day]*	*Reduce air temperature where carcases are held. Move carcases to a correctly functioning store. Check / correct carcases produced since the last time monitoring showed this process was under control. Investigate the cause of failures, amend procedures as necessary. Move the carcases to get the desired spacing. Retrain/instruct staff Destroy old stock.*
Contamination of carcases /product by pathogenic bacteria, physical, chemical contaminants from dirty chill store/ equipment.	*Plant and equipment cleaning and maintenance schedule followed.*	*/*	*[Refer to operating instructions including cleaning and maintenance procedures [ ] and usual supervisory activities/ records]*		
Contamination of carcases /product by pathogenic bacteria from store/ handling staff.	*Trained staff instructed to follow personal hygiene procedures.*		*[Refer to operating instructions including personal hygiene procedures [ ] and usual supervisory activities/ records]*		
PROCESS STEP: 11. Inspect, butcher and trim		**CRITICAL / LEGAL LIMIT(S)**	**MONITORING PLAN**		**CORRECTIVE ACTION PLAN**
HAZARDS AND CAUSES	CONTROL MEASURES		Procedure	Frequency	Procedures
Contamination of meat by pathogenic bacteria from faecal material or by SRM.	*Trained staff instructed to check product against agreed product specification before cutting.*	*No visible contamination*	*Visual check that the standard is being met.*	*[Each carcase]*	*Product removed from line. Carcases trimmed / cleaned / reworked. Product rejected / destroyed. Check / correct carcases produced since the last time monitoring*

					showed this process was under control. Investigate the cause of failures, amend procedures as necessary. Retrain / inform staff
Contamination of meat by pathogenic bacteria from other meat (especially of other species.)	*Meat handled in separate batches. Trained staff instructed to handle meat of different species separately and to follow company hygiene procedures.*	*/*	*[Refer to operating instructions including cleaning procedures between batches [] and usual supervisory activities/ records]*		
Contamination of meat by pathogenic bacteria / physical / chemical contaminants from knives / cutting tables / equipment during trimming.	*Trained staff instructed to follows operating, cleaning and staff hygiene procedures. Two knife system used. Batch sterilisers used for knives/chain mail, temperature [at least 82°C], checked with probe thermometer twice a day.*	*/*	*[Refer to operating instructions including cleaning and disinfection procedures [] and usual supervisory activities/ records]*		
Contamination of meat with metal fragments from broken knife blades/ band saws and chain mail.	*Knives / chain mail checked for damage before and during use. Regular maintenance checks on cutting equipment.* *Metal detection at step [12].*	*/*	*[Refer to operating instructions including maintenance procedures [] and usual supervisory activities/ records]*		
Contamination of meat by pathogenic bacteria/ physical contaminants from cutting staff.	*Trained staff instructed to follow personal hygiene rules.*	*/*	*[Refer to operating instructions including personal hygiene procedures [ ] and usual supervisory activities/ records]*		
Growth of pathogenic bacteria on meat due to poor temperature control from being too long in cutting room.	*Cutting room maintained below 12°C. Trained staff instructed to ensure product spends less than [x] minutes in cutting room.*	*Cutting room temperature below []ºC* *Meat temperature below []ºC*	*Check air temperature* *Check meat temperature.*	*[ ] times a day.* *[ ] times a day.*	*Move product to chiller. Investigate the cause of high temperatures, amend procedures / repair temperature control equipment/monitoring equipment as necessary. Retrain/ instruct staff.*

PROCESS STEP: 12. Metal detection		**CRITICAL / LEGAL LIMIT(S)**	**MONITORING PLAN**		**CORRECTIVE ACTION PLAN**
HAZARDS AND CAUSES	CONTROL MEASURES		Procedure	Frequency	Procedures
Contamination of meat by undetected metal from equipment, fixtures , fittings, blades.	*Trained staff instructed in correct operation of metal detector.*	*Test Pieces:* *[x]mm Fe* *[y]mm non Fe* *[z]mm S/S*	*Check efficacy of metal detector with test pieces.*	*[Before start up and every [x] minutes throughout production]*	*Stop the line. Identify/ recheck last 30 minutes of production, retest. Reset metal detector. Investigate the cause of failure.*

PROCESS STEP: 13. Package and dispatch		**CRITICAL / LEGAL LIMIT(S)**	**MONITORING PLAN**		**CORRECTIVE ACTION PLAN**
HAZARDS AND CAUSES	CONTROL MEASURES		Procedure	Frequency	Procedures
Growth of pathogenic bacteria due to inadequate temperature control at dispatch.	*Carcases/product chilled before dispatch below [x]ºC.* *Vehicle container chilled below [y]ºC before loading.*	*Product temp. below [4ºC/7]ºC.* *Vehicle air temp. below [y]ºC before loading*	*Check on carcase/ product temperature before loading using calibrated disinfected temperature probe. Check vehicle temperature before loading.*	*[Sample from each load]* *[Each vehicle]*	*Stop despatch until meat reach required temperature.* *Investigate the cause, amend procedures as necessary.* *Stop loading until vehicle reaches required temperature.* *Retrain/instruct staff*
Contamination of carcases/ product by pathogenic bacteria from outer packaging during packing/ loading process	*Trained staff instructed in packing / loading procedures, including transport of poultry/product in food grade polypropylene crates palleted and over-wrapped.*	/	*[Refer to operating instructions including packing and loading procedures [ ] and usual supervisory activities/ records]*		
Contamination of carcases / product by pathogenicbacteria, physical, chemical contaminants from dirty vehicles.	*Cleaning and maintenance schedule for vehicles followed.*	/	*[Refer to operating instructions including cleaning and maintenance procedures [ ] and usual supervisory activities/ records]*		
Contamination of carcases by pathogenic bacteria from loading staff.	*Trained staff instructed to follow personal hygiene procedures.*	/	*[Refer to operating instructions including personal hygiene procedures [ ] and usual supervisory activities/ records]*		

PART THREE

2. MICROBIOLOGICAL CRITERIA

2.1 WHY ARE MICROBIOLOGICAL CRITERIA IMPORTANT?

The aim of HACCP-based systems is to ensure that food is produced safely. This is achieved through the identification and effective control of food-borne hazards. It is generally recognised that the most significant food-borne hazards from fresh meat are bacteria which can cause disease in humans (pathogenic bacteria), such as *Salmonella*, Campylobacter and E.coli O157. Some of these, particularly E.coli O157, require only a few bacteria to cause food poisoning in humans. See Part One Chapter 6 (Hazards) and 2.2 below.

Bacteria cannot be seen by the naked eye. They cannot be detected at post-mortem inspection. The production of visually clean meat, monitored by visual inspection, is an important starting point for meat safety, but visual inspection can detect only gross faecal and other contamination. Although this gives a useful indication of the microbiological status of fresh meat, it is only by looking at samples after incubation on a suitable medium that the number of bacteria present on the surface of carcase meat or in processed meat can be assessed objectively.

Slaughter and dressing operations provide many opportunities for contaminating carcases with bacteria. The further processing of meat can spread contamination as well as introduce it from equipment, handing or the environment and poor temperature control can lead to growth of dangerous bacteria. Testing against microbiological criteria provides a way of measuring how well the operator has controlled the slaughter, dressing and production processes to avoid and control contamination. The results of testing can be used to validate whether the operator's HACCP-based procedures are controlling food safety and verify they are being correctly applied.

2.2 GENERAL INFORMATION

- **Legal Basis for Microbiological Criteria**

  The Microbiological Criteria Regulation 2073/2005[1] establishes microbiological criteria for certain micro-organisms and provides rules to be complied with by food business operators when implementing the general and specific hygiene measures referred to in Article 4[2] of Regulation (EC) 852/2004. Articles 4(3) and (4) of Regulation 852/2004 provide the legal basis for Regulation 2073/2005. Relevant definitions are set out at Article 2 of 2073/2005 and those relevant to meat are included for reference at PART ONE Chapter 8.6 of this guide.

- **Livestock**

  All animals carry a very large number of bacteria in their stomachs and intestines, which are excreted in their faeces. Bacteria are also present on the skin, hide fleeces and feathers of animals, including those from direct contact with faeces or from indirect contact with the environment of the farm, transport vehicles or lairage.

  The bacteria in or on animals may include those which can cause food poisoning in humans and which are recognised hazards from meat. Most of these bacteria do not cause illness in meat producing animals, which will appear healthy. Although ante-mortem inspection will enable clinically ill animals to be detected, it is not possible to identify healthy carriers of pathogenic organisms. It must therefore be assumed that all animals entering the slaughterhouse have the potential to carry pathogenic organisms in or on them.

- **Carcases**

  Bacteria from the surface or digestive tract of an animal may be transferred onto the carcase or onto other carcases during slaughter and dressing. This transfer may be caused by direct contact or through cross-contamination by slaughterhouse staff, equipment, surfaces, water or aerosols. The correct application of HACCP-based principles to the process aims to ensure that such transfer is minimised. Scientific research has shown that the cleanliness of animals at slaughter is an important control to minimise the risk of transfer of pathogens from the hide, fleece, skin or feathers to the carcase.

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[1]. Published in the Official Journal of the European Union on 22/12/05 – see www.ukmeat.org.

[2] (2) FBOs carrying of any stage of production, processing and distribution of food after [primary production] shall comply with the general hygiene requirements laid down in Annex II and any specific requirements provided for in Regulation 853/2004.
(3) Food business operators shall, as appropriate, adopt the following specific hygiene measures: (a) compliance with microbiological criteria for foodstuffs; (e) sampling and analysis.

- **Carcase Testing**

  When pathogenic bacteria are transferred to carcases they are usually present in only small numbers and on a small area of the carcase. This means that a negative result from microbiological testing for pathogenic bacteria will not guarantee the absence of such organisms. A large surface area of a high proportion of carcases needs to be tested to obtain a statistically valid result for many pathogenic bacteria. This is neither practical nor economically feasible and is why a criterion for E coli O157 is not currently included in Regulation 2073/2005. This does not mean that this organism is unimportant but that control is best achieved by setting a criterion for an indicator group of micro-organisms.

- **Indicator Organisms**

  Indicator organisms are larger groups of bacteria, including certain pathogenic bacteria, which are relatively easy to measure as a group and whose presence is likely to indicate the presence of pathogenic bacteria. Aerobic Plate Count (APC) is a general measure of the microbiological status of meat, but APC results and the number of pathogens present may not always be related. Testing for Enterobacteriaceae, a group of indicator organisms that live in the intestines of animals and the environment, will give a better indication of the likelihood of pathogenic organisms being present. Control measures that reduce the number of Enterobacteriaceae and the APC will reduce the risk of the presence of pathogenic bacteria on meat.

  Although the *Salmonella* group of organisms does contain bacteria of significance in terms of human disease, there are also many *Salmonella* that may occur in animal production that are rarely associated with human disease. For these reasons the *Salmonella* criteria set for carcases are, like Enterobacteriaceae and APC, process criteria. Failure to meet these does not in itself indicate the meat from the carcase tested or batch of carcases tested will be unfit for human consumption but it does mean that investigations to find the cause of contamination to prevent a reoccurrence should take place.

- **Processed Meat**

  The further processing of meat into minced meat, meat preparations and meat products provides an opportunity for any dangerous bacteria on the surface of the carcase meat to be spread throughout the product and also for new bacteria to be introduced from the environment, handling and processing.

  In particular, bacteria will be spread into the centre of the food, where they will be less easily destroyed on cooking. If the production process does not contain a pathogen reduction step such as cooking then any bacteria on the carcase meat will be present in the processed meat. If the product is intended as a ready to eat food such as steak tartare then special care will need to be taken to ensure absence of *Salmonella* and the safety of the food. For minced meat and

meat preparations intended to be eaten cooked, absence of *Salmonella*, although ultimately desirable, is not practical with the current prevalence of *Salmonella* in animals. Mince is often an economical product containing trim as well as other surface parts of the carcase. Labelling the product with advice on cooking and safe handling in addition to hygienic production controls the risk to human health.

Although this point was made by the Agency and accepted by other member states during the negotiations, the criteria in the regulation for *Salmonella* in raw processed meat intended to be eaten cooked are food safety criteria. Failure to meet these means the meat must be removed from the market.

- **The Micro-organisms in the Meat Criteria**

  - ***Aerobic Colony count (ACC)*** *also known as Aerobic Plate count (APC) and Total Viable Count (TVC)*

    A measure of bacteria in the sample that can survive in the conditions on the surface of carcases or in processed meat, be harvested by the sampling procedure used and grow in the presence of air on an agar plate. These bacteria include those arising both from animals and from the slaughterhouse or meat processing environment. Because the APC includes the organisms responsible for spoilage of meat, it will also give an indication of the keeping quality of the meat.

  - ***Enterobacteriacae (ENT)***

    The name given to a group of bacteria that live predominantly in the intestines of animals. The group includes most of the major food-borne pathogens of animal origin such as Salmonella, Yersinia and E.coli O157.

    The presence of these organisms on the surface of carcases is an ***indicator*** *of faecal and environmental contamination*

  - ***E. coli (EC)***

    A group of bacteria that live in the intestines and are shed in the faeces of man and food producing animals. Presence of E.coli is an ***indicator*** *of faecal contamination. The test procedure does not specifically recover E.coli 0157 but does indicate the risk of contamination with this and other dangerous faecally-derived bacteria.*

  - ***Salmonella species (Sal)***

    A group of bacteria that includes several pathogens of significance in human food poisoning disease. They mainly arise from faecal contamination but can also arise from the processing environment. Further analysis of the type of Salmonella can be useful in investigating and preventing the re occurrence of positive results as well as providing information that can be used in a risk analysis.

- **Food Safety and Process Hygiene Criteria**

  Two different classes of criteria are established in Regulation 2073/2005, namely food safety criteria and process hygiene criteria. The main difference between them is the additional action required when a food safety criterion is not met of removing the batch of food in question from the market. Failure to meet either class of criteria should always result in an investigation to find the cause of contamination and action taken to prevent contamination of future production.

  - **Food Safety Criteria**

    Food safety criteria have been set for minced meat, meat preparations, meat products and mechanically separated meat and, if exceeded, indicate that the batch tested is unsatisfactory and should be removed from the market.

    Demonstration of compliance with **food safety criteria** for meat and processed meat is required as follows:

    - Absence of ***Salmonella*** in:
      (a) minced meat and meat preparations intended to be eaten raw;
      (b) minced meat and meat preparations intended to be eaten cooked;
      (c) mechanically separated meat (MSM);
      (d) meat products intended to be eaten raw
      (e) meat products made from poultry meat intended to be eaten cooked.

  - **Process Hygiene Criteria**

    It is important to note that the purpose of testing against the process criteria that have been set for carcases and certain processed meat is **not** to assess the fitness of individual carcases or processed meat for human consumption. The results provide an indication of performance and control of the slaughter, dressing and production process at the time of sampling, and must be used accordingly. If the criteria are exceeded corrective action to improve future production must be initiated but there is no requirement to remove product from the market.

    Demonstration of compliance with **process hygiene criteria** for meat and processed meat is required as follows:

    Aerobic colony count and **Enterobacteriaceae** on cattle, sheep, goats, horses and pig carcases; (below specified limits)

    - ***Salmonella*** on cattle, sheep, goats, horses, pig, broiler and turkey carcases; (Absence from a specified number of samples per 50 samples examined)
    - **Aerobic plate count** and ***E.coli*** in minced meat and mechanically separated meat; (below specified limits)
    - ***E.coli*** in meat preparations; (below specified limits)

- **Sources of Advice and Information**

  Additional guidance may be found in:

  - General Guidance for Food Business Operators on EC Regulation No. 2073/2005 on Microbiological Criteria for Foodstuffs www.food.gov.uk/foodindustry/regulation/europeleg/eufoodhygieneleg/microbiolreg.
  - BRC/CFA Guidance on the Practical Implementation of the EC Regulation on Microbiological Criteria for Foodstuffs (www.chilledfood.org/content/guidance.asp).
  - The Public Health Laboratory Service (PHLS) (www.hpa.org.uk) - Guidelines for the Microbiological Quality of Some Ready-to-eat Food Sampled at the Point of Sale.
  - The Institute of Food Science and Technology (IFST) (www.ifst.org) - Development and Use of Microbiological Criteria for Foods ISBN 0 905367 16 2.

- **FSA Website**

  The Agency's website www.ukmeat.org provides information on the microbiological criteria regulations; guidance on taking samples (photographs are included); protocols; and information on taking corrective action when the criteria are not met, including a free typing facility for salmonella isolates from meat.

  This site is also the home of the Meat Test Results database. The database is a joint venture between the UK meat industry and the FSA. Plant operators enter their results into the database and trend information can be generated automatically. National summaries are generated for plants to compare their results with. There is a facility to help operators enter data, details of which are given on the home page and individual operator's data are password protected. The database exists only for research purposes and is not used for enforcement. UK meat plant operators are strongly encouraged to include their plants' test results to the database.

  The site also provides information on relevant meat hygiene research that has being undertaken by the FSA.

2.3.1 WHAT ARE THE LEGAL REQUIREMENTS FOR MICROBIOLOGICAL CRITERIA?

The following sections set out the microbiological criteria requirements of the regulations that apply to carcases after slaughter and further processed meat.

A. DEMONSTRATION OF COMPLIANCE

A1. Food business operators shall ensure that foodstuffs comply with the relevant microbiological criteria set out in Annex I.

The food business operator at each stage of food production, processing and distribution, including retail shall take measures, as part of their procedures based on HACCP principles together with the implementation of good hygienic practice to ensure the following:

- **that the supply, handling and processing of raw materials and foodstuffs under their control are carried out in such a way that the process hygiene criteria are met**
- **that the food safety criteria applicable throughout the shelf life of the products can be met under reasonably foreseeable conditions of distribution, storage and use.**

2073/2005 Article 3 point 1

OPERATOR'S OBLIGATION - MICROBIOLOGICAL CRITERIA FOR MEAT	
• **Demonstrate compliance with the criteria at Annex I for meat and processed meat.** ***A1***	*The Regulation establishes two types of microbiological criteria and requires that food business operators take corrective action when these criteria are not met. These two types are:* ▪ ***Food safety criteria*** *which should be used to assess the safety of a product or batch of foodstuffs; and* ▪ ***Process hygiene criteria*** *which should be used to ensure the production processes are operating properly.* ***Corrective actions*** *– the actions required when the criteria are not met differ for each type of criterion and are explained in Section D.*
	FOOD SAFETY CRITERIA
• **Annex I Chapter 1**	*The* ***food safety criteria*** *are absence of* ***Salmonella*** *in the samples as specified in the following sub-sections.* *When and how often to sample is covered at Section B.*
• **1.4 Minced meat and meat preparations intended to be eaten raw.**	*5 x 25g samples from a batch of minced meat or meat preparations intended to be eaten raw made from any species of meat e.g. steak tartare.*

• **1.5 Minced meat and meat preparations from poultry meat intended to be eaten cooked.**	***Until 31.12.2009*** *- 5 x 10g samples from a batch of minced meat or meat preparations made from poultry meat intended to be eaten cooked.* *Applies to poultry meat of all species including ducks, geese, turkeys and broilers e.g. minced chicken, turkey burgers, chicken sausages chicken and turkey escalopes.* ***From 01.01.2010*** *- the criteria will change to 5 x 25g. This is to reflect the reduction in Salmonella expected to be achieved by the National Control Plans operating under the Zoonoses Regulation 2003/99.*
• **1.6 Minced meat and meat preparations from red meat intended to be eaten cooked.**	*5 x 10g samples from a batch of minced meat or meat preparations made from other species than poultry intended to be eaten cooked.* *Applies to all species of red meat including game e.g. minced meat for bolognaise sauce or shepherds pie, sausages, burgers.*
• **1.7 Mechanically separated meat.**	*5 x 10g samples from a batch of mechanically separated meat (MSM).*
• **1.8 Meat products intended to be eaten raw.**	*5 x 25g samples from a batch of meat products intended to be eaten raw e.g. air dried smoked duck, partially fermented sausages.* *Does not apply to products where the manufacturing process or the composition of the product will eliminate the Salmonella risk such as certain types of salami. Does not apply to fully cooked ready to eat meat products such as cooked ham.*
• **1.9 Meat products from poultry meat intended to be eaten cooked.**	*5 x 10g samples from a batch of meat products made from poultry meat intended to be eaten cooked e.g. turkey bacon and chicken nuggets (Note: some nuggets may be a meat preparation).* ***From 01.01.2010*** *- the criteria will change to 5 x 25g. This is to reflect the reduction in Salmonella expected to be achieved by the National Control Plans operating under the Zoonoses Regulation 2003/99.* *Does not apply to meat products made from meat other than poultry meat intended to be eaten cooked such as bacon and gammon streaks.*
• **Action required when food**	*If a food safety criterion is not met, this usually means the food business operator will not be able to place the foodstuff on the market or will need to*

<table>
<tr><td>safety criteria are not met.</td><td>withdraw the food from the market (as required by Regulation 178/2002) and take steps to ensure future production meets the criterion. In certain circumstances, such as if the food is ready to eat, a recall of the food may also be required. Enforcement authorities will require sufficient evidence that the food business operator has taken the appropriate corrective action. See D1 for more information.</td></tr>
<tr><td></td><td>PROCESS HYGIENE CRITERIA</td></tr>
<tr><td>• Annex I Chapter 2</td><td>The process hygiene criteria are detailed in the sub-sections below.

When and how often to take samples is covered in Section B. Sampling methods are fully described at B8 to B13.

Species for which criteria are not specified e.g. game, rabbits, ducks and geese, are not required to be sampled.</td></tr>
<tr><td>• 2.1.1/2.1.3 Carcases of cattle, sheep, goats and horses.</td><td>5 carcases are required to be sampled per sampling session. 1 sample is from one carcase.
Aerobic Colony Count (ACC) and Enterobacteriaceae (ENT) - the criteria are below a specified mean log level of the 5 samples. The limits given in the regulation are for an excision method, the limits for the swab or sponge method are lower and are given in ( ) below after the figures for excision.
Salmonella (Sal) - the criterion is = to or below a specified number of positives in 10 consecutive sampling sessions (that is 50 samples) using a sponge method.

<table>
<tr><th></th><th></th><th>APC</th><th>ENT</th><th>Sal</th></tr>
<tr><td>Unacceptable:</td><td>mean log /number of positives is above</td><td>5.0 (4.3)</td><td>2.5 (1.8)</td><td>2/50</td></tr>
<tr><td>Acceptable :</td><td>mean log below</td><td>5.0 (4.3)</td><td>2.5 (1.8)</td><td></td></tr>
<tr><td>Satisfactory:</td><td>mean log / number of positives is = to or below</td><td>3.5 (2.8)</td><td>1.5 (0.8)</td><td>2/50</td></tr>
</table>
</td></tr>
<tr><td>• 2.1.2 / 2.1.4 Carcases of pigs.</td><td>5 carcases are required to be sampled per sampling session. 1 sample is from one carcase.
Aerobic Colony Count (ACC) and Enterobacteriaceae (ENT) - the criteria are below a specified mean log level of 5 samples. The figures given are for the excision method, the figures for the swab or sponge method are lower and are given in ( ) after the figures for excision.
Salmonella (Sal) - the criterion is = to or below a specified number of positives in 10 consecutive sampling sessions (that is 50 samples), using a</td></tr>
</table>

	sponge method. **APC** **ENT** **Sal** **Unacceptable:** mean log /number of positives is above 5.0 (4.3) 3.0 (2.3) 5/50 **Acceptable** : mean log below 5.0 (4.3) 3.0 (2.3) **Satisfactory:** mean log / number of positives is = to or below 4.0 (3.3) 2.0 (1.3) 5/50
• **2.1.5 Carcases of broilers and turkeys.**	*15 carcases are required to be sampled per sampling session. 1 sample is composed of 3 pooled neck skins. The 15 carcases sampled result in 5 samples for testing.* ***Salmonella (Sal)*** *the criterion is = to or below a specified number of positives in 10 consecutive sampling sessions (that is 50 samples)* **Sal** **Unacceptable**: number of positives is above 7/50 **Satisfactory:** number of positives is = to or below 7/50
• **2.1.6 / 2.1.7 Minced meat and Mechanically separated meat.**	*5 samples must be taken from one batch per sampling session.* ***Aerobic Colony Count (ACC) and E. Coli (EC)*** *: the criteria relate to a specified number per gram:* ***ACC****: All 5 samples must be less than 5 x 10^6 cfu/g and* *3 samples must be less than 5 x 10^5 cfu/g.* ***EC****: All 5 samples must be less than 500 cfu/g and* *3 samples must be less than 50 cfu/g.*
• **2.1.8 Meat preparations.**	*5 samples must be taken from one batch per sampling session.* ***E. Coli (EC)****: the criterion relates to a specified number per gram:* ***EC****: All 5 samples must be less than 5000cfu/g and* *3 samples must be less than 500cfu/g*
• **Action when process hygiene criteria are not met.**	*If a process hygiene criterion is not met, the meat can be placed or remain on the market, but the food business operator must review the production processes and improve process hygiene to ensure future production will meet the criteria. The actions should be included in the food safety management procedures, which should also include relevant actions specified in Annex I (Chapter 2) of the Regulation. Enforcement authorities will require sufficient evidence that the food business operator has taken the appropriate corrective action. See Section D for more information.*

B. MICROBIOLOGICAL TESTING AGAINST THE CRITERIA

B1. Food business operators shall perform testing as appropriate against the microbiological criteria set out in Annex I when they are validating or verifying the correct functioning of their procedures based on HACCP principles and good hygiene practice.

B2. Food business operators shall decide the appropriate sampling frequencies except where Annex I provides for specific frequencies ... the sampling frequency shall be at least that provided for in Annex I.

2073/2005 Article 4

B3. The food business operators of slaughterhouses or establishments producing minced meat, meat preparations or mechanically separated meat shall take samples for microbiological analysis at least once a week. The day of sampling shall be changed each week to ensure that each day of the week is covered.

B4. As regards the sampling of minced meat and meat preparations for *E. coli* and aerobic colony count analyses and the sampling of carcases for enterobacteriaceae and aerobic colony count analyses, the frequency may be reduced to fortnightly testing if satisfactory results are obtained for six consecutive weeks.

B5. In the case of sampling for *Salmonella* analyses of minced meat, meat preparations and carcases, the frequency can be reduced to fortnightly if satisfactory results have been obtained for 30 consecutive weeks. The salmonella sampling frequency may also be reduced if there is a national or regional salmonella control programme in place and if this programme includes testing that replaces the above-described sampling. The sampling frequency may be further reduced if the national or regional salmonella control programme demonstrates that the salmonella prevalence is low in animals purchased by the slaughterhouse.

B6. However, when justified on the basis of a risk analysis and consequently authorised by the competent authority, small slaughterhouses and establishments producing minced meat and meat preparations in small quantities may be exempted from these sampling frequencies.

2073/2005 Annex I Chapter 3.2

OPERATOR'S OBLIGATION - WHEN AND HOW OFTEN TO TAKE SAMPLES	
• **Carry out testing against the criteria.** ***B1***	***Frequency of testing*** *- testing is one of the ways to demonstrate compliance with the criteria. It should be undertaken as part of the process of validating and verifying procedures based on HACCP.*
• **Follow the specified sampling frequency for carcases, minced meat,**	*The Regulation requires weekly sampling at slaughterhouses producing meat carcases, and establishments producing minced meat, meat preparations and mechanically separated meat.* *The weekly sampling specified in the Regulation does not apply to small slaughterhouses and establishments producing minced meat and meat preparations in small quantities. The FSA has produced sampling*

meat preparations and MSM. ***B2***	*frequencies for small slaughterhouses and establishments producing minced meat and meat preparations in small quantities.* *Species for which criteria are not specified e.g. game, rabbits, ducks and geese, are not required to be sampled.*
	RED MEAT SLAUGHTERHOUSES
• **Take weekly samples at slaughterhouses producing red meat carcases.** ***B3, B4, B5, B6***	*Take 5 samples once a week for all specified species in a sampling session.* ***Specified species** are cattle, sheep, goats, pigs and horses of all ages. **See Table 1 for details**. The day of the week that sampling is carried out must be alternated. Sampling frequency can be reduced following satisfactory results as detailed in Table 1.* ***Small quantities of the specified species - the weekly frequency does not apply to small quantities** - see Table 1 for the throughput for small quantities on a per species basis and the sampling frequencies to be followed. These frequencies will be reviewed in early 2007.*
	POULTRY SLAUGHTERHOUSES
• **Take weekly samples at slaughterhouses producing poultry carcases.** ***B3, B4, B5, B6***	*Take samples once a week for all specified species in a sampling session.* ***Specified species** are broilers and turkeys. **See Table 2**. The day of the week that sampling is carried out must be alternated. Sampling frequency can be reduced following satisfactory results as detailed in Table 2.* ***Small quantities of the specified species - the weekly frequency does not apply to small quantities** - see Table 2 for the throughput for small quantities on a per species basis and the sampling frequencies to be followed. These frequencies will be reviewed in early 2007.*
	ESTABLISHMENTS PRODUCING MINCED MEAT, MEAT PREPARATIONS & MECHANICALLY SEPARATED MEAT
• **Take weekly samples at establishments producing minced meat, meat preparations**	*Take samples from one batch of minced meat or meat preparations or mechanically separated meat per producing establishment per week.* *All species of meat minced or processed into meat preparations or mechanically separated meat are included.* ***Small quantities** - the weekly frequency does not apply to small quantities - establishments producing an average of less than 2 tonnes a week **of***

and mechanically separated meat. ***B3, B4, B5, B6***	***product intended to be eaten cooked*** *are considered to be small quantities and are not required to undertake testing. This will be reviewed in early 2007.* *All establishments producing* ***products intended to be eaten raw or undercooked*** *irrespective of production volume must undertake weekly testing.* ***Batch*** *- see definition and more information below at 'ADVICE –Batches'.*
	ESTABLISHMENTS PRODUCING MEAT PRODUCTS
• **Decide an appropriate sampling frequency for meat products.** ***B2***	*The Regulation does not stipulate how often to take samples from an establishment producing meat products to demonstrate compliance with the criteria for Salmonella.* *Determine the frequency of sampling and hence testing according to the specific local risk (see advice below).*
ADVICE- MEAT PRODUCTS	
Meat Products - Key Manufacturing Process Stages	*The following information is provided to assist a food business operator when deciding the frequency for sampling meat products.* *HACCP principles must be applied when manufacturing all products. The management of the microbiological risks at each stage of manufacturing process must be considered.* ***Key stages*** *include:* ▪ *Ingredients/ raw material* ▪ *Factory - design, hygiene of equipment and people* ▪ *Manufacturing process targeting appropriate organism/s* ▪ *Packaging* ▪ *Storage temperature and shelf life* ▪ *Intended use* ▪ *Food Safety Studies related to similar products* *Microbiological testing may be appropriate at certain stages to validate/ verify that the procedures based on HACCP principles are adequate, operational and effectively in control. Monitoring raw materials and factory hygiene may also be important. Final product microbiological testing against the criteria can be used to verify that the overall process is in control.*

	As the HACCP based procedures becomes more established and more satisfactory test results are obtained the frequency of testing may be able to be reduced based on the historical data obtained. *If anything significant is changed in the production of the product such as raw material source, formulation or processing, the HACCP based procedures must be reviewed and it may be appropriate to increase test frequency.*
Manufacturing Process Key Stage - Example: Raw materials	*When deciding the frequency of microbiological tests required against the criteria the following should be considered for raw materials.* ▪ *The microbiological hazards and risks associated with the raw material.* ▪ *Knowledge and confidence in the supplier/ producer of the raw material. The more confidence you have in the raw material supplier/ producer the less testing is required. Confidence can be achieved by:* *- auditing the supplier/ producer and their HACCP including their microbiological checks, and/ or* *- increasing the frequency of checks until sufficient historical data is available.* ▪ *The risk associated with the volume of the raw material used.* ▪ *Historical data.* ▪ *The supplier/ producer of the raw material should be producing using HACCP principles, which should minimise the risks, associated with the raw materials.* *A similar approach should be taken for other key stages.*

SAMPLING PLANS AND METHODS

B7. The analytical methods and the sampling plans and methods in Annex I shall be applied as reference methods

2073/2005 Article 5

Sampling Rules for Red Meat Carcases

B8. The destructive and non-destructive sampling methods, the selection of the sampling sites and the rules for storage and transport of samples are described in standard ISO 17604.

B9. Five carcases shall be sampled at random during each sampling session. Sample sites should be selected taking into account the slaughter technology used in each plant.

B10. When sampling for analyses of enterobacteriaceae and aerobic colony counts, four sites of each carcase shall be sampled. Four tissue samples representing a total of

20 cm² shall be obtained by the destructive method. When using the non-destructive method for this purpose, the sampling area shall cover a minimum of 100 cm² (50 cm² for small ruminant carcases) per sampling site.

B11. When sampling for *Salmonella* analyses, an abrasive sponge sampling method shall be used. The sampling area shall cover a minimum of 100 cm² per site selected.

B12. When samples are taken from the different sampling sites on the carcase, they shall be pooled before examination.

Sampling Rules for Poultry Carcases

B13. For the *Salmonella* analyses, a minimum of 15 carcases shall be sampled at random during each sampling session and after chilling. A piece of approximately 10g from neck skin shall be obtained from each carcase. On each occasion the neck skin samples from three carcases shall be pooled before examination in order to form 5 x 25g final samples.

2073/2005 Annex I Chapter 3

OPERATOR'S OBLIGATIONS - SAMPLING OF CARCASES	
• **Follow the sampling plans in Annex I Chapters 1 & 2 and the sampling rules in Chapter 3 for slaughterhouses** ***B7***	*Take 5 samples per sampling session from each of the specified species per slaughterhouse and send to a testing laboratory. See Tables 1 and 2 for species and when to take samples.* ***Training** - the person undertaking the sampling needs to be trained in microbiological sampling. The testing laboratory or the OV can provide training.* ***Supplies** - the testing laboratory will be able to supply the equipment and consumables necessary for sampling.*
OPERATOR'S OBLIGATIONS - SAMPLING OF RED MEAT	
• **Take samples from red meat carcases.** ***B8 – B12***	*Take 5 sponge samples per sampling session from carcases after dressing but before chilling. 1 sponge sample is from one carcase.* *The reference sampling method for Salmonella on red meat carcases is using an abrasive swab covering a minimum of 100 cm^2 per site.* *For ENT and APC four sites of the carcase should be sampled using excision or a non-destructive method.* *The carcase sponge swab method:* ▪ *is an abrasive sponge* ▪ *is a non-destructive method,* ▪ *covers 4 sites* ▪ *covers a minimum of 100 cm^2 per site*

	and so can be used for all three tests. *Wet and dry swabbing or excision can be used for ENT and APC (note method not described in this guidance) but not for salmonella testing.* *Operators are encouraged to use the simple sponge sampling method described below for all three tests*
ADVICE - SAMPLING OF RED MEAT	
Apparatus	*Sterile dry abrasive sponge swabs (10 x 10 cm or 5 x 10 cm, folded in half) in sterile plastic sample bags (waffle style cellulose sponge dishcloths and stomacher bags).* *Details on how to purchase and prepare sponge swabs is available at www.ukmeat.org/Sponges.htm .* *Diluent: sterile 0.9% unbuffered sodium chloride solution.*
Sampling Method	▪ *Rehydrate the sponge in the sample bag with approximately 10ml diluent. The sponges should be damp without excess diluent in the bag. Alternatively, sponges can be rehydrated, stored frozen and defrosted prior to use.* ▪ *Grasp the sponge through the bag folding the bag back over the hand.* ▪ *Avoid allowing the sponge, diluent, or the internal surface of the bag to come into contact with other surfaces.* ▪ *Randomly choose one side of a randomly chosen carcase after inspection and before chilling.* ▪ *Wipe the sponge with a firm pressure and a slight side to side movement down one side of the carcase starting at the back leg and moving across the carcase. Use a firm consistent pressure. The length of the wipe should be approximately 1000 cm for adult sheep, goats and pigs and 1500 cm for adult cattle and horses. The pictures at www.ukmeat.org.RedSampling.htm show the direction and path the sponge swab should follow.* ▪ *Refold the bag over the sponge and secure the bag with a closure.*
OPERATOR'S OBLIGATIONS - SAMPLING OF POULTRY	
• **Take samples from poultry**	*Take 5 samples from broilers and turkeys. 1 sample is 3 neck skins, so 15 carcases are required to be sampled. Collect samples from carcases after*

carcases. ***B13***	*chilling.*
ADVICE - SAMPLING OF POULTRY	
Apparatus	*Gloves, clean sharp scissors, alcohol wipes, sample bags, labels*
Sampling Method	▪ *Put on pair of gloves then wipe the surfaces of the gloves with alcohol wipes to kill any bacteria that may be present.* ▪ *Wipe the scissors with an alcohol wipe.* ▪ *Grip the plastic bag at the bottom and fold back over the gloved hand. Avoid the internal surface of the bag or the scissors contacting other surfaces.* ▪ *Grasp the neck skin through the bag and cut off approximately 10g with the clean scissors, repeat with two further neck skins to make a total of three in one bag.* ▪ *Fold the bag back over the sample and tie to secure the neck skin samples inside.* ▪ *Clean gloves and scissors with alcohol wipes and repeat.* *See pictures of the sampling process at www.ukmeat.org/WhiteSampling.htm*
ADVICE - HANDLING OF SAMPLES	
Labelling carcase samples	*Label the bag and record the following information:* ▪ *Date of sampling* ▪ *Species* ▪ *Origin of animal (farm postcode, slaughtering reference)* ▪ *Length of wipe for red meat: an estimate is sufficient* ▪ *Width of wipe for red meat (normally 10cm).*
Temperature Control During Storage and Transport	*Sponge and neck skin samples should kept cool and delivered to the laboratory within 2 hours. If longer than two hours the samples should be placed into an insulated coolbox containing frozen freezer blocks or crushed ice. Keep the samples cold but do not allow them to freeze.* *Sample testing should commence within 24 hours of sampling.* *Further information on taking samples is included in the ISO standard 17604 (see below).*
OPERATOR'S OBLIGATIONS - SAMPLES OF PROCESSED MEAT	

• **Take and send to the testing laboratory samples from establishments producing minced meat, meat preparations, MSM and meat products.** ***B7***	*Take a sufficient sample to enable the laboratory to take 5 x 10g or 5 x 25g test portions for Salmonella and 5 x 25g test portions for EC and ACP from one batch per producing establishment of* ▪ *Minced meat or meat preparations: once a week* ▪ *Mechanically separated meat: once a week* ▪ *Meat products: at the frequency decided and recorded by the producer as part of the HACCP- based plan.* ***Note:** minced meat and meat preparation establishments producing on average less than 2 metric tonnes per week of product (minced meat and meat preparations combined production) intended to be eaten cooked are not required to take samples. This will be reviewed in 2007.*
• **Definition of 'Batch'** ***2073/2005 Article 2***	*"Batch" means a group or set of identifiable products obtained from a given process under practically identical circumstances and produced in a given place within one defined production period.*
ADVICE - BATCHES OF PROCESSED MEAT	
Batches	*A batch is defined as product produced under near-identical production conditions. The product in the batch must be able to be identified and located and the information on how to do this must be recorded. It is the ability to describe and identify batches of production that will determine the batch size and this will differ under different production conditions.* *The following information is provided to assist food business operators in identifying a batch and how to take the 5 samples.*
Minced meat	*A batch could be one hopper load of meat after mincing. If the meat is then packed into retail packs, 5 packs should be selected throughout the batch of packs produced from the hopper and either sent to the laboratory or a sample may be taken from each pack. Samples may also be taken from the hopper attempting to sample as randomly as possible or from one large pack if the meat is stored in bulk.*
Meat preparations / Meat products	*For comminuted products such as burgers, sausages or salami, a similar approach should be taken as for minced meat.* *For meat preparations/ products made with large pieces of meat then the description of batch will determine when and how 5 units to sample are*

	selected.
Mechanically Separated Meat	*The production process will influence the definition of batch. This must be recorded and the product in a batch must be able to be identified and differentiated from product in other batches.*
Sample information	*Information about the batch of processed meat samples must be recorded on a sample form. This should include* ▪ *Name and species of product e.g. beef burger, turkey mince, pork kebabs* ▪ *Pack description e.g. retail 500g pack* ▪ *Physical state e.g. fresh or frozen* ▪ *Details of any modified atmosphere packaging (MAP)* ▪ *Date of production* ▪ *Source of meat (slaughterhouse, farm), traceability code*
OPERATOR'S OBLIGATIONS - LABORATORY PRACTICE	
• **The laboratory testing the samples must use the specified. ISO methods Alternative methods and modifications can be agreed with the CA.** ***B7***	*The laboratory undertaking testing for the food business operator should use the organism-specific method*: ▪ *For Salmonella this is EN/ISO 6759* ▪ *For Enterobacteriaceae this is ISO 21528-2* ▪ *For E.coli this is ISO 16649-1* ▪ *For Aerobic Colony count this is ISO 4833.* *Modifications to the methods such as the use of single plates for ACC can be used as long as the laboratory is accredited for the modified procedure.* ***Official Controls*** *- if the testing is undertaken under official control procedures the laboratories must be accredited by UKAS www.ukas.com*
• **Laboratory test portions - processed meat** ***B7***	*The test portion size for minced meat, mechanically separated meat, meat preparations and meat products is specified in the Regulation for Salmonella as either 25g or 10g.* *The laboratory test portion weight for minced meat, mechanically separated meat or meat preparations for ACC and EC examination is not specified in the Regulation so the ISO standard (6887-2) should be followed which specifies a 25g sample.* *The laboratory must be able to obtain both test portions from each sample*

	it receives. Test portions should be taken from throughout the sample including the surface and the interior. Preparation of the initial suspension for meat and meat products is described in ISO 6887-2.
ADVICE - LABORATORY PRACTICE	
Laboratory methods	*Ideally, the laboratory undertaking testing for the food business operator should be accredited by UKAS www.ukas.com for the examinations required in meat samples.* *As a minimum it should take part in a recognised proficiency testing scheme for the examinations required e.g. FEPAS www.csl.gov.uk/fepas.cfm.* *If contracting a laboratory to undertake microbiological testing, ask to see the accreditation schedule and the proficiency test results ideally for the two previous years.*
Pooling of samples	*For Salmonella examinations the 5 test portions can be pooled to give one 50g test portion (5 x 10g) or one 125g test portion (5 x 25g) saving on examination costs. These test portions must then be enriched in a 10 fold dilution of BPW.* ***Note**: if the derogation is applied then pooling of test portions cannot be undertaken - see Section C3.*
Samples from cattle, sheep, horses, pigs and goats	*Sponges from red meat carcases are to be examined for Salmonella, ENT and ACC.* ▪ *Add 90 mls of Buffered Peptone Water (BPW) to the swab to make a total of 100 mls (taking into account the 10mls added previously).* ▪ *Agitate the sample using a peristaltic homogeniser taking care to minimise foaming.* ▪ *Remove 10mls of BPW for ACC and ENT enumeration and follow the ISO method incubate the remainder with the sponge for 16-20 hours at 37^{o}C and proceed with salmonella determination as per the ISO method.*
Samples from turkeys and broilers	*Neck skins are to be examined for Salmonella.* *Compose a 25g sample from 3 approximately 10g neck skins. Aim to include material from all three skins avoiding fat.* *Follow the ISO method for Salmonella by adding the 25g neck skin sample to 225ml BPW.*

OPERATOR'S OBLIGATIONS - REPORTING RESULTS	
• **Reporting results for ENT & ACC** ***B7, B1***	*Results for red meat carcases for ENT and ACC must be calculated as the log number of organisms per area of carcase tested.* *The mean log value of the 5 carcases sponged per sampling session can then be calculated by adding the 5 individual log results together and dividing by 5. The mean log is then compared with the criteria.*
• **Reporting results for Salmonella** ***B7, B1***	*Results for Salmonella for red meat carcases must be reported as absence or presence in the area sponged.* *Results for Salmonella on poultry carcases must be reported as presence or absence in 25g of neck skin sample.*
ADVICE - REPORTING RESULTS	
Results database	*Enter results into the meat data base at www.ukmeat.org .* *The home page provides details of how to obtain a plant specific password and there is currently a resource facility to assist producers with entering results. The site contains information to help with calculation, expression and interpretation of results.*

B14 Samples shall be taken from processing areas and equipment used in food production when such sampling is necessary for ensuring the criteria are met. In that sampling the ISO standard 18593 shall be used as a reference method. *2073/2005 Article 5 point 2*	
OPERATOR'S OBLIGATIONS - PROCESSING ENVIRONMENT	
• **Undertake sampling and testing of the processing environment** ***B14***	*Sampling the process environment can be useful to validate and verify the cleaning procedures.* *When the criteria for carcases or processed meat are not met, sampling of the processing environment MUST BE CONSIDERED as part of your investigatory action.* *The ISO standard 18593 provides useful information and should be used as the reference method.*
ADVICE - PROCESSING ENVIRONMENT	
Rapid methods	*Rapid methods can also provide valuable information on the effectiveness of*

	cleaning. *Further information is available at www.ukmeat.org.*

C. LABELLING REQUIREMENTS

C1. When the requirements for Salmonella in minced meat, meat preparations and meat products intended to be eaten cooked of all species set down in Annex I are fulfilled, the batches of those products placed on the market must be clearly labelled by the manufacturer in order to inform the consumer of the need for thorough cooking prior to consumption. *2073/2005 Article 6*	
OPERATOR'S OBLIGATIONS - COOKING INFORMATION	
• **Label minced meat, meat preparations and meat products intended to be eaten cooked to inform the consumer of the need for thorough cooking prior to consumption.** ***C1***	*Food business operators responsible for the production of raw minced meat, meat preparations and meat products intended to be cooked before consumption, for which there is a Salmonella criterion, must label products to be sold at retail with cooking information.* *For such food made from poultry meat this requirement expires on 1.1.2010 because Salmonella is expected to be controlled in poultry flocks as a result of national control programmes (under the Zoonoses Regulation 2003/99).* *The Agency has taken advice from the Advisory Committee on the Microbiological Safety of Food, and considers that it will be sufficient to indicate clearly that the food requires cooking aided by cooking times and temperatures where appropriate for example for burgers and sausages.*
ADVICE	
Best Practice	*The wording should not include internal temperatures, as these are not easily measured by the consumer. Symbols can be used, as long as they are used in conjunction with appropriate wording.* *The FSA's Safer Food Better Business advice pack provides guidance* www.food.gov.uk/foodindustry/hygiene/implementstrategy/enforcertoolkit/ *Examples of good practice are:* *1. Cook in a hot (x ^{o}C) oven for x minutes until piping hot in the centre* *2. Grill for x minutes per side until piping hot in the centre* *3. Raw meat requires cooking.*
Guidance	*Guidance produced for caterers may be helpful:* *For information about 'Safe Food, Better Business' produced by FSA England see http://www.food.gov.uk/foodindustry/hygiene/sfbb/*

	For information about 'CookSafe' produced by FSA Scotland see http://www.food.gov.uk/foodindustry/hygiene/cooksafe/ *For information about 'Safe Catering' contact FSA Northern Ireland e-mail: esther.chartres@foodstandards.gsi.gov.uk or phone 028 9041 7737.* *For information about guidance materials in Wales contact the Environmental Health Department of the local county borough council or FSA Wales – e-mail: keith.blake@foodstandards.gsi.gov.uk or phone 029 2067 8902.*
Safe Handling	*In addition to cooking information, label raw meat and products containing raw meat appropriately to give the following safe handling advice:* ▪ *Store raw meat separately from cooked meat and other ready to eat foods* ▪ *Wash hands and preparation utensils after handling raw meat* ▪ *Keep refrigerated UNTIL USE.*

C2. A transitional derogation is granted until 31 December 2009 as regards compliance with the value set in Annex I for Salmonella in minced meat, meat preparations and meat products intended to be eaten cooked placed on the national market of a Member State.

The Member States using this possibility shall notify the Commission and other Member States thereof. The Member State shall:

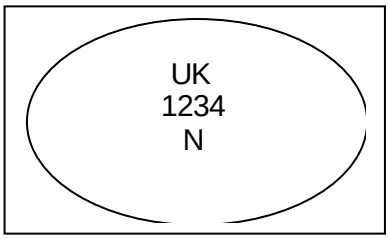
C3. (a) Guarantee that the appropriate means, including labelling and a special mark which cannot be confused with the identification mark provided for in Annex II, Section I to Regulation (EC) No 853/2004, are in place to ensure the derogation applies only to the products concerned when placed on the domestic market, and that products dispatched for intra-Community trade comply with the criteria laid down in Annex I.

(b) Provide that the products to which such transitional derogation applies shall be clearly labelled that they must be thoroughly cooked prior to consumption.

(c) Undertake that when testing against the Salmonella criteria pursuant to Article 4, and for the result to be acceptable as regards the transitional derogation, no more than one out of five sample units shall be found to be positive.

2073/2005 Article 8

OPERATOR'S OBLIGATIONS - TRANSITIONAL DEROGATION	
	Salmonella in Minced Meat, Meat Preparations and Meat Products
• **Decide whether the minced**	***Transitional derogation*** *- until 1.1.2010, the 'removal from the market' action need not always be taken when the criteria for Salmonella in minced*

meat, meat preparation or meat product is only to be sold on the UK home market and is intended to be eaten cooked. ***C2***	*meat, meat preparations and poultry meat products intended to be eaten cooked are not met. Under the derogation, absence of Salmonella in at least 4 out of 5 sample units taken (rather than in all 5) would allow the product to remain on the market in the UK provided that the special mark shown in C3 is applied.* *This derogation does not apply to food produced in the UK that is exported to another Member State. Food produced under the derogation may with the agreement of the importing country be exported to a destination outside the EU.* *The Agency has notified the Commission that UK food business operators may apply the derogation.*
	Special Identification Mark
• **Label with the special national mark.** ***C3***	*Manufacturers will need to comply with the requirement to clearly label all such products with the national special mark (indicating it is marketed under the derogation).* *In the UK the 'special mark' is an oval touching the four sides of a surrounding oblong. It is not acceptable for the outer part of the special mark to be 'implied' by the border of a label applied to packaging.* ***The special mark***  *There is no size or pack position requirement.* *Within the oval ,the letters UK, the approval number of the premises of manufacture / production, and the letter N to denote that the product is for the national market only, must be clearly displayed.* *The general requirements for identification marks in Regulation 853/2004, Annex II Section I, paragraph B5 must be met, i.e. the special mark must be: clearly displayed; legible; in indelible ink; and the characters must be easily decipherable. (The mark is not to be confused with the oval identification mark required by Article 5 (1)(b) of Regulation 853/2004 - see*

	PART TWO Chapter 11).
• **Decide whether to manufacture under the derogation.** ***C2***	*The decision to manufacture under the derogation should take into consideration the prevalence of Salmonella in the product. Applying the derogation may result in fewer batches having to be withdrawn from the market and lower cost for the producer.* *Food business operators may produce a range of products at an establishment not all of which are produced under the derogation and need to be marked. The details of which products the food business operator wishes to produce under the derogation and needs to apply the special mark to should be detailed in their HACCP based procedures.* *The decision to apply the derogation should be made **in advance** of manufacture of a product line.*
• **Place only on the UK market.** ***C2***	*Meat marked with the special mark can only be sold in the EU on the market of the Member State where it was produced.*
• **Label with cooking information** ***C2***	*Clearly label that the product must be thoroughly cooked prior to consumption. The cooking information applied for product produced under the derogation should not be different to that required to inform the consumer of the need for thorough cooking (see C1).*
ADVICE - TRANSITIONAL DEROGATION	
Derogation	*The meat produced under the derogation may not be any different to meat that is not derogated. The difference is in the action required concerning withdrawal of product.* *However, as only a small percentage of batches are tested (1 batch a week per establishment is estimated to be less than 1% of total UK production) the effect on the consumer risk of exposure to a contaminated product is only minimally effected by applying the derogation.* *It is important to understand that consumer protection is not achieved by the withdrawal of product but by the corrective actions for future production that are required if a product is found to contain Salmonella both derogated and non derogated (D1).*

D. UNSATISFACTORY RESULTS

D1. When the results of testing against the criteria set out in Annex 1 are unsatisfactory the food business operator shall take the measures laid down in paragraphs 2 to 4 of this article together with other corrective actions defined in their HACCP based procedures and other actions necessary to protect the health of consumers. In addition they shall take measures to find the cause of the unsatisfactory results in order to prevent the recurrence of the unacceptable microbiological contamination

When testing against food safety criteria provides unsatisfactory results the product or batch of foodstuffs shall be withdrawn or recalled from the market in accordance with Article 19 of Regulation (EC) No 178/2002. However products that are not yet at retail may be subject to further processing by a treatment eliminating the hazard.

2073/2005 Article 7

OPERATOR'S OBLIGATIONS - ACTION WHEN CRITERIA HAVE NOT BEEN MET

	FOOD SAFETY CRITERIA
• **Take the action specified in the last column of Annex I together with other actions specified in a food safety management plan when the criteria have not been met.** ***D1***	*Salmonella in minced meat, meat preparations MSM and meat products.* *The batch tested must be removed from the market if one or more of the 5 samples is positive for Salmonella (2 or more if produced under the derogation see C3). If the test portions have been combined into a single test portion for examination then this action is triggered if the combined test portion is positive (B7).* *If the product is produced under the derogation, test portions need to be examined separately to take advantage of only withdrawing batches where 2 or more of the 5 samples are confirmed as positive for Salmonella (B7).* *If the product is at retail and intended to be cooked it must be withdrawn. If the product is ready to eat a recall is required. Regulation 178/2002 provides the legal basis for these actions and the requirements for providing point of sale notices and informing the Food Standards Agency must be followed. For product intended to be cooked, the Agency would not normally place this information on its website. However in appropriate circumstances (such as an ineffective withdrawal) the Agency may decide to inform consumers.* *In all cases when the criteria have not been met and Salmonella has been detected in one or more of the 5 samples action should be taken to improve future production and improve consumer protection. This should include a review of the source of meat and on-farm action plans for control of Salmonella.*

	Note this corrective action is triggered when one or more processed meat samples is positive for meat produced under the derogation. It is only the withdrawal from the market that is triggered when 2 or more samples are positive.
	PROCESS CRITERIA
• **Take the action specified in the last column of Annex I tables together with other actions specified in a food safety management plan when the criteria have not been met.** ***D1***	*When the process criteria have not been met, Annex I to the Regulation requires that a review of the hygiene of production is undertaken. Additionally for Salmonella on poultry and pig meat carcases, review the biosecurity procedures of the farm of origin.*
ADVICE – CORRECTIVE ACTION	
Food Safety and Process Criteria corrective action	*Useful information for producers can be found in* ▪ *Defra codes of practice for producing poultry and pigs* ▪ *ZAP 13 point action plan for pig producers* ▪ *FSA guidance on biosecurity for poultry production* ▪ *FSA red meat safety information booklet* ▪ *FSA producing beef for slaughter a guide for producers*
ADVICE – SALMONELLA TYPING	
Serotyping Salmonella Isolates	*Serotyping Salmonella isolates will provide information that can be useful in pinpointing the source and also provide information on the significance of the Salmonella detected in terms of human disease.* *The Agency has established a typing and anti-microbial resistance facility for Salmonella isolates from meat carcases and processed meat.* *Instruct the testing laboratory to retain the records of presumptive Salmonella isolates at the end of the ISO procedure and follow the*

	procedure for arranging typing. *See www.ukmeat.org for details on how to request a bio bottle and a prepaid label to forward the isolate to one of four national laboratories. Isolating laboratories may also claim a small fee to cover the costs involved with processing the isolate.* *Results of the typing will be available at www.ukmeat,org protected by password for individual operators and as freely accessible nationally compiled data. The data from typing will be made available for the risk assessment to be undertaken by the EU to assess the proportionality of the Salmonella criteria on raw meat.*

D2. Food business operators shall analyse trends in test results *2073/2005 Article 7*	
OPERATOR'S OBLIGATIONS – ANALYSIS OF TRENDS	
• **Use trends in results to inform future production** ***D2***	*Trends in results may reveal unwanted developments in the manufacturing process enabling the food business operator to take corrective actions before the process is out of control.* *Results must be expressed in a format that allows trends to be seen.*
ADVICE	
FSA meat database	*Using a chart showing the results of testing for the previous 12 months will allow trends to be seen easily.* *Trend information can be generated automatically by the FSA's meat database accessible at www.ukmeat.org. The database facility has been developed to assist in the interpretation of individual business's results as well as providing accessible national data sets on a UK wide basis. Individual operator's data are password protected. There is currently a resource facility to help operators enter data, details of which are given on the home page.*

2.3.2 WHAT ARE THE OFFICIAL CONTROL REQUIREMENTS?

The competent authority shall verify compliance with the rules and criteria laid down in this Regulation in accordance with Regulation EC No 882/2004.

2073/2005 Article 1

Audits of HACCP-based procedures shall verify that food business operators apply such procedures continuously and properly, having particular regard to ensuring that the procedures provide the guarantees specified in Section II of Annex II to Regulation (EC) 2004. They shall, in particular, determine whether the procedures guarantee, to the extent possible, that products of animal origin: (a) comply with microbiological criteria laid down under Community legislation.

854/2004 Article 4 point 5a

2.3.3 APPLYING PROCEDURES CONTINUOUSLY AND PROPERLY

The operator is responsible for food safety in the food business.

852/2004 Article1 point 1a

Food … business operators at all stages of production, processing, and distribution within the businesses under their control shall ensure that foods [ ] satisfy the requirements of food law which are relevant to their activities and shall verify that such requirements are met.

178/2002 Article 17

	Operator Responsibilities for Microbiological Criteria
• **Operator responsibility includes applying and verifying the company's procedures for complying with microbiological criteria. This will include any microbiological sampling and testing procedures, keeping relevant records and the taking of corrective action if those procedures fail.**	***Operator Responsibility*** *includes maintaining and monitoring procedures for complying with microbiological criteria and taking corrective action if there is a failure.* ***These procedures should be based on HACCP principles -*** *see PART THREE Chapter 1 (Application of HACCP Principles).* ***Delegation*** *– responsibility for applying and verifying the company's products comply with microbiological criteria may be delegated to a nominated person. The HACCP based procedures would require microbiological problems to be reported to that person, who must have authority to ensure that corrective action is taken when necessary.* ***Verification*** *– undertake regular management checks to check if company procedures are being followed regarding the compliance with microbiological criteria.*

	Frequency of verification *– this will depend on the likelihood of a problem being found. Once a month may be sufficient for checking experienced staff who are following established procedures and if microbiological test results are generally acceptable/satisfactory and corrective action has not been required. The work of new or temporary people who are less familiar with the procedures and premises may need to be monitored more frequently.* ***Records*** *– keep an accurate, dated account (e.g. in the Food Safety Management diary) of the date and result of the periodic verification checks, test results and of any corrective action taken. Test results should also be entered into the FSA database for meat food business operators at www.ukmeat.org (see 2.2. General Information).* ***Corrective action*** *- take action when there is evidence of non-compliance with criteria. Further action may be necessary if there has been a failure to initiate corrective action or the planned corrective action fails to prevent a re occurrence this may include:* ▪ *Investigating the hygiene of slaughter, dressing and or processing;* ▪ *Investigations in relation to the laboratory service; and* ▪ *Improving staff instructions and training.*

TABLE 1 - SAMPLING FREQUENCY FOR RED MEAT CARCASES

<table>
<tr><th colspan="2" rowspan="2">Category</th><th rowspan="2">Annual throughput per species per year</th><th colspan="2">Sampling frequencies</th></tr>
<tr><th>Initial Frequency
(may include pre-11.1.06 tests*)</th><th>Reduced Frequency if results are satisfactory</th></tr>
<tr><td rowspan="2">Standard</td><td rowspan="2">1</td><td rowspan="2">Over:
20,000 cattle or horses;
100,000 pigs or sheep or goats.
(>400 or 2,000/week)</td><td><u>Enteros and APC</u>:
5 carcases once a week for 6 weeks for each species
(6 x 5 = 30 samples / species)</td><td><u>Enteros and APC</u>:
5 carcases once every 2 weeks.</td></tr>
<tr><td><u>Salmonella</u>:
5 carcases once a week for 30 weeks for each species
(30 x 5 = 150 samples / species)</td><td><u>Salmonella</u>:
5 carcases once every 2 weeks.</td></tr>
<tr><td rowspan="7">Small</td><td rowspan="2">2</td><td rowspan="2">Below 20,000 but over:
7,500 cattle or horses;
Below 100,000 but over 37,500 pigs or sheep or goats.
(>150 or 750/week)</td><td><u>Enteros and APC</u>:
5 carcases once a week for 2 weeks for each species
(5 x 2 = 10 samples / species)</td><td><u>Enteros and APC</u>:
5 carcases once every 4 weeks.</td></tr>
<tr><td><u>Salmonella</u>:
5 carcases once every 4 weeks for each species.</td><td><u>Salmonella</u>:
no reduction</td></tr>
<tr><td rowspan="2">3</td><td rowspan="2">Below 7,500 but over 1,500 cattle or horses;
Below 37,500 but over 7,500 pigs or sheep or goats.
(>30 or 150/week)</td><td><u>Enteros and APC</u>:
5 carcases once a week for 2 weeks for each species.
(5 x 2 = 10 samples/ species)</td><td><u>Enteros and APC</u>:
5 carcases on one day every 12 weeks.</td></tr>
<tr><td colspan="2"><u>Salmonella</u>:
not required</td></tr>
<tr><td rowspan="2">4</td><td rowspan="2">Below 1,500 but over 500 cattle or horses;
Below 7,500 but over 2,500 pigs or sheep or goats.
(>10 or 50/week)</td><td><u>Enteros and APC</u>:
5 consecutive carcases for each species
(5 samples/ species)</td><td><u>Enteros and APC</u>:
5 consecutive carcases 1 year after last satisfactory series.</td></tr>
<tr><td colspan="2"><u>Salmonella</u>:
Not required</td></tr>
<tr><td rowspan="2">5</td><td rowspan="2">Below 500 cattle or
Horses or 2,500 pigs or sheep or goats.
(<10 or 50/week)</td><td colspan="2"><u>Enteros and APC</u>:
Not required</td></tr>
<tr><td colspan="2"><u>Salmonella</u>:
Not required</td></tr>
</table>

** Tests undertaken pre 11.01.06 can be used to qualify for reduced frequency testing. For enterobacteriaceae and aerobic plate count the tests carried out for the Meat (HACCP) Regulation may be used. For salmonella the sampling and testing method must be as specified in this chapter.*

TABLE 2 - SAMPLING FREQUENCY FOR POULTRY MEAT CARCASES

Category		***Annual throughput of turkeys or broilers***	***Sampling frequencies (One sample is three neck skins)***	
			Initial Frequency *(may include pre-11.1.06 tests**)*	***Reduced Frequency if results are satisfactory***
Standard	**1**	Over 7,500,000 *(>150,000/week)*	***Salmonella***: 5 samples once a week for 30 weeks for each species *(30 x 5 = 150 samples)*	***Salmonella***: 5 samples once every 2 weeks
Small	**2**	Below 7,500,000 but over 1,000,000 *(>20,000week)*	***Salmonella***: 5 samples once every 4 weeks for each species	***Salmonella***: No reduction
	3	Below 1,000,000 (*<3,000/week)*	***Salmonella***: Not required	

*** Tests for salmonella undertaken pre 11.01.06 can be used to qualify for reduced frequency testing providing the sampling and testing method was as specified in this chapter.*

PART THREE

3. SPECIFIED RISK MATERIAL (SRM)

3.1 WHY IS CORRECT HANDLING AND DISPOSAL OF SRM IMPORTANT?

The correct removal, handling, staining and disposal of specified risk material (SRM) in slaughterhouses and cutting plants is necessary to ensure that public health is protected from the possible risks associated with Transmissible Spongiform Encephalopathies (TSEs) in cattle, sheep and goats. Procedures that minimise the risk of TSE infectivity entering the food chain must be in place.

For example:

- Complete removal, staining and proper disposal of SRM will prevent SRM entering the food chain and therefore minimise the TSE risk to public health.
- Washing hands after handling SRM, and between handling SRM and handling the carcase, should minimise risk of cross-contamination.
- The use of leak-proof, properly lidded SRM storage and transport bins will reduce the risk from leaks and spillage.

3.2 GENERAL INFORMATION

- **What is SRM?**

  Specified Risk Material (SRM) is those parts of cattle, sheep and goats that are most likely to contain the BSE agent in infected animals. It is essential, therefore, that it is removed from both the human and animal food chains and destroyed.

- **Which parts of cattle, sheep and goats is SRM?**

  The parts classified as SRM are set out in Annex XI of EC Regulation 999/2001 *as amended*. This Regulation is directly applicable in the UK and is administered and enforced through:

  - **England** - The Transmissible Spongiform Encephalopathies (No. 2) Regulations 2006 (SI No. 2006/1228) (www.opsi.gov.uk/si/si2006/20061228)
  - **Scotland** – The TSE (Scotland) Regulations 2006 (as amended) (SSI No. 2006/530) (http://www.opsi.gov.uk/legislation/scotland/ssi2006/ssi_20060530_en.pdf)
  - **Wales** – The Transmissible Spongiform Encephalopathies (Wales) Regulations 2006 (SI No. 2006/1226 (W.117)) (www.opsi.gov.uk/legislation/wales/wsi2006/20061226e.htm)
  - **Northern Ireland** – The Transmissible Spongiform Encephalopathies Regulations (Northern Ireland) 2006 (SR No. 2006/202) (www.opsi.gov.uk/sr/sr2006/20060202.htm)

  Important note: Annex XI of EC 999/2001 has been amended several times and care must be taken to maintain awareness of any changes in definitions as they arise.

  - **The current Community TSE Regulation definition of SRM is:**

Cattle	**All ages:** The tonsils, the intestines, from the duodenum to the rectum, and the mesentery. **Over 12 months:** Skull excluding the mandible but including the brains and eyes, and spinal cord. **Over 24 months:** Vertebral column, excluding the vertebrae of the tail, the spinous and transverse processes of the cervical, thoracic and lumbar vertebrae, the median sacral crest and the wings of the sacrum, but including the dorsal root ganglia.
Sheep and Goats	**All ages:** The spleen and the ileum. **Over 12 months (or permanent incisor erupted)**: Skull including the brains and eyes, tonsils, spinal cord.

  The definition applies in **all** EU Member States.

- **How am I notified of changes to the rules?**

  The Agency will write to all approved slaughterhouses and cutting plants to advise Food Business Operators (FBOs) of proposed changes to the rules and to consult on their potential impact. The FSA will also write to advise when changes come into force and explain what businesses need to do to comply. **It is important that all FBOs read and retain this correspondence.**

- **Disposal of SRM**

  SRM is classified as Category 1 animal by-product and must, after staining, be disposed of in accordance with The Animal By-Products Regulations 2005.

  www.opsi.gov.uk/si/si2005/20052347.htm

  Guidance on disposal is available in a separate FSA publication – Industry Guide on Edible Co-products and Animal By-products, see http://www.food.gov.uk/multimedia/pdfs/ediblecoprod.pdf

OPERATOR'S OBLIGATIONS	*ADVICE*

3.3.1 WHAT ARE THE LEGAL REQUIREMENTS FOR SPECIFIED RISK MATERIAL?

The following sections set out the requirements of the TSE and ABP Regulations for the prevention of SRM contamination and requirements for SRM removal, handling, staining and disposal.
Note: References to the legal requirements refer to the England legislation. Where necessary, please refer to the separate legislation for Wales, Scotland and Northern Ireland (see Section 3.2 above).

A. TRAINING & HACCP

A1. Food business operators ensure that food handlers are supervised and instructed and/or trained in food hygiene matters commensurate with their work activity.

*852/2004 Annex II **Training:** Chapter XII point 1*

TSE (No 2) Regulations 2006 (SI 2006/1228): Schedule 6, paragraph 3

	Training, Instruction & Supervision
• **Make sure that food handlers are supervised and instructed and/or trained in food hygiene matters commensurate with their work activity.** ***A1*** • **Put in place specific working instructions detailing the measures to prevent contaminating meat with SRM.** ***B2***	*Arrange or establish a staff training programme to ensure that all staff involved in the removal, separation, staining and disposal of SRM are fully aware of the requirements of the regulations to enable then to operate a system that complies with the regulations.* *Put in place written procedures and staff instructions for SRM management. Communicate those procedures to staff and that they are applied consistently. These are to include all necessary measures to avoid contaminating meat with SRM during slaughter (including stunning) and removal of SRM. Where head meat is removed specific working instructions should be put in place for the prevention of contamination of head meat during harvesting, in particular in the case when the seal is lost or the eyes are damaged.* *Supervise as appropriate and issue reminders if lapses occur.* *Keep accurate, dated records to show what instruction/ training individuals have received. Each person's training records must be kept for as long as they work at the premises.* *See also PART TWO Chapter 6 (Training) Section A1.*

OPERATOR'S OBLIGATIONS	*ADVICE*

A2. Food business operators shall put in place, implement and maintain a permanent procedure or procedures based on the HACCP principles. *852/2004 Article 5 point 1*	
	HACCP-based Procedures
• **Implement and maintain a permanent procedure or procedures based on the HACCP principles.** ***A2, B2***	*Include in the relevant HACCP plan, key procedures for removing, staining and disposing of SRM, the limits that are to be monitored (no visible contamination) the checks to be carried out, the corrective actions to be taken to ensure the safety of the meat and the records to be kept of those checks and actions.* *Include the measures taken to prevent contamination of meat with SRM during slaughter (including stunning) and removal of SRM.* *Cross reference can be made to existing staff instructions and protocols that explain procedures in detail.* *See PART THREE Chapter 1 (Application of HACCP principles).*

OPERATOR'S OBLIGATIONS	*ADVICE*

B. BOVINE HEADS AND TONGUES

B1. Laceration of central nervous tissue by means of an elongated rod-shaped instrument introduced into the cranial cavity after stunning shall not be carried out on bovine, ovine of caprine animals whose meat is intended for human or animal consumption. *Regulation (EC) No. 999/2001 (as amended) Annex XI Chapter A point 4* *TSE (No 2) Regulation 2006: Schedule 6 paragraph 5*	
	Pithing
• **Do not lacerate the central nervous tissue of cattle, sheep or goats intended for human consumption by inserting a rod into the cranial cavity after stunning (known as pithing).** ***B1***	*Cattle, sheep and goats must not be pithed as this could disperse potentially contaminated central nervous system tissue (CNS) throughout animal's blood stream during slaughter.* ***Captive bolts** - to prevent possible cross contamination, where captive bolt stunning is used, the captive bolt should, if possible, be wiped clean after each use with disposable wipes, which should then be discarded as SRM.*

B2. Head meat of bovine animals above 12 months of age shall be harvested at slaughterhouses, in accordance with a control system, recognised by the competent authority, to ensure the prevention of possible contamination of head meat with central nervous system tissue. **B3. The provisions of point 7 shall not apply to the harvesting of tongue in accordance with point 6 nor to the harvesting of cheek meat in the slaughterhouse if performed without removing the bovine head from the conveyor or hooks.** *Regulation (EC) No. 999/2001 (as amended) Annex XI Chapter A points 6,7 & 9* *TSE(No 2) Regulations 2006: Schedule 6 paragraphs 6 & 7*	
	Head Meat of Cattle over 12 Months
• **Implement a control system (recognised by MHS) to prevent contamination of head meat with central nervous system (CNS) tissue.** • **Include at least the following provisions:** ▪ **Harvesting is to take place**	*Heads must not be despatched to any other premises in UK or any other member state, for the purpose of head meat harvesting.* *Produce a protocol for removal of head meat. This should take into account the specific requirements set out in Regulation 999/2001 outlined in the adjacent column, under 'Operator's Obligations'. Describe contamination prevention measures and CNS testing requirements in a protocol that includes:*

OPERATOR'S OBLIGATIONS	*ADVICE*
in a dedicated area, physically separated from the other parts of the slaughter line. ▪ **Where heads are removed from the conveyor or hooks before harvesting head meat, seal the frontal shot hole and *foramen magnum* with an impermeable and durable stopper.** ▪ **Where the brainstem is sampled for laboratory testing for BSE, seal the *foramen magnum* immediately after that sampling.** ▪ **Do not harvest head meat from heads where the eyes are damaged or lost immediately prior to, or after slaughter, or which are otherwise damaged in a way which might result in contamination of the head with central nervous tissue.** ▪ **Do not harvest head meat from heads that have not been sealed properly as above.** ▪ **Central Nervous System (CNS) testing.** ***B2*** • **Tongue is not regarded as**	*1. The point on the slaughter line from which the head is removed.* *2. Where the head is to be removed to if meat is not intended to be removed immediately or if the line speed is faster than the speed at which meat can be removed from each individual head. Heads awaiting removal of meat should be held on a rack and **not** together in a container.* *3. Where CNS sampling is to be undertaken, this should be situated in an area separate from the slaughterline.* *4. Who is to undertake the sampling. Only trained personnel should be used.* *5. The equipment and practices to be used in taking the sample so as to prevent contamination of meat with CNS material.* *6. The action to be taken if, during head meat removal, either of the bungs or eyes become dislodged. The protocol should indicate that heads must be disposed of and the table and equipment used for harvesting to be thoroughly cleaned before work is undertaken on any further heads.* *7. The sampling regime including method and frequency (see Head Meat Sampling plan below).* *8. Where harvested meat is to be collected.* *9. Procedures covering disposal of heads.* *10. Cleaning & Disinfection regimes during harvesting and at the end of the day, in compliance with hygiene legislation.* ***Captive bolts** - Where captive bolt stunning is used, plug the captive bolt hole to prevent leakage of SRM (fragments of CNS tissue) during handling and dressing.* *Exercise care and take all appropriate hygiene precautions*

OPERATOR'S OBLIGATIONS	*ADVICE*
head meat so the cross-contamination control system and CNS sampling plan specified in Point 7 do not apply to its harvest nor to the harvesting of cheek meat in the slaughterhouse if performed without removing the bovine head from the conveyor or hooks. *B3*	*when detaching heads.* ***Flaying** - ensure skinning is complete when bovine heads are flayed.* ***Inspection point** - the head inspection point should be situated close to the place where the head is detached from the carcase. Transport the head to this point in a manner that is hygienic and minimises the potential for cross-contamination of meat or surroundings with SRM.* ***Bovine brains and eyes** - bovine brains and eyes must only be removed for permitted use (e.g. instructional, diagnostic or research purposes) and must not cause contamination to meat intended for human consumption.* ***Horns** – cattle horns are not SRM so can be harvested. However the cornual process of the frontal bone is SRM in cattle over 12 months of age as it is part of the skull. Care must be taken not to break into the cranial cavity during horn removal.*
	Head CNS Sampling Plan
• **Apply a sampling plan using an appropriate laboratory test to detect CNS tissue and verify that the measures to reduce contamination are properly implemented.** *B2*	***Central Nervous System testing** – a CNS testing regime is required to be implemented if head meat harvesting is undertaken after the head has been removed from the conveyor or hooks.* *The head CNS sampling plan to be followed is attached at Annex A.*

B4. Tongues of bovine animals of all ages intended for human or animal consumption shall be harvested at the slaughterhouse by a transverse cut rostral to the lingual process of the basihyoid bone. *Regulation (EC) No. 999/2001 (as amended) Annex XI Chapter A point 6* *TSE (No 2) Regulation: Schedule 6 paragraph 6*	
	Bovine Tongues
• **Remove bovine tongues by a**	*Complete flaying and washing of the detached head before*

OPERATOR'S OBLIGATIONS	*ADVICE*
transverse cut rostral to the lingual process of the basihyoid bone. ***B4***	*tongues are harvested.* *The cut should be applied at the level of the last vallate papillae. Any material behind the last vallate papillae must be disposed of as SRM. See illustrated poster prepared by the MHS and distributed in July 2003. (http://www.food.gov.uk/multimedia/bigimages/srmoncattletongue.jpg)* *Trim tongues to remove any residual connective tissue;* *In animals tested for TSEs, tongues must remain correlated with the carcase pending receipt of the results.*

OPERATOR'S OBLIGATIONS	*ADVICE*

C. REMOVAL OF SRM – BOVINES

CS: REQUIREMENTS FOR SLAUGHTERHOUSES

CS1. Specified risk material shall be removed at:

(a) Slaughterhouses, or, as appropriate, other places of slaughter;

(b) Cutting plants, in the case of vertebral column of bovine animals;

(c) butchers shops, specifically authorised and registered for the removal of vertebral column from animals 24 – 30 months of age at slaughter

Regulation (EC) No. 999/2001 (as amended), Annex XI, Chapter A, points 5, & 10(b)

The TSE (No 2) Regulations 2006: Schedule 6 paragraph 8

CS2. (1) Any person who removes specified risk material in any premises other than premises in which that specified risk material may be removed under point 5, point 10(a) or point 10(b) of Part A of Annex XI to the Community TSE Regulation is guilty of an offence.

The TSE (No. 2) Regulations 2006, Schedule 6, paragraph 8(1)

CS3. When a bovine animal is slaughtered, the occupier of the slaughterhouse must remove all specified risk material (other than those parts of the vertebral column that are specified risk material) as soon as is reasonably practicable after slaughter and in any event before post-mortem inspection.

The TSE (No. 2) Regulations 2006, Schedule 6, paragraph 9(1)

	SRM Removal
• **All bovine SRM, except vertebral column, must be removed in the slaughterhouse, as soon as practicable after slaughter but before post mortem inspection.** ***CS1, CS2, CS3***	*Present carcases for inspection only after all appropriate SRM has been removed.* ***Green Offal*** *- (i.e. intestines, from the duodenum to the rectum, and mesentery are SRM in bovine animals of all ages) - remove green offal completely and hygienically from the carcase and present for inspection. Carry out total separation of the intestines from other green offal in the gut room. This must include the whole length of intestines including any bag used in bunging. Intestines and the mesentery, which are categorised as SRM, must be placed immediately in an SRM bin and subsequently stained without undue delay - see Section E below.* ***Spinal Cord*** *- SRM in bovine animals over 12 months at slaughter) - remove spinal cord from bovine carcases using a designated tool or knife to remove the meninges, fat and debris from the spinal canal so that no fragments of spinal*

OPERATOR'S OBLIGATIONS	*ADVICE*
	cord can remain in the spinal canal; ▪ *Ensure spinal cord and meninges do not come into contact with the floor or other surfaces of the slaughterhouse;* ▪ *Cover chain mail gloves with rubber gloves;* ▪ *Change protective clothing as often as necessary to minimise cross-contamination;* ▪ *Wash hands frequently;* ▪ *Use clean, sterilised tools for each carcase;* ▪ *Wash hands and sterilise tools after removal of SRM from each carcase;* ▪ *Where cleavers are used, the operative should examine the carcase for fragments of SRM and trim any bone spicules and dispose of them as SRM;* ▪ *Where bone dust is removed from the cut surface of the vertebral column using a low pressure warm water wash, the washings must be prevented from contaminating the slaughter hall or other carcases.*

CS: REQUIREMENTS FOR SLAUGHTERHOUSES

CS4. The FBO must consign any meat containing those parts of the vertebral column that are specified risk material as soon as is reasonably practicable –

(a) in the case of any animal that is aged over 30 months at slaughter, to a cutting plant authorised under paragraph 13(1)(a) or to another member State in accordance with the second paragraph of point 13 of Part A of Annex XI to the Community TSE Regulation; and

(b) in the case of any animal that is aged 30 months or less at slaughter, to a cutting plant, to a butcher shop authorised and registered under paragraph 14 or to another member State in accordance with the second paragraph of point 13 of Part A of Annex XI to the Community TSE Regulation.

The TSE (No. 2) Regulations 2006, Schedule 6, paragraphs 9(2)

CS5. A control system shall be put in place for the removal of the vertebral column as specified in point 1(a)(i). The system shall include at least the following measures:

(a) when removal of vertebral column is not required, carcases or wholesale cut of carcases of bovine animals containing vertebral column shall be identified by a blue stripe on the label referred to in Regulation (EC) No 1760/2000;

(b) a specific indication of bovine carcases or wholesale cuts of carcases, from which removal of vertebral column is required and from which removal of

OPERATOR'S OBLIGATIONS	*ADVICE*

vertebral column is not required, shall be added to commercial documentation.

Regulation (EC) No. 999/2001 (as amended), Annex XI, Chapter A, Point 14(a) & (b)

CS6. The FBO must identify meat containing vertebral column that is not specified risk material in accordance with point 14(a) of Part A of Annex XI to the Community TSE Regulation and provide information in accordance with point 14(b) of that Part.

CS7. No person shall include a blue stripe in the label referred to in Article 13 of Regulation (EC) No. 1760/2000 except in accordance with point 14(a) of Part A of Annex XI to the Community TSE Regulation

The TSE (No. 2) Regulations 2006, Schedule 6, paragraphs 9(3) - 9(4)

	Vertebral Column Consignment
Make sure that: • **Carcases of animals aged over 30 months at slaughter are consigned to a cutting plant authorised to remove the vertebral column, as soon as is reasonably practicable (or to another Member State).** • **Carcases of animals aged between 24 and 30 months may also be consigned to:** ▪ **any approved cutting plant (a specific authorisation is not required), or** ▪ **a butcher shop authorised and registered to remove VC by its Local Authority, or** ▪ **other Member States.** ***CS4***	*Carcase and wholesale cuts containing vertebral column may be sent to butchers shops and cutting plants in the following circumstances:* ***To butchers shops (24-30m carcases only)** – make sure that only butcher shops that have been specifically authorised and registered by the local authority are supplied with carcases of 24-30m cattle. Ask the butcher to provide a copy of the authorisation and check that this is in order before the consignment is despatched.* ***To cutting plants** - no specific authorisation to remove SRM VC from carcases of 24-30m is required. Cutting plants authorised to remove VC from OTM animals can, of course, also remove VC from the carcases of 24-30m animals.* ***Labelling** – carcases under 24 months must have a blue stripe applied to the label. Carcases of animals 24m and over should have a plain white label.* ***Transport** – the RMOP for receiving premises (cutting plants and butcher shops) requires segregation between carcases containing SRM VC and those that do not, during transportation and beyond. Meat dispatched to such operators should therefore ensure segregation between carcases containing SRM VC and those that do not.*

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	Blue Stripe Labels
• **Mark the label applied to meat containing vertebral column that is not SRM with a blue stripe.** ***CS5*** • **Do not apply a blue stripe to the label of any carcase that contains SRM VC.** ***CS7***	*The presence of the blue stripe is an indicator that the VC is not SRM and therefore need not be removed. A label without a blue stripe indicates that the VC is SRM and must be removed.* *The absence of the blue stripe is an indicator that the VC is SRM, so must be removed. Any carcase or part carcase without a label or with a plain label should have the VC removed as SRM.* *Marking an over 24m carcase with a blue stripe label is an offence.*
	Documentation
• **Record the specific number of carcases/part carcases requiring VC removal as SRM and those not requiring VC removal as SRM on commercial documentation.** ***C6***	*The specific number of carcases/part carcases from which removal of VC is required and the number of those from which removal of VC is not required must be recorded separately in the commercial documentation accompanying the consignment.*

CC: REQUIREMENTS FOR CUTTING PLANTS

CC1. Specified risk material shall be removed at:

(a) Slaughterhouses, or, as appropriate, other places of slaughter,

(b) Cutting plants, in the case of vertebral column of bovine animals.

(c) butchers shops, specifically authorised for the removal of vertebral column from animals 24 – 30 months of age at slaughter.

Regulation (EC) No. 999/2001 (as amended) Annex XI Chapter A point 5 & 10(b)

The TSE (No 2) Regulations 2006: Schedule 6 paragraph 8

CC2. (2) In the case of a cutting plant, it is an offence to remove -

(i) any part of the vertebral column that is specified risk material from any animal aged over 30 months at slaughter; or

(ii) in circumstances where the meat containing the specified risk material has been brought into England from another member State, any part of the vertebral column that is specified risk material from any bovine animal aged 30 months or less at slaughter, unless the plant is authorised under paragraph 13(1)(a)

OPERATOR'S OBLIGATIONS	*ADVICE*

The TSE (No. 2) Regulations 2006, Schedule 6, paragraph 8(2)	
	Vertebral Column Removal Authorisation
• **Only remove SRM vertebral column from over 30-month carcases cutting plants specifically authorised to do so by the MHS.** ***CC1*** • **Only remove SRM VC from imported over 24 month carcases in cutting plants authorised to remove VC from domestically produced OTM animals.** ***CC2***	*All approved cutting plants are permitted to remove SRM vertebral column from UK-slaughtered 24-30 month bovine carcases and this may occur without MHS presence.* *Only cutting plants that have been authorised under paragraph 13(1)(a) of Schedule 6 to the Transmissible Spongiform Encephalopathies (No. 2) Regulations 2006 are permitted to remove VC from domestic OTM and imported over 24 month carcases;* *To be authorised to remove VC from OTM carcases or imported carcases over 24 months, obtain in application pack available from the MHS.* *OTM and imported carcases must only be unloaded/ processed when the MHS is present on site.* *The MHS should be given 24 hours notice of the arrival of such consignments.*

CC: REQUIREMENTS FOR CUTTING PLANTS

CC3. The occupier of a cutting plant authorised under paragraph 13(1) commits an offence unless, as soon as reasonably practicable after arrival at the plant of meat, and in any event before meat is removed from the plant, he removes from the meat -

(a) all specified risk material of a kind to which the authorisation relates; and

(b) where the meat is from a bovine animal aged 30 months or less at slaughter, those parts of the vertebral column that are specified risk material.

CC4. In the case of meat derived from a bovine animal aged 30 months or less at slaughter that has not been brought into England from another Member State, the occupier of a cutting plant not authorised under paragraph 13(1)(a) commits an offence unless he removes from the meat those parts of the vertebral column that are specified risk material as soon as practicable, and in any event before the meat is removed from the premises.

CC5. In the case of meat derived from a bovine animal aged 30 months or less at slaughter that has not been brought into England from another Member States, the

OPERATOR'S OBLIGATIONS	*ADVICE*
occupier of a butcher shop authorised and registered under paragraph 14 commits an offence unless he removes from the meat those parts of the vertebral column that are specified risk material before the meat is removed from the premises. *The TSE (No. 2) Regulations 2006, Schedule 6, paragraphs 15–17*	
	Vertebral Column Removal (Cutting Plants)
• **Remove VC that is SRM from meat as soon as reasonably practicable after it arrives and in any event before the meat leaves the plant.** ***CC3, CC4, CC5***	***Vertebral column*** *- SRM in bovine animals over 24 months at slaughter.* ***Documentation*** *- commercial documentation must be checked to verify that the number of carcases received with blue stripe labels matches the number of carcases shown as not requiring VC removal, and that the number of those without blue stripe labels matches the number shown as requiring VC removal.* ***RMOP*** *- removal of SRM VC must take place in accordance with the relevant protocol and operator's required method of operation (RMOP).* *Copies of the protocol and examples of the RMOP are available from SRM Branch of the FSA in the case of 24-30m carcases (Tel: 020-7276-8329) and the MHS (Tel: 01904-456193 – OTM Approvals) in the case of over 30m carcases.* ▪ *Carry out random checks of carcases for spinal cord and inform the MHS if any is found.* ▪ *Maintain effective separation of carcases containing SRM and those not containing SRM at all times.* ▪ *Ideally, carry out de-boning in a single batch on a dedicated line.* ▪ *It is best practice to clean after each batch has been processed. Clean and disinfect after each day's production in compliance with Food Hygiene legislation.* ▪ *Hold carcases in a separate secure chiller or on separate dedicated rails.* ▪ *Make sure that SRM is removed by staff adopting the necessary hygiene measures to avoid the risk of cross-contamination e.g. avoid touching the carcase with*

OPERATOR'S OBLIGATIONS	*ADVICE*
	hands or implements that have been used to remove, or have come into contact with, SRM without washing/cleaning in between. ▪ *After removal from the carcase, handle SRM so that there is no contact with any other animal material.* ***Staining & Disposal** – following removal, vertebral column must be stained and sent for disposal as SRM Category 1 ABP - see Section E.*

OPERATOR'S OBLIGATIONS	*ADVICE*

D. REMOVAL OF SRM – SHEEP AND GOATS

DS: REQUIREMENTS FOR SLAUGHTERHOUSES

DS1. Specified risk material shall be removed at: slaughterhouses, or, as appropriate, other places of slaughter.

Regulation (EC) No. 999/2001 (as amended), Annex XI, Chapter A, point 5

DS2. When a sheep or goat is slaughtered, the occupier of the slaughterhouse must remove all specified risk material (other than the spinal cord when the carcase is to be consigned to a cutting plant for removal of the spinal cord)) as soon as reasonably practicable after slaughter and in any event before post-mortem inspection.

(2) In the case of a sheep or goat over 12 months at slaughter, or which has a permanent incisor erupted through the gum, he must as soon as is reasonably practicable after slaughter –

(a) Remove the spinal cord at the slaughterhouse before the post-mortem inspection;

(b) Send the meat to a cutting plant authorised under paragraph 13(1)(b); or

(c) In accordance with the first paragraph of point 13 of Annex XI to the Community TSE Regulation, send the meat to a cutting plant in another member State provided that the Food Standards Agency has entered into a written agreement with the competent authority of the receiving Member State, and the dispatch is in accordance with that agreement.

The TSE (No. 2) Regulations 2006, Schedule 6, paragraph 10

DS3. It is an offence to remove the spinal cord or any part of it from a sheep or goat aged over 12 months at slaughter or that had one or more permanent incisors erupted through the gum (other than for the purposes of veterinary or scientific examination) except by-

(a) Longitudinally splitting the whole vertebral column; or

(b) Removing a longitudinal section of the whole vertebral column including the spinal cord.

The TSE (No. 2) Regulations 2006, Schedule 6, paragraph 12

	Sheep & Goat SRM
• **Remove all sheep and goat SRM in the slaughterhouse (except spinal cord in carcases that are to be consigned to a cutting plant authorised to remove spinal cord).** ***DS1***	*Present carcases for inspection only after all appropriate SRM has been removed.*

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	Skull, including brain and eyes, and tonsils
• **Remove all sheep and goat SRM as soon as practicable after slaughter but before post mortem inspection (except spinal cord in carcases that are to be consigned to a cutting plant authorised to remove spinal cord).** ***DS2***	*The skull, including brain and eyes, and tonsils are SRM in sheep and goats over 12 months or with one or more permanent incisors erupted through the gum.* ***Horns** – if horns are to be removed, do this carefully without breaking into the cranial cavity to prevent contamination of the horns by central nervous system tissue. Such removal must occur before the head is detached from the carcase.* ***Heads** - exercise care and all hygienic precautions when detaching the head to avoid SRM contamination of the carcase, adjacent carcases and the environment.* ***Head meat** - recovery of head meat from sheep and goats over 12 months of age must only occur at the slaughterhouse where appropriate facilities exist and the operation can be carried out hygienically.* *If tongue or cheek meat is to be removed for human consumption, flay the head first. Then remove the meat taking care not to contaminate the meat with brain or tonsil material. Remove any remaining visible traces of brain or tonsil.* ***Staining & disposal** – after head meat has been recovered, stain the remainder of the head and dispose of it as SRM Category 1 ABP – see Section E.*
	Spleen
• **Remove all sheep and goat SRM as soon as practicable after slaughter but before post mortem inspection(except spinal cord in carcases that are to be consigned to cutting plant authorised to remove spinal cord).**	*Spleen is SRM in sheep and goats of all ages.* *Spleens must be removed completely and, wherever possible, whole. Ideally, separation of the spleen from green offal should take place in the slaughter hall. Make sure individual spleens are presented to MHS staff for inspection and that these remain correlated with relevant carcases until inspection is completed;* ***Staining & disposal** – following inspection, the spleen*

OPERATOR'S OBLIGATIONS	*ADVICE*
DS2	*must be stained and disposed of as SRM Category 1 ABP – see Section E.*
	Ileum
• **Remove all sheep and goat SRM as soon as practicable after slaughter but before post mortem inspection(except spinal cord in carcases that are to be consigned to cutting plant authorised to remove spinal cord).** *DS2*	*The Ileum is SRM in sheep and goats of all ages.* *Ileum separation should take place in the gut room after post-mortem inspection in accordance with the following:* ▪ To allow for a margin of error, approximately 60 cms (24") of intestine, from the ileocaecal junction towards the small intestine, should be removed. Note: Staff are not required to measure the length of intestine but to use their judgement. ▪ *The removed section of small intestine must be treated as SRM Category 1 ABP. If the ileum is not separated from the intestines, it and any attached intestine must be treated as SRM category 1 ABP.* *An illustrated poster prepared by MHS and distributed in September 2003 is available at:* *www.food.gov.uk/multimedia/bigimages/sheepgoatileum.jpg* ***Staining & disposal** – following inspection, the ileum must be stained and disposed of as SRM Category 1 ABP – see Section E.*
	Young Lamb/Young Goat Stamp
• **An inspector may stamp a sheep or goat in a slaughterhouse with a young lamb stamp or a young goat stamp if the animal does not have a permanent incisor erupted through the gum and the documentation, if any, relating to the animal does not indicate that it is aged over 12**	*Ideally, sort sheep and goats in the lairage and identify batches intended to be classified as young lambs/young goats to MHS staff to enable the dentition check point to be adequately staffed.* *In consultation with the OV, establish a system for segregating carcases of sheep/goats eligible to bear the YL/YG stamp from those not eligible for the stamp.* *It is an offence to stamp a sheep or goat over 12 months of age or with a permanent incisor erupted, with a young lamb or goat stamp.*

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months at slaughter. ***The TSE (No. 2) Regulations 2006 Schedule 6 paragraph 11***	
	Spinal Cord
• **Once all SRM, except spinal cord has been removed, either:** ▪ **remove the spinal cord at the slaughterhouse before the post-mortem inspection; or** ▪ **send the meat to a cutting plant authorised by the FSA to remove SRM spinal cord; or** ▪ **send the meat to another Member State, provided the FSA has agreed in writing to its despatch, and the Member State for which it is destined has agreed in writing to receive it.** ***DS2*** • **Remove spinal cord that is SRM either by:** ▪ **longitudinally splitting the vertebral column; or** ▪ **removing a longitudinal section of the whole vertebral column including the spinal cord.** ***DS3***	*Spinal cord is SRM in sheep and goats over 12 months or with one or more permanent incisors erupted through the gum.* *Spinal cord must be removed at the slaughterhouse or, unless destined for another Member State, the carcase must be consigned to an authorised cutting plant for the spinal cord to be removed there.* *Make sure carcases containing SRM spinal cord are segregated from those that do not contain SRM spinal cord.* *Where the storage of carcases awaiting spinal cord removal as SRM is necessary, ensure the storage arrangements are secure and under the control of the OV.* *Make sure subsequent removal of spinal cord is carried out under the supervision of the MHS and that carcases are re-presented for inspection for compliance with the Regulations following removal of the spinal cord.* ***Removal** - the only permitted methods for removing spinal cord are:* ▪ *Splitting the vertebral column longitudinally and then removing the spinal cord; or* ▪ *Removing a longitudinal section of the vertebral column containing the spinal cord.* *It is an offence to remove the spinal cord by any other method, e.g. by suction method from an unsplit carcase* ***Staining & disposal** – following inspection, the spinal cord spleen must be stained and disposed of as SRM Category 1 ABP – see Section E.*

OPERATOR'S OBLIGATIONS	*ADVICE*

DC: REQUIREMENTS FOR CUTTING PLANTS

DC1. (1) Any person who removes specified risk material in any premises other than premises in which that specified risk material may be removed under point 5 or point 10(a) of Part A of Annex XI to the Community TSE Regulation is guilty of an offence.

(2) In the case of a cutting plant, it is an offence to remove –

(a) the spinal cord form any sheep or goat over 12 months at slaughter or which has a permanent incisor erupted through the gum, unless the plant is authorised for the purpose of such removal under paragraph 13(1)(b).

The TSE (No. 2) Regulations 2006, Schedule 6, paragraph 8

DC2. The occupier of a cutting plant authorised under paragraph 13(1) commits an offence unless, as soon as reasonably practicable after arrival at the plant of meat, and in any event before meat is removed from the plant, he removes from the meat – all specified risk material of a kind to which the authorisation relates.

The TSE (No. 2) Regulations 2006, Schedule 6, paragraph 15(a)

	Authorisation
• **Remove sheep and goat spinal cord that is SRM in slaughterhouses or, as appropriate, other places of slaughter, or in cutting plants specifically authorised for that purpose.** • **Do not remove the spinal cord from any sheep or goat over 12 months at slaughter or which has a permanent incisor erupted through the gum unless the plant is authorised.** ***DC1***	*It is an offence for cutting plants that are not authorised under paragraph 13(1)(b) of Schedule 6 to the Transmissible Spongiform Encephalopathies (No. 2) Regulations 2006 to remove SRM spinal cord.* *Requests for authorisation should be made to the FSA.*
	Spinal Cord Removal
• **Remove the spinal cord as soon as reasonably**	*Removal of the spinal cord must be carried out under MHS supervision.*

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practicable after arrival of the carcase at the authorised cutting plant, and in any event before meat is removed from the plant. ***DC2***	▪ *Make sure you give the MHS at least 72 hours' notice of the intention to remove SRM spinal cord to enable an MHS officer to attend.* ▪ *Make sure carcases awaiting the removal of spinal cord are stored securely and under the OV's control;* ▪ *Maintain effective separation of carcases containing SRM and those not containing SRM at all times;* ▪ *Where spinal cord is to be removed from a hot carcase prior to chilling, split the carcase with care to prevent contamination of the environment with spinal dust, and wash the carcase using a low-pressure warm water wash;* ▪ *After splitting carcases, wash all equipment and disinfect in hot water at a temperature of not less than 82°C.* ***Removal methods*** *– see DS3.*

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E. STAINING, STORAGE & CONSIGNMENT OF SRM

E1. All specified risk material shall be stained with a dye or, as appropriate, marked immediately on removal, and disposed of in accordance with the provisions laid down in Regulation (EC) No 1774/2002, and in particular, Article 4(2)

Regulation (EC) No. 999/2001 (as amended), Annex XI, Chapter A, point 11

E2. (1) The occupier of any premises where specified risk material is removed who fails to comply with point 11 of Part A of Annex XI to the Community TSE Regulation (staining and disposal of SRM) is guilty of an offence.

(2) For the purposes of that point –

(a) staining means treating the material (whether by immersion, spraying or other application) with –

(i) a 0.5% weight/volume solution of the colouring agent Patent Blue V (E131, 1971 Colour Index No 42051; or

(ii) such other colouring agent as may be approved in writing by the Secretary of State or the Food Standards Agency; and

(b) the stain must be applied in such a way that the colouring is and remains clearly visible –

(i) over the whole of the cut surface and the majority of the head in the case of the head of a sheep or goat; and

(ii) in the case of all other specified risk material, over the whole surface of the material.

E3. (1) Pending consignment or disposal from the premises on which it was removed, the occupier of the premises must ensure that specified risk material is adequately separated from any food, feedingstuff or cosmetic, pharmaceutical or medical product and held in an impervious covered container that is labelled as either –

(a) containing specified risk material; or

(b) Category 1 animal by-products and including the words "For disposal only".

E4. (2) He must ensure that the container is thoroughly washed as soon as reasonably practicable each time it is emptied, and disinfected before use for any other purpose.

The TSE (No. 2) Regulations 2006, Schedule 6, paragraphs 19 and 21

	Staining of SRM
• **Immediately after removal, stain all SRM with a dye and dispose of it in accordance with Regulation (EC) No 1774/2002.** ***E1*** • **Treat the material (whether by**	*SRM must be stained before it leaves the slaughterhall or cutting area unless doing so risks contamination of fresh meat, in which case stain must be applied in a suitable area as soon as the SRM leaves the slaughterhall or cutting area.* *The following is regarded as SRM and must be stained*

OPERATOR'S OBLIGATIONS	*ADVICE*
immersion, spraying or other application) with – ▪ **a 0.5% weight/volume solution of the colouring agent Patent Blue V (E131, 1971 Colour Index No 42051; or** ▪ **such other colouring agent as may be approved; and** ▪ **apply the stain so that the colouring is and remains clearly visible –** ▪ **over the whole of the cut surface and the majority of the head in the case of the head of a sheep or goat; and** ▪ **in the case of all other SRM, over the whole surface of the material.** ***E2***	▪ *Any material left attached to SRM (except SRM bovine vertebral column and sheep/goat spinal cord) after dissection of the carcase, e.g. red offal not intended for human consumption left with thymus attached.* ▪ *Any material that comes into contact with that material or with SRM after it has been removed from the carcase.* ▪ *Make sure adequate supply of 0.5% solution of Patent Blue V is available to meet staining requirements.* ▪ *Make sure stain is prepared correctly using measuring equipment.* *Stain should be applied to each layer of SRM and a suitable tool, dedicated to the task, used to stir the SRM to ensure the stain achieves optimum coverage.*
	Storage & Disposal of SRM
• **Stain all SRM immediately after removal, with a dye and dispose of it in accordance with Regulation (EC) No 1774/2002.** ***E1*** • **Make sure that before consignment or disposal, SRM is adequately separated from any food, feedingstuff or cosmetic, pharmaceutical or medical product.**	***Storage*** *- make adequate provision for the correct storage of SRM.* *Transfer SRM to correctly labelled storage containers without undue delay, The container labels must be indelibly marked with the words:* *"Contains SRM"; or* *"Category 1 animal by-products - For disposal only".* *Use only lidded storage containers that are made of impervious material and leak-proof.* ***Disposal*** *– must be in accordance with Regulation (EC) No 1774/2002 (The Community Animal By-products*

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• **Keep SRM in an impervious covered container that is labelled as either –** **(a) containing SRM; or** **(b) Category 1 animal by-products and including the words "For disposal only".** ***E3*** • **Wash the container thoroughly each time it is emptied, and disinfected before use for any other purpose.** ***E4***	*Regulation) – see 3.2 (General Information) above.* *Make provision for SRM to be removed from premises by appropriately approved Category 1 animal by-products collector. The local Animal Health Office should be able to provide details of collectors on request.* ***Guide** - guidance on disposal is available in a separate FSA publication – Industry Guide on Edible Co-products and Animal By-products, see www.food.gov.uk/multimedia/pdfs/ediblecoprod.pdf* *Maintain records of all SRM consigned from the premises and retain for 2 years.* ***Cleaning** - wash every container used for storing SRM thoroughly as soon as reasonably practicable each time it is emptied.* *Disinfect containers before use for any other purpose.*

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F. PROHIBITION ON MECHANICALLY RECOVERED MEAT PRODUCTION

F1. Bones of bovine, ovine and caprine animals shall not be used for the production of mechanically recovered meat.

Regulation (EC) No. 999/2001 (as amended), Annex XI, Chapter A, point 3

F2. In this paragraph "mechanically recovered meat" means the product derived from residual meat on animal bones by mechanical means (other than meat produced using hand held powered knives that do not use powered pressure or suction).

The TSE (No. 2) Regulations2006, Schedule 6, paragraph 4(3)

	Mechanically Recovered Meat
• **Do not use bones of bovine, ovine or caprine animals for producing mechanically recovered meat (MRM).** ***F1, F2***	***'Mechanically recovered meat'*** *means the product derived from residual meat on animal bones by mechanical means (other than meat produced using hand held powered knives that do not use powered pressure or suction).* *Make sure that bones of bovine animals, sheep and goats are not used for producing MRM.* *Cuts of bone-in meat cuts, from cattle, sheep or goats, that have been subject to any prior boning, are not to be further processed using mechanical separation machines e.g. Baader, Lima separator, as the product of such operations would be MRM.*

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3.3.2 WHAT ARE THE OFFICIAL CONTROL REQUIREMENTS?

The Community TSE Regulations require that Member States carry out frequent inspections to verify the correct application of the Regulations and that measures are taken to avoid any contamination, particularly in slaughterhouses and cutting plants where SRM is removed.

Regulation (EC) No. 999/2001 (as amended), Annex XI Chapter A point 12

Inspections must be carried out to check that the removal, separation and, where appropriate, marking of SRM is properly carried out.

Inspections must be carried out to ensure that meat plant operators take all necessary measures to avoid contaminating meat with SRM during slaughter (including stunning) and removal of SRM.

854/2004 Annex I Chapter II E

Audits must be conducted to verify continuous compliance with meat plant operators' own procedures concerning any collection, transport, storage, handling, processing and use or disposal of SRM for which the meat plant operator is responsible.

Audits must be conducted to ensure that operators' procedures guarantee, as far as possible, that meat does not contain SRM except as provided for under Community legislation (e.g. bovine carcases in slaughterhouses containing SRM VC) and has been produced in accordance with Community legislation on TSEs.

854/2004 Annex I Chapter 1 points 1 & 2(c)

Audits by officials of HACCP –based procedures shall verify that food business operators apply such procedures continuously and properly.

854/2004 Article 4 point 5

3.3.3 APPLYING PROCEDURES CONTINUOUSLY AND PROPERLY

The operator is responsible for food safety in the food business

852/2004 Article 1 point 1a

Food business operators shall put in place, implement and maintain a permanent procedure or procedures based on the HACCP principles.

852/2004 Article 5 point 1

Food… business operators at all stages of production, processing and distribution within the businesses under their control shall ensure that foods… satisfy the requirements of food law which are relevant to their activities and shall verify that such requirements are met.

Regulation (EC) No 178/2002, Article 17

	Operator Responsibilities for SRM
• **Operator responsibility**	***Operator Responsibility*** *– includes maintaining and*

OPERATOR'S OBLIGATIONS	*ADVICE*
includes applying and verifying the establishment's SRM handling and disposal procedures and taking corrective action if those procedures fail. • **Implement and maintain a permanent procedure or procedures based on the HACCP principles.**	*monitoring SRM management procedures and taking corrective action if there is a failure.* ***These procedures should be based on HACCP principles -*** *see A2 above and PART THREE Chapter 1 (Application of HACCP Principles).* ***Delegation*** *– responsibility for the application and verification of SRM handling and disposal procedures may be delegated to a nominated person, to whom problems are reported and who has sufficient authority to ensure that corrective action is taken when necessary.* ***Verification*** *– check at least daily that staff are following the establishment's SRM handling and disposal procedures. Work of new or temporary staff who may be less familiar with the procedures and premises may need to be monitored more frequently.* ***Records*** *– keep an accurate, dated account (e.g. in a diary/daybook) of each periodic verification check and of any corrective action taken.* ***Corrective action*** *– Take action when any failures of SRM handling and disposal procedures are identified.*

HEAD MEAT SAMPLING PLAN

REGIME (i)

WEEK 1	
1 - 200 heads /day	*On a daily basis, for every 50 heads the following samples should be taken.* *One sample from head (left or right cheek) prior to removal of head meat*[*1]*.* ***and*** *One sample of meat harvested from the head*[*2]*.*
>200 heads /day	*On a daily basis, for every 100 heads the following samples should be taken:* *One sample from head (left or right cheek) prior to removal of head meat*[*1]***.*** ***and*** *One sample of meat harvested from the head*[*2]*.*

Note: The samples need not be from the same head within the batch of 50 or 100.

Results: If all results negative the following Regime (ii) can be followed for Week 2. If positive results obtained, repeat Regime (i) until negative results obtained.

REGIME (ii)

WEEK 2	
Every 100 heads	*On a weekly basis, for every 100 heads the following samples should be taken:* *One sample from head (left or right cheek) prior to removal of head meat*[*1]***.*** ***and*** *One sample of meat harvested from the head*[*2]*.*

Note: The samples need not be from the same head within a batch of 100. The batch can straddle more than one day.

Results: If all negative results, the following Regime (iii) can be followed. If positive results obtained, repeat Regime (i) until negative results obtained then repeat Regime (ii) until negative results obtained before proceeding to Regime (iii).

REGIME (iii)

WEEK 3	
1 – 300 / week	*Over a fortnight the following samples should be taken.* *One sample from head (left or right cheek) prior to removal of head meat*[1]* ***and*** *One sample of meat harvested from the head*[2].* **Note : The samples need not be from the same head and need not be taken the same day over a fortnight**
>300 / week	*Over a fortnight the following samples should be taken* *Two samples each of* *A sample from head (left or right cheek) prior to removal of head meat*[1]* ***and*** *Meat harvested from the head*[2].* **Note: The four samples need not be taken from the same head. All four samples may not be from the one head.**

Results: If positive results received, revert to Regime (ii). If negative results then obtained revert back to regime (iii) or if positive results obtained, revert to Regime (i) until negative results obtained; then follow Regime (ii) until negative results obtained before moving back to Regime (iii).

*** NOTES**

***[1]** Where a sample is to be taken from the left or right cheek it should be ensured that material from the surface of the cheek is included in the sample.

***[2]** Where head meat is to be sampled from an individual head after removal from the head, the meat should be collected separately and the sample taken prior to the meat from that head being placed in the larger container holding meat from all heads.

PART THREE

4. TSE* TESTING

(*Transmissible Spongiform Encephalopathy)

2.1 WHY IS TSE TESTING IMPORTANT?

BSE (Bovine Spongiform Encephalopathy) testing of cattle aged over thirty months (OTM) slaughtered for human consumption provides assurance to consumers that no OTM cattle either with undetected clinical BSE or that are infected with BSE and close to developing clinical disease will be allowed to enter the food supply. Removal and destruction of any cattle that test positive for BSE will reduce the possible risk to consumers of exposure to BSE.

Testing of other cattle, sheep and goats for BSE or other TSE (Transmissible Spongiform Encephalopathy) diseases provides information on the level of these diseases in these animals. This information enables the effectiveness of disease control measures to be assessed and helps to ensure that controls to protect consumers are proportionate to the risk.

Failure to follow TSE test requirements would be a breach of UK and EU law and could undermine the public's confidence in the safety of UK meat production.

2.2 GENERAL INFORMATION

- **TSE Legislation**

  The rules for the prevention, control and eradication of TSEs, including the requirements for BSE/TSE testing are laid down in Regulation (EC) 999/2001[1] *as amended.* This Regulation is directly applicable in the UK and is administered and enforced through the following legislation:

  - **England** - The Transmissible Spongiform Encephalopathies (No.2) Regulations 2006 (SI No. 2006/1228) http://www.opsi.gov.uk/si/si2006/uksi_20061228_en.pdf
  - **Wales** - The Transmissible Spongiform Encephalopathies (Wales) Regulations 2006 (SI No. 2006/1226(W.117)) www.opsi.gov.uk/legislation/wales/wsi2006/20061226e.htm
  - **Scotland** - The TSE (Scotland) Regulations 2006 (SSI No. 2006/530) http://www.opsi.gov.uk/legislation/scotland/ssi2006/ssi_20060530_en.pdf
  - **Northern Ireland** - The Transmissible Spongiform Encephalopathies Regulations (Northern Ireland) 2006 (SR 2006 No. 202) - www.opsi.gov.uk/sr/sr2006/20060202.htm

- **Testing of OTM cattle slaughtered for human consumption**

  Cattle born or reared in the UK before 1 August 1996 are not eligible for the food supply. Regulation 999/2001 requires that cattle aged over 30 months at slaughter must receive a negative result from a BSE test before they are permitted to enter the food supply. Under national rules for the administration and enforcement of Regulation 999/2001, slaughter for human consumption of OTM cattle born on or after August 1996 may take place only in slaughterhouses that have been specially approved for BSE testing (by the MHS in GB or DARD in NI). It is illegal to slaughter OTM cattle for human consumption in a non-approved slaughterhouse.

  The approval process involves a series of steps. In summary these are:

  - the plant occupier must ensure that the plant meets certain minimum requirements (the prerequisites) for the OTM testing process to operate successfully. If the prerequisites are not in place, an application will not go forward for approval;
  - the plant occupier will need to prepare for discussion with their OV a detailed plan of how they intend to process OTM cattle in a way which complies with the legal requirements;
  - the plant occupier will then need to document the proposed OTM process in a "Required Method of Operation" (RMOP);

[1] http://europa.eu.int/servlet/portail/RenderServlet?search=DocNumber&lg=en&nb_docs=25&domain=Legislation&coll=&in_force=NO&an_doc=2001&nu_doc=999&type_doc=Regulation

- completed RMOPs are then subject to assessment by the MHS (DARD in NI). A process of discussion and amendment of the RMOP may then follow;
- once the RMOP has been finalised, a formal assessment trial for 2 days using cattle aged under thirty months to simulate OTM procedures must be carried out;
- once the trial has been completed successfully, the plant occupier will agree with the MHS/DARD the date on which OTM processing will start;
- on the first agreed day for OTM processing and before processing starts the OVS will sign the RMOP. The OV's signature constitutes approval of the premises to slaughter OTM cattle for human consumption.

Full guidance on the requirements for approval to slaughter OTM cattle for human consumption is contained in an application pack which may be requested from MHS/DARD. The contents of the application pack as well as information on brain stem sampling may be found on the Defra website at: www.defra.gov.uk/animalh/bse/otm/review/guidance-otm.htm

Contacts: Defra BSE Surveillance Unit: Tel: 020 7904 6324.
DARDNI Veterinary Service: Tel: 028 9052 0912.

- **Testing of other cattle slaughtered for human consumption**

  Regulation 999/2001 also requires that all cattle aged over 24 months
  - which have been subject to emergency slaughter; or
  - were found at ante-mortem inspection to be sick, injured or presenting some other abnormality such that the OV judges that testing is required;

  must receive a negative result from a BSE test before they are permitted to enter the food supply. Any OTM cattle born after 1 August 1996 discovered at post-mortem in a non-OTM-approved slaughterhouse must also be tested but are not eligible for the food supply.

- **Testing of sheep and goats slaughtered for human consumption**

  Regulation 999/2001 requires the UK to carry out TSE surveillance on sheep and goats, which includes testing a random sample of sheep and, currently, all goats slaughtered for human consumption aged over 18 months. The sheep and goat surveys are carried out only at specific plants that agree with Defra or DARD to participate.

- **Veterinary Laboratories Agency (VLA)**

  The Veterinary Laboratories Agency (www.defra.gov.uk/corporate/vla) is an Executive Agency of the Department for Environment, Food & Rural Affairs. It undertakes research, diagnosis and surveillance on livestock diseases, including TSEs.

OPERATOR'S OBLIGATIONS	*ADVICE*

2.3.1 WHAT ARE THE LEGAL REQUIREMENTS FOR TSE TESTING?

The following sections set out the requirements of the TSE regulations that apply to the testing of OTM cattle, other cattle, sheep and goats in slaughterhouses.

Note: References to the legal requirements refer to the England legislation. Where necessary, please refer to the separate legislation for Wales, Scotland and Northern Ireland (see Section 2.2 above).

A. OVER THIRTY MONTH (OTM) CATTLE

- **Required Method of Operation = 'RMOP'**

A1. It is an offence for the occupier to use a slaughterhouse to slaughter for human consumption a bovine animal aged over 30 months unless the Secretary of State has approved the Required Method of Operation for that slaughterhouse and that occupier.

The TSE (No. 2) Regulations 2006: Schedule 2, paragraph 4.1

A2. The RMOP must, as a minimum—

(a) describe the procedures that will be followed to comply with Part 1 of this Schedule; and

(b) describe all the systems and procedures specified in Part 2 of this Schedule.

The TSE (No. 2) Regulations 2006: Schedule 2, paragraph 4.2

A3. The Secretary of State shall approve the RMOP if she is satisfied that all the requirements of the Community TSE Regulation and these Regulations will be complied with, and the occupier must demonstrate this by means of an assessment of two days duration in which animals are slaughtered (using bovine animals under 30 months old unless the slaughterhouse is operating for the purposes of Commission Regulation (EC) No 716/96 adopting exceptional support measures for the beef market in the United Kingdom).

The TSE (No. 2) Regulations 2006: Schedule 2, paragraph 4.3

A4. If a bovine animal aged over 30 months is slaughtered for human consumption other than in accordance with the RMOP, the occupier of the slaughterhouse is guilty of an offence.

The TSE (No. 2) Regulations 2006: Schedule 2, paragraph 4.4

	Requirement for an approved RMOP
• **Obtain approval for BSE testing by having an approved RMOP before slaughtering any OTM cattle**	*Guidance on the slaughterhouse approval process is located at www.defra.gov.uk/animalh/bse/otm/review/guidance-otm.htm - 10*

OPERATOR'S OBLIGATIONS	*ADVICE*
for human consumption. ***A1*** • **The RMOP must describe the procedures that will be undertaken to comply with all the legislative requirements.** ***A2***	*See also 2.2 General Information.*
	RMOP approval
• **Undertake a 2-day trial of the procedures specified in the RMOP before the RMOP is approved.** ***A3***	*The requirement for a 2-day assessment trial is covered in the guidance on the approval process referred to above. The trial must be carried out using cattle aged under 30 months except in slaughterhouses contracted to carry out slaughter under the Older Cattle Disposal Scheme (OCDS). The MHS (DARD in NI) has delegated responsibility to approve RMOPs.*
	Compliance with RMOP
• **Make sure that slaughter and processing of all OTM cattle is carried out in accordance with the RMOP.** ***A4***	*Make sure the RMOP is fully complied with at all times. An amendment to the RMOP may be requested at any stage, for example if required due to changes in plant practices or facilities. The OV must be informed of intended amendments and sufficient time allowed for the OV to discuss these changes with the AOV. Amendments must be agreed and signed by both parties before being implemented.*

Contents of the RMOP

A5. Animal identification and separation

The RMOP must describe the system that enables -

(a) bovine animals born or reared in the United Kingdom before 1st August 1996 to be identified and ensures that they are not slaughtered for human consumption;

(b) bovine animals over 30 months of age but born on or after 1st August 1996 to be identified and ensures that they are sampled in accordance with this Schedule; and

(c) bovine animals subject to "special emergency slaughtering", or suspected of having a disease or condition that may adversely affect animal or human

health to be identified and ensures that they are sampled in accordance with this Schedule.

It must also describe the system that ensures that animals over 30 months of age are -

(a) batched together before slaughter separately from those aged 30 months or under; and

(b) slaughtered in batches separately from those aged 30 months or under.

A6. Brain stem sampling

The RMOP must show that there are -

(a) sufficient staff trained and competent in the taking, labelling, packaging and dispatch of brain stem samples;

(b) hygienic facilities for sampling; and

(c) sampling procedures that do not jeopardise the hygienic production of meat intended for human consumption.

It must describe how health and safety guidelines designed to minimise the risk of exposure of staff to BSE during brain stem sampling and packaging will be complied with.

A7. Correlation of sample to carcase and all other parts of the body

The RMOP must describe the system linking the brain stem sample of each bovine animal over 30 months of age to the carcase and all parts of the body of that animal (including the blood and the hide).

A8. Retention of carcases

The RMOP must describe the system that ensures that all carcases retained pending the receipt of the test result are retained in slaughter order either in a sealed or locked chiller or on a sealed or locked rail in an unsealed chiller.
It must describe how the occupier will ensure that there is suitable and sufficient chiller space for retaining carcases pending the receipt of the test result.

A9. Retention of parts of the body

The RMOP must describe the system that ensures that all parts of the body (including the blood and the hide) are retained pending the receipt of the test result.

A10. Disposal before receipt of the result

The RMOP must describe the disposal route for all carcases and all parts of the body (including the blood and the hide) retained pending the receipt of the test result but disposed of before the test result is received.

A11. Other measures following sampling

The RMOP must describe the systems in place that ensure that—

(a) brain stem samples are packaged in accordance with packaging instructions P650 of the European Agreement Concerning the International Carriage of Dangerous Goods by Road (version applicable as from 1 January 2005)[(2)];

(b) test results are received, either by fax or by other electronic means; and

(c) following a positive or a no-test result, everything required to be disposed of is identified and disposed of as SRM.

([2]) ISBN 92-1-139097-4.

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A12. Removal of vertebral column

The RMOP must describe the system that ensures that, in the case of a bovine animal for which a negative test result has been received—

(a) those parts of the vertebral column that are specified risk material are not removed in the slaughterhouse; and

(b) the meat containing that specified risk material is consigned to a cutting plant authorised to remove it.

The TSE (No. 2) Regulations 2006: Schedule 2, Part 2

	Contents of the RMOP
• **Document in the RMOP the procedures for OTM processing, covering all the processes specified in the legislation, in sufficient detail to allow someone walking into the plant for the first time to fully understand the processes.** ***A5 - A12***	*Guidance on drawing up the RMOP may be found at www.defra.gov.uk/animalh/bse/otm/review/abattoir-guidancermop.pdf* *A specimen protocol setting out the procedures a slaughterhouse needs to have in place before starting processing of OTM cattle for human consumption is at* www.defra.gov.uk/animalh/bse/otm/review/protocol-table.pdf *A blank RMOP template is at www.defra.gov.uk/animalh/bse/otm/review/blank-rmop.pdf*

A13. The occupier of a slaughterhouse in which a bovine animal over 30 months of age subject to normal slaughter for human consumption is slaughtered must -

(a) take a sample of brain stem in accordance with point 1 of Chapter C of Annex X to the Community TSE Regulation; and

(b) arrange for it to be delivered to an approved testing laboratory, and failure to do so is an offence.

The TSE (No. 2) Regulations 2006: Schedule 2, paragraph 3.1

	Brain stem sampling
• **Make sure that a correct brain stem sample is taken from all OTM cattle slaughtered for human consumption and sent to an approved testing laboratory.** ***A13***	*Guidance from the Veterinary Laboratories Agency on procedures for brain stem removal and sampling may be found at www.defra.gov.uk/animalh/bse/pdf/bsesampling030906.pdf* *Cattle in GB with 6 or 7 teeth erupted or in NI with 5 or 6 teeth erupted will be considered as possibly aged over 30 months.*

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	There are two possible courses of action: *(i) the carcase could be detained pending investigation by local Trading Standards Officers (TSOs) or DARD inspectors. It would then be allowed into the food chain only when and if the results of the investigations indicate that the animal can be accepted as not aged over 30 months and there is no other reason to suspect that the animal is aged over 30 months; or* *(ii) the slaughterhouse may decide to treat the animal as though it were aged over 30 months and to test it. In this case, all requirements related to testing OTM cattle for human consumption (e.g. retention and disposal) would apply. If the result is negative, the animal can be sold for human consumption.* *Any animal with 8 or more teeth (in NI: 7 or more) erupted and a passport indicating that it is under thirty month (UTM) will be considered as OTM and destroyed. This is because an animal with 8 teeth cannot be aged less than 30 months and fraud in relation to the cattle identification regulations must be suspected.*

A14. In relation to any sampled bovine animal, the occupier of a slaughterhouse must pending receipt of the test result, either –

(a) retain all carcases and all parts of the body (including the blood and the hide) that will have to be disposed of in the event of a positive result; or

(b) dispose of them in accordance with sub-paragraph (2) (A15 below).

The TSE (No. 2) Regulations 2006: Schedule 2, paragraph 5.1

A15. If a positive result is received for a sampled animal, he must immediately dispose as SRM of -

(a) the carcase and all parts of the body of that animal (including the blood and the hide); and

(b) the "one before and two after rule" must be applied, i.e. the carcase and all parts of the body (including the blood and the hide) of the animal immediately preceding that animal on the slaughter line and the two animals immediately following it, unless a derogation from this requirement has been granted.

The TSE (No. 2) Regulations 2006: Schedule 2, paragraph 5.2

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A16. **If no sample has been sent to an approved testing laboratory for testing, or if a no-test result is received, in respect of an animal required to be tested [A13 above], the occupier must immediately dispose as SRM of -**

(a) **the carcase and all parts of the body (including the blood and the hide) of that animal; and**

(b) **the "one before and two after rule" [see A15 above] must be applied, unless a derogation from this requirement has been granted,**

"no-test result" means a sample that an approved testing laboratory has certified cannot be tested for any reason.

The TSE (No. 2) Regulations 2006: Schedule 2, paragraph 5.3

A17. **The Secretary of State may grant in writing a derogation from the "one before and two after rule" if she is satisfied that there is a system in place that prevents contamination between carcases.**

The TSE (No. 2) Regulations 2006: Schedule 2, paragraph 5.4.

	Retention of products pending results and disposal
• **Retain all carcases and body parts of sampled animals, including the blood and the hide, until the BSE test result has been received.** ***A14***	*Guidance on the requirements for retention of carcases and body parts pending receipt of test results, and for disposal of carcases and body parts where a positive or no test result is received, may be found at* www.defra.gov.uk/animalh/bse/otm/review/protocol-table.pdf
• **Dispose of the carcase and all body parts of any animal that tests positive for BSE plus those of the 'one before and two after' i.e. the animal immediately preceding that animal on the slaughter line and the two animals immediately following it.** ***A15*** • **Dispose of the carcase and all body parts of any animal that receives a "no test" result plus those of the 'one**	***Hides*** *from tested animals may be either retained at the slaughterhouse under the official control until results are obtained from the approved testing laboratory or, provided procedures set out in an agreed protocol are followed, transported to hide premises.* *Guidance on hide procedures may be found at www.defra.gov.uk/animalh/bse/otm/review/guidance-otm.htm - 50* *and a template for the hide protocol at www.defra.gov.uk/animalh/bse/otm/review/annexa-hidepro.pdf*

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before and two after'. ***A16*** • **A derogation from the 'one before and two after' rule may be sought if there is a system in place preventing contamination between carcases.** ***A17***	*Strict conditions are applied for granting a derogation from the 'one before and two after rule'. The OV can advise on the type of arrangements for preventing contamination between carcases that might qualify.*

OPERATOR'S OBLIGATIONS	*ADVICE*

B. OTHER CATTLE

B1. The occupier of a slaughterhouse in which a bovine animal aged over 24 months subject to "special emergency slaughtering", or suspected of having a disease or condition that may adversely affect animal or human health is slaughtered must—
(a) take a sample of brain stem in accordance with point 1 of Chapter C of Annex X to the Community TSE Regulation; and
(b) arrange for it to be delivered to an approved testing laboratory, and failure to do so is an offence.

The TSE (No. 2) Regulations 2006: Schedule 2, paragraph 3.1

B2. The occupier of a slaughterhouse in which a bovine animal aged over 24 months subject to "special emergency slaughtering", or suspected of having a disease or condition that may adversely affect animal or human health is slaughtered must—
(a) take a sample of brain stem in accordance with point 1 of Chapter C of Annex X to the Community TSE Regulation; and
(b) arrange for it to be delivered to an approved testing laboratory,
and failure to do so is an offence.

The TSE (No. 2) Regulations 2006: Schedule 2, paragraph 3.1

	TSE Testing of 24-30 month animals
• **Sample for BSE testing any bovine animal aged over 24 months which is either subject to emergency slaughter identified by the OVS at ante-mortem inspection.** ***B1***	*To be able to sample these animals, slaughterhouses which are not approved to slaughter OTM cattle must have staff that have either received training directly from the Veterinary Laboratories Agency or have been trained by another member of staff who has received such training.* ***Non-approved slaughterhouses*** *- premises not approved to slaughter OTM cattle should agree an RMOP covering the procedures for handling any emergency slaughter or sick at ante mortem cattle aged between 24 – 30 months that are presented at the slaughterhouse.* *The arrangements for identification, slaughter, sampling, traceability, retention and disposal will be virtually identical to the requirements for the testing of OTM cattle. However, the RMOP for the testing of emergency slaughter and sick at ante-mortem cattle should be simpler to prepare as the testing/retention of one or two of these cattle on any given slaughter day should result in fewer logistical problems than the continuous full scale slaughter and retention of a larger number of OTM cattle.*

OPERATOR'S OBLIGATIONS	ADVICE
	As with the testing of OTM cattle, the slaughterhouse occupier is responsible for the packaging, labelling, collection and transport arrangements for samples taken from emergency slaughter and sick at ante-mortem cattle. *Where an animal requiring testing is identified in a slaughterhouse with no trained staff to remove the brain stem, it is the responsibility of the occupier to contact Defra (tel. 020 7904 6324) to arrange future VLA training, and to seek approval, for this one sample to be taken by the OVS, as an exceptional measure.* *If a further casualty over 24 months arrives prior to the receipt of formal training of staff by the VLA, the occupier should contact Defra (same number) for advice.*
	Fallen Stock
• **Detain the body of any bovine animal aged over 24 months that dies or is killed but not for human consumption and notify the competent authority within 24 hours.** ***B2***	*Circumstances may arise in which an animal has to be killed and disposed of as if it were fallen stock.* *Examples include:* ▪ *A bovine animal born before August 1996 delivered to any fresh meat slaughterhouse;* ▪ *Animals found at any fresh meat slaughterhouse without a passport and/or eartags in cases where it is not possible to correctly identify these animals.* *The OV can advise on whether an animal should be treated as fallen stock. Once the animal has been killed, phone Defra's free phone number on 0800 525890 (GB) so that the animal can be collected, tested for BSE and disposed of, free of charge.* *In Northern Ireland contact: Glenfarm Customer Services (Tel 028 9445 1919) to arrange for free collection.*

OPERATOR'S OBLIGATIONS	*ADVICE*

C. SHEEP AND GOATS

C1. In relation to any sampled sheep or goat, the occupier of a slaughterhouse must—

(a) retain the carcase and all parts of the body (including the blood and the hide) pending receipt of the test result; and

(b) in the event of a positive result, immediately dispose of the carcase and all parts of the body (including the blood and the hide) as SRM.

failure to do so is an offence.

The TSE (No. 2) Regulations 2006: Schedule 2, paragraph 5.5

	TSE Testing of Sheep and Goats
• **Retain all parts of the body of any sheep or goat sampled for testing pending receipt of the test result, except for any parts disposed of directly as SRM.** • **All parts of any sheep or goat that tests positive must be disposed of as SRM.** ***C1***	*Sampling of sheep or goats for TSE testing is carried out only at certain slaughterhouses that agree with Defra or DARD to participate in the survey. A specimen protocol for the slaughterhouse procedures for the sheep and goat surveys may be found at www.defra.gov.uk/animalh/bse/pdf/sheepgoat-abattoirguidance.pdf.*

OPERATOR'S OBLIGATIONS	*ADVICE*

2.3.2 WHAT ARE THE OFFICIAL CONTROL REQUIREMENTS?

The Official Veterinarian shall carry out inspection tasks in slaughterhouses [] placing fresh meat on the market in accordance with the general requirements of Section I, Chapter II, of Annex I, and with the specific requirements of Section IV, in particular as regards:

(f) laboratory testing

854/2004 Article 5 point 1

The Official Veterinarian is to ensure that sampling takes place and samples are appropriately idnetified and handled and sent to the appropriate laboratory with the framework of:

(b) specific laboratory testing for the diagnosis of TSEs in accordance with Regulation (EC) No 999/2001 of the European Parliament and the Council.

854/2004 Annex I Chapter II, Part F

Member States may also allow slaughterhouse staff to carry out specific sampling and testing tasks in accordance with Annex I, Section III, Chapter III, Part B.

854/2004 Article 5 point 6(b)

Slaughterhouse staff who have received specific training, under the supervision of the official veterinarian, carry out specific sampling and testing tasks in respect of animals of all species.

854/2004 Annex I Section III Chapter III Part B

2.3.3 APPLYING PROCEDURES CONTINUOUSLY AND PROPERLY

The operator is responsible for food safety in the food business.

852/2004 Article 1 point 1a

Food business operators shall put in place, implement and maintain a permanent procedure or procedures based on the HACCP principles.

852/2004 Article 5 point 1

Food… business operators at all stages of production, processing and distribution within the businesses under their control shall ensure that foods… satisfy the requirements of food law which are relevant to their activities and shall verify that such requirements are met.

178/2002 Article 17

	Operator Responsibilities for TSE Testing
• **Operator responsibility includes applying and verifying the company's**	***Operator Responsibility*** *includes maintaining and monitoring the testing arrangements (including those set out in the RMOP for the slaughter of OTM animals) and taking*

OPERATOR'S OBLIGATIONS	*ADVICE*
TSE testing procedures and taking corrective action if those procedures fail. • **Implement and maintain a permanent procedure or procedures based on the HACCP principles.**	*corrective action if there is a failure.* *Before having an RMOP approved, a process step identification and control plan must be produced. This plan must set out the major hazards involved in the processing of OTM cattle and the controls identified to minimise them.* *Guidance on procedures for monitoring and verifying the operation of the RMOP may be found in the outline process step identification and control plan at:* *www.defra.gov.uk/animalh/bse/otm/review/annexa.pdf*

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