Title: Changes to Pig Meat Inspection in June 2014

CONSULTATION SUMMARY PAGE

Date consultation launched: 25 March 2014
Closing date for responses: 6 May 2014

Who will this consultation be of most interest to?
Food Business Operators (FBOs) in FSA approved pig meat establishments, pig farmers, officials working in pig meat establishments.

What is the subject of this consultation?
UK implementation of directly applicable EU legislation that introduce changes to pig meat inspection that apply from June 2014. The changes include the visual inspection of pig carcases and offal by officials at post mortem; a strengthened Process Hygiene Criterion for Salmonella; and a more risk based Trichinella testing regime.

What is the purpose of this consultation?
Our plans for implementation are at an advanced stage, building on extensive discussions we have had with stakeholders, including industry groups and enforcement colleagues. The purpose of this consultation is to seek stakeholder views on the practical application of the changes in the UK and to determine whether the FSA's assumptions are a fair reflection of costs, benefits and wider impacts for stakeholders. The overall objective is to ensure that the controls are proportionate and risk-based, taking into account the latest scientific evidence and information and views from producers and consumers, and continue to provide public health, animal health and animal welfare protection.

Responses to this consultation should be sent to:
Name Linda Schidlof
Division/Branch EU Regulatory Reform
FOOD STANDARDS AGENCY
Tel: 02072768306
Fax: 02072768289

Postal address:
Food Standards Agency
EU Regulatory Reform
1st Floor, Zone B
Aviation House
125 Kingsway
London WC2B 6NH
Email: ReviewMeatControls@foodstandards.gsi.gov.uk

Is an Impact Assessment included
Yes ☒ No ☐

If you would prefer to receive future FSA consultations by e-mail, or if you no longer wish to receive information on this subject please notify the named person in this consultation.
Changes to pig meat inspection in June 2014

DETAIL OF CONSULTATION

Introduction

1. From June 2014, directly applicable EU legislation introduces three changes of direct relevance for pig slaughterhouses. They are:
   a. The visual inspection of pig carcases and offal by government officials by default, with incision and palpation used only in cases where the Official Veterinarian is of the opinion that there is a possible risk to public health, animal health or animal welfare;
   b. A strengthened Salmonella testing regime; and
   c. A more risk based Trichinella testing regime.

2. The changes are based on scientific evidence from the European Food Safety Authority, which identified that microbiological and parasitic contamination are the key hazards from pig meat and that traditional inspection measures are not effective at controlling these hazards. The changes aim to better protect public health in line with this evidence, and to provide a more risk based and proportionate system.

3. The new regulations were published in the Official Journal of the European Union on 8th March 2014:
   • Regulation 217/2014 of 7th March 2014 amending Regulation (EC) No 2073/2005 as regards Salmonella in pig carcases;

Proposals

Visual inspection of pig carcases and offal by government officials by default

4. From June 2014, officials working in pig slaughterhouses will no longer carry out routine incision and palpation of pig lymph nodes and organs. Palpation and incision will still be carried out where such further inspection procedures are deemed necessary. During ante mortem inspection, the Official Veterinarian will assess whether a batch of pigs or an individual animal requires further post mortem inspection procedures to judge the fitness for human consumption; and during post mortem inspection, officials may need to detain pig carcases or offal for closer inspection, for example where visible abnormalities suggest a generalised condition.

5. The criteria for visual inspection, developed in conjunction with industry and enforcers, are attached to this consultation, and we welcome final views on them.
Bovine TB surveillance

6. Commission Regulation 219/2014 requires the Official Veterinarian to carry out incision and palpation of the carcase and offal where, in his or her opinion, the provenance of the animals indicates a possible risk to animal health. Therefore, we propose that incision of head lymph nodes from spent breeding sows and boars from areas subject to annual TB testing of cattle herds should continue to be carried out. Defra regard this as a proportionate requirement which takes into account the fact that incision is the only effective surveillance method in pigs for bovine TB, which remains endemic in a large part of the country.

Salmonella testing

7. Under existing requirements, UK food business operators processing over 37,500 pigs a year are required to sample carcases and test for Salmonella as a process hygiene criterion. From June, the level of permitted positives will be reduced from 5 (the current level) to 3, out of 50 samples over a ten week period. The requirement still only applies to food business operators processing over 37,500 pigs a year; for those Food Business Operators processing less than 37,500 pigs a year (which is the majority) there is no change from the existing requirements.

8. The number of Salmonella samples taken in the slaughterhouse and the number of positive results found will be collected by the FSA. This data will be anonymised and submitted to the European Commission annually. The European Commission will gather similar data from all EU Member States.

9. Currently, Official Veterinarians need to monitor that corrective action is taken by the Food Business Operator when Salmonella trends start to approach non-compliance. From June, in the case of repeated unsatisfactory results the Food Business Operator will need to draw up an action plan to address the problem, which will be strictly supervised by the Official Veterinarian.

Trichinella testing

10. Food Business Operators are currently required to test 100% of pigs sent to slaughter for Trichinella, but this requirement has not been fully implemented in the UK. From June the Trichinella testing requirement will become more risk based.

11. The new legislation will set out testing requirements for:
   o All sows and boars or 10% of pigs from controlled housing conditions to be tested for Trichinella;
   o All pigs that do not originate from “controlled housing conditions” to be tested for Trichinella.

12. The requirements for “controlled housing conditions”, which mainly concern farmers, are set out in Regulation 216/2014 (see link on page 2). FSA data suggest that there are around 8.12m pigs that go for slaughter in England and Wales each year, out of which approximately 3% (243,600) are from what would be considered as holdings not operating controlled housing conditions (such as organic and free-range pigs) and would have to be tested under the proposal.
13. The housing conditions on the farm will need to be stated on the Food Chain Information accompanying the pigs from June.

14. The draft SI attached carries over the existing powers with regard to Trichinella currently set out in the Food Safety and Hygiene Regulations 2013. This SI is necessary as the new EU Regulation amends both articles and annexes, which means that the ambulatory references could not carry over all existing powers.

### Key proposal(s)

**Visual inspection of pig carcases and offal by government officials by default**

The key proposal is that officials no longer carry out incision and palpation inspection tasks as routine on pig carcases and their offal. The criteria to assist officials in deciding at ante or post mortem inspection whether a carcase or its offal require palpation and incision (or other inspection methods) are attached.

**Bovine TB surveillance**

The key proposal is that incision of head lymph nodes continues in breeding sows and boars from areas subject to annual testing for TB in cattle herds in England for the purposes of identifying pigs affected by bovine TB.

**Salmonella testing**

The key proposal is that the number of permitted positive results in any ten week period (or 50 samples) is reduced from five to three in slaughterhouses processing more than 37,500 pigs annually.

**Trichinella testing**

The key proposal is that all sows and boars or 10% of pigs from controlled housing conditions to be tested for Trichinella. To fulfil this, we propose that all sows and boars in the UK are tested (this is no change from the current situation). All pigs not from controlled housing conditions will require testing.

### Consultation Process

15. There has been ongoing communication with stakeholders throughout the EU negotiations of the proposals and during the development of the national application of the changes. The FSA held a number of ad hoc meetings with key organisations to help inform its discussions, and these meetings have informed this consultation and the accompanying Impact Assessments (IAs).

16. The draft criteria for visual inspection have been drawn up with the input from industry groups and colleagues working in enforcement at pig slaughterhouses. We intend to gather further final views over the consultation period, including through trialling the criteria in a number of slaughterhouses across the UK. The overall delivery of the work is led by a programme board with representation from both enforcement and industry representatives on it. We intend to run a series of workshops for enforcement colleagues in April to gather views and will also hold further meetings with industry bodies and trades unions in this period.
17. This consultation seeks your views on the key changes listed in the above box. A number of key questions are raised in the accompanying IAs and have been compiled in the box below for ease of reference. We would also be interested in your comments about any other aspect of the proposals that you would like to bring to our attention.

Questions asked in this consultation:

A. Visual inspection of pig carcases and offal by government officials by default

Q1: To provide assurance that visual inspection is effective in detecting conditions and the procedures are correctly implemented, the FSA intends for the inspection team to carry out verification tasks on a daily basis for a period of six months. The increased verification would be encompassed within existing daily activities, and would not place an increased burden on industry or enforcement. We invite stakeholders to comment on whether they agree with this assumption. If you disagree, please provide us with as detailed information and data as possible for us to monetise this potential cost.

Q2: We invite stakeholders to comment on whether our assumption that reporting cases of endocarditis is likely to impose minimal costs on Food Business Operators (FBOs). If you disagree, please provide as detailed information and data as possible (e.g. expected reporting arrangements adopted, associated time and resource requirements), so that we can monetise this potential cost.

Q3: It is our assumption, based on industry feedback, that the new requirements may cause a temporary increase in the number of detained carcases, and that this may slow down line speed and increase the inspection time per carcase in the short term. We invite stakeholders to comment on whether they agree with this assumption.

Q4: Meat inspectors are required to declare if red offal is unfit for human consumption, but the legislation does not specify who should remove any abnormalities found. As meat inspectors would no longer routinely carry knives, we are proposing that removal of abnormalities should be carried out by the FBO. We invite stakeholders to comment on whether they agree with this approach. If you disagree, please provide as detailed information and data as possible so that we can monetise any potential cost.

Q5: It is our assumption that in the longer term the new requirement will reduce inspection times per carcase which may lead to efficiency benefits to slaughterhouses. We invite stakeholders to comment on whether they agree with this assumption.

Q6: We invite stakeholders to comment on our proposed approach to the implementation of the requirement on Official Veterinarians to carry out incision and palpation of the carcase and offal where, in their opinion, the provenance of the animals indicates a possible risk to animal health. Our proposal is that that should include the continued incision of head lymph nodes from spent breeding sows and boars from areas subject to annual TB
testing of cattle herds in England.

B. Salmonella testing

Q1: Despite requests, we currently have limited data to monetise the impact of the lowering of the c value from five to three. We invite stakeholders to comment on the impact of this requirement:
   - How would your current sampling frequency change in terms of number of per annum tests taken?
   - How would your sampling costs change in terms of per annum pounds spent on sampling?

Q2: We invite stakeholders to comment on whether the lowering of the threshold from five to three may increase their costs of corrective action:
   - How would the frequency of corrective action change, in terms of per annum occasions?
   - How would your per annum costs change, in terms of time and resources spent on corrective action?
   - How would the requirement of an action plan impact on costs – how much additional time and resources are likely to be spent on implementing an action plan per annum?

Q3: We envisage that the costs to slaughterhouses from Competent Authority collection of sampling data would be minimal. If you agree or disagree, please provide us with as detailed information and data as possible:
   - Do you agree with our estimates of the associated costs/time required for using the different systems?

Q4: We invite stakeholders to comment on the potential costs to farmers from an increase in the number of on-farm investigations:
   - How would the frequency of reviews of on-farm controls change, in terms of per annum occasions?
   - How would your per annum costs change, in terms of time and resources spent on on-farm investigations?
   - Would the proposal be associated with any familiarisation costs to farmers?

Q5: Currently OVs need to monitor that corrective action is taken. We invite stakeholders to comment on the costs to enforcement from a potential increase in the frequency of corrective action:
   - How would the per annum costs change, in terms of time and resources spent on monitoring that corrective action has been taken?
   - What would be the per annum costs of supervising the outcome of action plans in terms of time and resources spent?

Q6: Do stakeholders agree that Option 2 should be the preferred option? It would be helpful if an explanation could be provided to support opinions, particularly where other options are preferred.

C. Trichinella testing
Q1: We would welcome any evidence regarding the distribution of pigs from non-controlled housing:
- In England and Wales, respectively, what proportion of pigs from non-controlled housing is slaughtered in micro, small, medium, large slaughterhouses, and what proportion is already tested for Trichinella?

Q2: We invite stakeholders to comment on whether our estimates of familiarisation costs to slaughterhouses seem reasonable or not. Please provide us with as detailed information and data as possible (e.g. hours required, grade involved) for us to be able to monetise this cost.

Q3: We invite stakeholders to comment on whether our estimates of the cost of additional testing seem reasonable or not:
- Do you agree with our assumption (informed by discussions with industry and BPEX) that approximately 3% of the total pig population in England and Wales, respectively, are likely to be reared in non-controlled housing conditions? What proportion of these pigs are likely to already be tested for Trichinella?
- Do you agree with our assumption that approximately 95% of additional tests under this proposal would be carried out in-house at a cost of 60p per sample?
- Do you agree with our assumption that approximately 5% of additional tests under this proposal would be carried out privately at a cost of approximately £4.09 per sample?
- If you agree, or disagree, please provide us with as detailed information and data as possible for us to monetise this potential cost.

Q4: We invite stakeholders to comment on whether our estimates of the cost of setting up in-house labs seem reasonable or not. If you agree, or disagree, please provide us with as detailed information and data as possible for us to be able to monetise this cost, in particular:
- What proportion of micro, small, medium and large slaughterhouses are likely to set up an in-house lab as a result of the new requirements?
- What would be the approximate one-off cost to set up an in-house laboratory?
- Would there be any costs involved for plants that make arrangements to use the in-house lab of a nearby FBO?

Q5: We invite stakeholders to comment on whether our estimates of the cost to farmers in the following areas seem reasonable or not:
- changes to FCI
- familiarisation
Please provide us with as detailed information and data as possible for us to be able to monetise this cost.

Q6: We invite stakeholders to comment on whether our estimates of familiarisation costs to enforcement seem reasonable or not. If you agree, or disagree, please provide us with as detailed information and data as possible for us to be able to monetise this cost.
18. We welcome comments from all stakeholders. Please send your response by email or post using the contact details given. All responses received as part of this consultation will be given careful consideration; they will be summarised and published on the FSA's website within three months of the close of the consultation.

Responses

19. Responses are required by close 6 May 2014. Please state, in your response, whether you are responding as a private individual or on behalf of an organisation/company (including details of any stakeholders your organisation represents).

Thank you on behalf of the Food Standards Agency for participating in this public consultation.

Yours,

Phil Flaherty

Name  Philip Flaherty
Branch  EU Regulatory Reform
Division  Food Safety Policy

Enclosed

Annex A: Standard Consultation Information
Annex B: Impact Assessments
Annex C: List of interested parties
Annex D: Draft SI for Trichinella enforcement powers
Annex E: Draft criteria for visual inspection
Queries

1. If you have any queries relating to this consultation please contact the person named on page 1, who will be able to respond to your questions.

Publication of personal data and confidentiality of responses

2. In accordance with the FSA principle of openness we shall keep a copy of the completed consultation and responses, to be made available to the public on receipt of a request to the FSA Consultation Coordinator (020 7276 8140). The FSA will publish a summary of responses, which may include your full name. Disclosure of any other personal data would be made only upon request for the full consultation responses. If you do not want this information to be released, please complete and return the Publication of Personal Data form, which is on the website at http://www.food.gov.uk/multimedia/worddocs/dataprotection.doc Return of this form does not mean that we will treat your response to the consultation as confidential, just your personal data.

3. In accordance with the provisions of Freedom of Information Act 2000/Environmental Information Regulations 2004, all information contained in your response may be subject to publication or disclosure. If you consider that some of the information provided in your response should not be disclosed, you should indicate the information concerned, request that it is not disclosed and explain what harm you consider would result from disclosure. The final decision on whether the information should be withheld rests with the FSA. However, we will take into account your views when making this decision.

4. Any automatic confidentiality disclaimer generated by your IT system will not be considered as such a request unless you specifically include a request, with an explanation, in the main text of your response.

Further information

5. A list of interested parties to whom this letter is being sent appears in Annex C. Please feel free to pass this document to any other interested parties, or send us their full contact details and we will arrange for a copy to be sent to them direct.

6. A Welsh version of the consultation package can be found at www.food.gov.uk

7. Please contact us for alternative versions of the consultation documents in Braille, other languages or audiocassette.

8. Please let us know if you need paper copies of the consultation documents or of anything specified under ‘Other relevant documents’.

9. This consultation has been prepared in accordance with HM Government consultation principles.

10. Please see the Impact Assessments at Annex B.

11. For details about the consultation process (not about the content of this consultation) please contact: Food Standards Agency Consultation Co-ordinator, Room 2B, Aviation House, 125 Kingsway, London, WC2B 6NH. Tel: 020 7276 8140.

http://www.bis.gov.uk/policies/bre/consultation-guidance
Comments on the consultation process itself

12. We are interested in what you thought of this consultation and would therefore welcome your general feedback on both the consultation package and overall consultation process. If you would like to help us improve the quality of future consultations, please feel free to share your thoughts with us by using the Consultation Feedback Questionnaire at http://www.food.gov.uk/multimedia/worddocs/consultfeedback.doc

13. If you would like to be included on future Food Standards Agency consultations on other topics, please advise us of those subject areas that you might be specifically interested in by using the Consultation Feedback Questionnaire at http://www.food.gov.uk/multimedia/worddocs/consultfeedback.doc The questionnaire can also be used to update us about your existing contact details.
Title: Post-Mortem Inspection of Pigs at Slaughterhouses
IA No: FOODSA0138
Lead department or agency: Food Standards Agency
Other departments or agencies: Department of Environment, Food and Rural Affairs (Defra)
Northern Ireland Department for Agriculture and Rural Development

Impact Assessment (IA)
Date: 04/03/2014
Stage: Consultation
Source of intervention: EU
Type of measure: Other
Contact for enquiries: Ouafa Doxon ouafa.doxon@foodstandards.gsi.gov.uk Tel: 207 276 8355

Summary: Intervention and Options

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What is the problem under consideration? Why is government intervention necessary?
A new EU regulation that changes how government officials working in slaughterhouses inspect pig carcasses and offal comes into force on 1st June 2014. The FSA has worked in collaboration with industry during the negotiations on the pig proposals. The amended process aims to make the inspection process more risk based and proportionate. The evidence suggests that it may also better protect public health from the risk of cross contamination during meat production by reducing carcass handling by officials and ending the routine palpation of organs and incision of lymph nodes, which can contribute to microbiological contamination. Government intervention is needed to produce updated national operational procedures for officials working in approved slaughterhouses.

What are the policy objectives and the intended effects?
The policy objective is to ensure that post mortem inspection procedures delivered by government officials are risk based, proportionate, and effective at protecting public health, animal health and animal welfare, and are in compliance with the requirements of EU Regulations.

What policy options have been considered, including any alternatives to regulation? Please justify preferred option (further details in Evidence Base)
Option 1: Do nothing: do not update UK operational procedures in line with the EU regulation
The new EU regulation would still apply in the UK as it is directly applicable. However, without updated operational procedures the potential public health benefits may not be realised, industry and officials would be unclear on the correct inspection procedures, and the UK could be subject to infraction proceedings.

Option 2: Update UK operational procedures in line with the EU regulation
Changes will be achieved through an update of UK operational procedures. This would apply the rules at a national level, taking into account the UK’s epidemiological situation. This would provide a more risk based and proportionate inspection process, clarity for industry and enforcement officials, and potentially improve public health protection. This is the preferred option.

Will the policy be reviewed? It will be reviewed. If applicable, set review date: 06/2016

Does implementation go beyond minimum EU requirements? No
Are any of these organisations in scope? If Micros not exempted set out reason in Evidence Base. Micro: Yes < 20: Yes Small: Yes Medium: Yes Large: Yes

What is the CO₂ equivalent change in greenhouse gas emissions? (Million tonnes CO₂ equivalent) Traded: N/A Non-traded: N/A

I have read the Impact Assessment and I am satisfied that, given the available evidence, it represents a reasonable view of the likely costs, benefits and impact of the leading options.
Signed by the responsible FSA Director: .................................................. Date: __________________________
### Summary: Analysis & Evidence

**Option 1**

**Description:** Do nothing: do not update UK operational procedures in line with the EU regulation

#### FULL ECONOMIC ASSESSMENT

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**COSTS (£m)**

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**Description and scale of key monetised costs by ‘main affected groups’**

None – this is the baseline against which all other options are appraised

**Other key non-monetised costs by ‘main affected groups’**

None – this is the baseline against which all other options are appraised

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<th>Average Annual (excl. Transition) (Constant Price)</th>
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**Description and scale of key monetised benefits by ‘main affected groups’**

None – this is the baseline against which all other options are appraised

**Other key non-monetised benefits by ‘main affected groups’**

None – this is the baseline against which all other options are appraised

**Key assumptions/sensitivities/risks**

Discount rate (%) 3.5

Option 1 assumes is that the proposed amendment is not implemented

### BUSINESS ASSESSMENT (Option 1)

**Direct impact on business (Equivalent Annual) £m:**

**In scope of OIOO?**

**Measure qualifies as**
| Costs: N/A | Benefits: N/A | Net: N/A | No | NA |
Summary: Analysis & Evidence  
Option 2

Description: Update UK operational procedures in line with the EU regulation

FULL ECONOMIC ASSESSMENT

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**COSTS (£m)**

- **Low**: Optional
- **High**: Optional
- **Best Estimate**: £0.06

Description and scale of key monetised costs by ‘main affected groups’

**Industry:**
- One-Off Costs: Familiarisation: £3,251 (PV 10 years);

**Enforcement:**
- One-Off Costs: Familiarisation: £12,348 (PV ten years); Training: £49,392 (PV ten years);

Other key non-monetised costs by ‘main affected groups’

**Industry:**
- Revision of procedures governing the rejection and removal of offal unfit for human consumption; potential costs associated with the reporting of cases on endocarditis.

**Wider impacts:**
- Fewer cases of porcine endocarditis detected.

**BENEFITS (£m)**

- **Low**: Optional
- **High**: Optional
- **Best Estimate**: £0.00

Description and scale of key monetised benefits by ‘main affected groups’

We have been unable to monetise any benefits from the new requirements

Other key non-monetised benefits by ‘main affected groups’

**Industry:**
- Reduced inspection times per carcass;

**Enforcement:**
- Reduced inspection times per carcass; lower frequency of knife-related accidents;

**Consumers:**
- Reduced risk of cross-contamination of pork carcases.

Key assumptions/sensitivities/risks

Discount rate (%) 3.5

The assumption is that the proposal will generate an overall benefit in terms of increased line speed.

BUSINESS ASSESSMENT (Option 2)

Direct impact on business (Equivalent Annual) £m:

- Costs: £0.00
- Benefits: £0.00
- Net: £0.00

In scope of OIOO? No

Measure qualifies as NA
Evidence Base (for summary sheets)

Problem under consideration
1. A new EU regulation that changes how government officials carry out inspections of pig carcases and offal comes into force on 1st June 2014. Government intervention is needed to produce updated national operational procedures for officials working in slaughterhouses.
2. This impact assessment covers England, Wales, and Northern Ireland. Due to administrative processes Scotland is undertaking a separate impact assessment.

Rationale for intervention
3. Under existing EU legislation, pig carcases and offal are subject to ante mortem and post mortem inspection by government officials at approved slaughterhouses before their meat can be placed on the market for human consumption. These inspections are carried out to check for signs of abnormalities that would present a public health risk or indicate animal health or welfare concerns. Such abnormalities may ultimately lead to the meat and/or offal being declared unfit for human consumption. Details of these findings are fed back to the holding of provenance to allow producers the opportunity to use this in the formulation of farm disease control plans. The current post mortem system consists of a visual check of the carcase and offal, as well as the routine palpation (examine by touching) and incision of specific organs and associated lymph nodes to check for abnormalities.
4. Evidence from the European Food Safety Authority (EFSA), supported by research carried out by the Food Standards Agency (FSA), suggests that this system does not adequately identify risks for public health protection. This is because the main cause of foodborne disease is microbiological contamination, which is invisible to the naked eye. Current inspection methods cannot detect such contamination. In fact, the evidence from EFSA suggests that palpation and incision may actually increase the risk of microbiological contamination and thus increasing the risk to public health.
5. The new regulation therefore requires that officials no longer carry out palpation and incision of organs and lymph nodes as routine at post mortem inspection of pigs. Each carcase and its offal will continue to be inspected visually by an official for signs of visible abnormalities, but physical handling will be minimised and palpation and incision will only take place on a risk basis. For example the risk basis might include where the Food Chain Information, epidemiological data from the holding of provenance of the animals, or the ante mortem inspection has identified the risk of a specific animal health condition that could be verified through palpation or incision.
6. The new regulation is a low-impact simplification of current EU law, which ties in with the Government’s strategic aim of supporting growth. It will have a small benefit to business in terms of the speed of the production process, and will allow government resources to be more effectively deployed in the slaughterhouse. It represents a more risk based approach to meat inspection in line with the scientific evidence, and may reduce the risk of microbiological cross-contamination of carcases at post mortem.
7. The regulation was supported by the UK throughout negotiations.

Policy Objective
8. The policy objective is to ensure that post mortem inspection procedures delivered by government officials are risk based, proportionate, and effective at protecting public health,
animal health and animal welfare and are in compliance with the requirements of the EU regulations.

**Official controls in slaughterhouses**

9. The EU Food Hygiene Regulations place responsibility on the operator of a slaughterhouse to ensure that all stages of the production, processing and distribution of food under their control comply with EU Food Hygiene Regulations. The safe production of food is therefore a fundamental legal obligation of the food business operator (FBO).

10. The FSA is the central competent authority in the UK responsible for carrying out official controls in slaughterhouses in England, Scotland and Wales. In Northern Ireland, the official controls are delivered by the Department for Agriculture and Rural Development (DARD) on behalf of the FSA.

11. The controls require inspections of all animals, carcasses and offal to verify that FBOs comply with EU Food Hygiene Regulations. They include ensuring that the slaughter and dressing process conducted by the FBO is in accordance with the legislative requirements, and that sampling and enforcement are undertaken as required. The FSA also undertakes official controls on behalf of Defra in approved slaughterhouses in GB to ensure compliance with legislative requirements on animal health and welfare. This is a DARD responsibility in NI.

12. The EU Hygiene Regulations require the competent authority to carry out ante mortem and post mortem inspection on all animals presented for slaughter for human consumption at the slaughterhouse. The purpose of these inspections is to detect abnormalities of public or animal health or welfare significance, or any other factor that might ultimately lead to the meat being declared unfit for human consumption. Table 1 provides an overview of both inspections.

**Table 1:** An overview of “ante mortem” and “post mortem” inspections carried out by government officials in slaughterhouses

<table>
<thead>
<tr>
<th>Ante Mortem Inspection</th>
<th>Post Mortem Inspection</th>
</tr>
</thead>
<tbody>
<tr>
<td>Livestock and poultry delivered to abattoirs are inspected by the FSA (DARD in NI) before slaughter. Ante-mortem inspection is performed by the Official Veterinarian (OV), who will check for any signs of disease, injury, fatigue, stress and mishandling. Only animals that can be hygienically processed in accordance with the food business operator’s procedures may progress to slaughter to reduce the risk of contamination of the resulting meat.</td>
<td>Every carcase and its offal are inspected after slaughter to ensure fitness for human consumption. This is the responsibility of the OV. In practice the inspection is generally delegated to the teams of official Meat Hygiene Inspectors (MHIs) working under the supervision of the OV, but may be carried out by the OV in some circumstances. The EU Food Hygiene Legislation sets out specific and prescriptive tasks that need to be undertaken by the official delivering post mortem inspection, including a list of organs that require palpating and lymph nodes that require incising to check for abnormalities. Post mortem inspection findings will assist the OV in reaching a definitive decision on the fitness of the carcase and offal for human consumption.</td>
</tr>
</tbody>
</table>
FSA Future Meat Controls Programme

13. At its meeting in September 2009, the FSA Board established a programme of work to deliver a modernised system of fresh meat official controls. The Board agreed that this work would be a strategic priority for the FSA, with the aim of ensuring that fresh meat controls are more risk-based, proportionate and effective. The Board recognised that change could only be achieved through legislative proposals brought forward by the European Commission, and therefore agreed that the Programme would include a significant research component in order to generate evidence that might support any case for change.

14. Since 2009, the Future Meat Controls research programme has undertaken 101 projects over two distinct phases of work with a third phase in the process of being set up. The research projects have generated evidence for proportionate and risk-based approaches for all species, including cattle, wild game, sheep, poultry and pigs. On completion of a peer review, the research projects are published on the FSA website and forwarded to the European Food Safety Authority (EFSA) for consideration, and have been reflected in the EFSA opinions that form the evidence base for the European Commission proposals.

15. The full set of published Future Meat Controls research can be found here:

http://food.gov.uk/science/research/choiceandstandardsresearch/meatcontrolsprojects/

The European Commission’s 2009 review of EU food hygiene legislation

16. Existing EU food hygiene laws (known as the “Hygiene Package”) have applied in the UK since January 2006. These are:

- Regulation (EC) 852/2004 on the hygiene of foodstuffs;
- Regulation (EC) 853/2004 laying down specific hygiene rules for food of animal origin;

17. The regulations were implemented in England by the Food Hygiene (England) Regulations 2006. Similar regulations apply in Scotland, Wales and Northern Ireland. As the regulations took an innovative approach to hygiene legislation, the Hygiene Package contained the legal requirement for the European Commission to submit a report to the European Parliament and Council reviewing the experience gained from their application.

18. A few years after the Hygiene Package came into effect, the Commission began gathering evidence for this review from Member States, industry and consumer representatives, and the Commission’s Food and Veterinary Office. The Commission submitted its conclusions to the European Parliament and to the European Council in July 2009 who adopted them².

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1 http://food.gov.uk/enforcement/monitoring/meat/reviewofmeatcontrols/
19. Overall, the review concluded that the implementation of the Hygiene Package was satisfactory and there was no need for an extensive revision. In relation to fresh meat controls, the report mentioned the increasing public health importance of hazards that cannot be easily detected by conventional meat inspection, the possible enhancement of the role of official auxiliaries, the need to clarify food business operator and competent authority responsibilities, and the possibility that some tasks could be more appropriately carried out by slaughterhouse staff.

20. In May 2010, the Commission requested that the European Food Safety Authority (EFSA) provide scientific opinions on the current inspection system and alternative meat inspection approaches, with the intention of using the outcome of these risk assessments as the primary evidence base for legislative proposals. EFSA were instructed to consider animal health and welfare risks in addition to public health risks from chemical and microbiological contamination.

The European Food Safety Authority opinion on pig meat inspection

21. EFSA approached the work by dividing the scientific opinions by species. EFSA began with pigs, on which it published its scientific opinion in October 2011. EFSA have since also published opinions on poultry and red meat species inspection, for which European Commission proposals are expected to follow in 2014 and 2015.

22. In respect of pigs the food-borne hazards *Salmonella*, *Yersinia enterocolitica*, *Toxoplasma gondii* and *Trichinella* were identified as priority targets at slaughterhouse level, due to their prevalence and impact on human health. It was concluded that current inspection methods do not enable the early detection of the first three of these hazards and, more broadly, do not differentiate food safety aspects from meat quality aspects, prevention of animal diseases or occupational hazards.

23. For biological hazards, EFSA recommended omitting the use of palpation and/or incision techniques as routine slaughter because of the risk of bacterial cross-contamination, introducing a pork carcass safety assurance framework to integrate preventive measures applied on-farm and at-abattoir, and improving Food Chain Information.

24. In the area of animal health and welfare, it was noted that the abolition of palpation and/or incision would lead to a reduction in detection of some diseases but that in cases where several organs are affected this effect was likely to be minimal. To mitigate the reduced detection probability of the proposed modified system, EFSA recommended that palpation and/or incision should be conducted as a follow-up to a visual inspection where abnormalities were identified.

25. In the area of contaminants, dioxins, dioxin-like polychlorinated biphenyls and the antibiotic chloramphenicol were identified as the chemical substances of high potential concern in pork. EFSA concluded that chemical substances at the concentrations found in pig meat are unlikely to pose an immediate or short-term health risk for consumers.

The European Commission’s legislative package for pig meat inspection

26. The European Commission developed a legislative package on modernising pig meat inspection in line with the EFSA opinion and presented it to Member States at the Standing Committee on the Food Chain and Animal Health on 21st September 2012. The package achieved a qualified majority of Member State agreement on 22nd May 2013.

3 EFSA Journal 2011;9(10):2351[198 pp.], published 3 October 2011
27. The UK supported the proposals at the vote in May 2013 because they were in line with the negotiating principles endorsed by the FSA Board\(^4\) and subsequently agreed with UK health ministers and the Westminster agriculture minister.

28. The package consists of three legislative measures:

- Visual inspection of pig meat and offal;
- Revised testing processes for *Salmonella*; and
- Revised testing processes for *Trichinella*.

29. The legislative measures for *Trichinella* and *Salmonella* are considered in more detail in separate Impact Assessments.

30. With regard to the other key hazards identified by EFSA, the stricter process hygiene control for *Salmonella* is also expected to help reduce *Yersinia enterocolitica* microbiological contamination, as general good hygiene practices could improve controls of both microorganisms. The evidence also suggests that no longer routinely requiring the incision of the sub-maxillary lymph nodes may contribute to a reduction in the risk of contamination on carcases from *Yersinia enterocolitica*.

31. Legislative proposals for *Toxoplasma* were not proposed, as it was felt that further research was required to develop a better understanding of the epidemiological situation. The FSA is therefore currently collaborating on a *Toxoplasma* research project with the National Institute of Public Health and the Environment (Netherlands); Agency for Food, Environmental and Occupational Health and Safety (France); Friedrich-Loeffler-Institut (Germany); Stichting Dienst Landbouwkundig Onderzoek (Netherlands); University of Agricultural Science and Veterinary Medicine (Romania); Instituto Superiore di Sanita (Italy); and Royal Veterinary College (UK). The overall aim of the project is to gain information on the presence and infectivity of *Toxoplasma* cysts in meat and other edible tissues (in the main meat-producing animals), and its relationship with *Toxoplasma* seroprevalence in animals. The results from this project may provide evidence for future discussions about *Toxoplasma* controls.

32. The Commission opened discussions with Member States on possible improvements in relation to Food Chain Information in December 2013. This builds on both the EFSA recommendations and also discussions held at the Lithuanian Presidency’s October conference on meat official controls (“Animals + Humans = One Health”)\(^5\). These negotiations are expected to continue during 2014.

33. The original proposals brought forward by the Commission also included a measure that would have permitted MHIs to undertake ante mortem inspection with the OV only required to be present during ante mortem if the MHI had identified abnormalities in the pigs. This was a risk based and proportionate proposal in line with the scientific evidence and was supported by the UK during negotiations. However, due to insufficient support from other Member States, the proposal did not progress.

\(^4\) http://www.food.gov.uk/multimedia/pdfs/bMHIrd/info111102.pdf

\(^5\) http://132968743853066968.weebly.com/index.html
Consultation

Industry

34. The FSA has worked in collaboration with industry groups throughout the development of the Future Meat Controls programme, and during the negotiations on the pig proposals. Individual slaughterhouses have assisted the development of the evidence base through contributing to the FSA’s research programme, for example through running pilots on visual inspection in pigs.

35. On a policy level, the FSA hosts a Current and Future Meat Controls Group (CFMC) that includes organisations representing slaughterhouses, the meat processing industry, primary producers and consumers. The Group meets three times a year and contributes to discussions on strategy and planning, both in respect of research and future negotiations.

36. In 2011 the FSA established a specific Task Group of the CFMC in relation to pigs to provide comments and feedback on the Commission’s proposals and help inform the UK negotiating position. Input from the Task Group was sought throughout negotiations. This collaborative approach was a success, and a similar approach will be taken when the FSA begins negotiations on other species.

Consumers

37. A series of nationwide citizen’s forums were conducted between June and July 2010 to explore consumer attitudes to meat hygiene and views on potential changes to meat official controls. One of the changes explored at the forums was the possible introduction of visual inspection at post mortem. Participants indicated that they would favour any changes to meat inspection that were based on robust science with a suitable monitoring system for animal diseases.

38. Consumer perspectives were also sought through the FSA Consumer Advisory Panel (CAP), whose role is to provide consumer insights into the FSA’s work by supplementing consumers’ views and opinions obtained from direct engagement. CAP’s preference was that an OV should continue to have oversight of the slaughter process, and advised on communication handling.

39. The CFMC (see paragraph 35) have been engaged with throughout the negotiations and includes consumer representation.

Defra and UK Agriculture Departments

40. The FSA set up a Cross Government Group on Official Meat Controls in 2010. Animal health and animal welfare fall within the remit of agriculture and rural affairs departments, so Defra, the devolved Rural Affairs Departments, and DARD Veterinary Public Health Programme are all represented on the group, in addition to the FSA’s national offices in Scotland, Wales and Northern Ireland. The group was instrumental in developing the high level UK negotiating principles and played a key role during the negotiations.

Operational Delivery

41. FSA officials with responsibility for operational delivery in pig slaughterhouses and DARD are also represented on both the Cross Government Group and the CFMC, and were engaged throughout negotiations on the pig proposals and the development of the Future Meat Controls research.

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Description of Options Considered

Option 1: Do nothing: do not update UK operational procedures in line with the EU regulation

42. This option would involve taking no action to update UK operational procedures.

43. This would not prevent the new regulations from coming into force, as they are directly applicable across the EU. The UK would therefore be in non-compliance with its legal obligations.

44. This non-compliance would provide a lack of clarity about official operational procedures for UK food business operators, many of whom have been supportive of the changes being proposed. It may also place UK slaughterhouses at a competitive disadvantage to those in the rest of the EU. Inspection tasks carried out on a risk basis in other Member States would remain part of the routine procedure in the UK. As set out in the benefits to Option 2, the new rules are expected to provide increased line speed in some slaughterhouses, and additional operational flexibility for government, which would not be realised under this option.

45. The potential public health benefits from the visual inspection system would also not be realised, as officials would continue to routinely palpate and incise organs and lymph nodes despite the evidence that suggests that this may contribute to microbiological contamination on carcases.

Option 2: Update UK operational procedures in line with the EU regulation

46. This option would involve updating UK operational procedures so that government officials working in slaughterhouses can routinely carry out visual post mortem inspection in slaughterhouses, rather than using the traditional methods of palpation and incision. This would apply the rules at a national level, taking into account the UK’s epidemiological situation. The move to visual inspection only would provide a more risk based and proportionate inspection process, clarity for industry and enforcement officials, and potentially improve public health protection.

47. This is the preferred option.

48. Issues related to the operational procedures for visual inspection by default are outlined below.

Incision of Porcine Hearts

49. Under the new regime, government officials will no longer incise porcine hearts as routine during post mortem inspection. As a result, there is a possibility that clotted blood may remain in the chambers of the heart and that porcine endocarditis (the inflammation of the smooth membrane that lines the inside of the heart in pigs) is not detected.

50. The presence of blood clots may become a quality issue when the hearts are placed on the market for human consumption. For quality assurance purposes, FBOs may choose to incise hearts to release blood clots. Such a quality control system would also be expected to identify and reject hearts with porcine endocarditis. Where FBOs discover porcine endocarditis during quality control checks they will be asked to inform officials so that it can be recorded for animal health and welfare surveillance purposes.
51. The Risk and Benefit Assessment for Visual-Only Meat Inspection of UK Indoor and Outdoor Pigs, funded by the FSA, assessed a large number of diseases/conditions that would potentially be affected by a change to visual inspection methods and also posed a human and/or animal health threat. Only two conditions, porcine tuberculosis and endocarditis, were considered to be of public or animal health and welfare risk and would be less likely to be spotted through visual inspection. The study concluded that very few cases of the pathogens causing endocarditis and associated with human infections are reported each year in the UK, and the majority, if not all, are linked to occupational exposure to pigs or raw pork. The risk of foodborne infection via consumption of pork was considered negligible. Table 2 below shows that the prevalence of endocarditis detected in pig hearts over the past two years is very low.

Table 2: Level of endocarditis detected in pig heart at post mortem inspection in England, Wales and Northern Ireland

<table>
<thead>
<tr>
<th>Year</th>
<th>Total throughput</th>
<th>Endocarditis (no. of cases)</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011</td>
<td>7,901,150</td>
<td>2,823</td>
<td>0.03%</td>
</tr>
<tr>
<td>2012</td>
<td>7,451,426</td>
<td>1,649</td>
<td>0.02%</td>
</tr>
</tbody>
</table>

UK Sectors and Group affected

Industry

Pig Slaughterhouses

52. The new operational procedures will impact on approved pig slaughterhouses where a default system of visual inspection is adopted. These establishments will incur familiarisation costs. However there will be potential benefits from a reduction in inspection time per carcase. FSA internal data (see Table 3 below) shows the total number of approved pig slaughterhouses in England, Wales and Northern Ireland.

Table 3: Total number of multi species and specialist approved pig slaughterhouses in England, Wales and Northern Ireland (2013)

<table>
<thead>
<tr>
<th></th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>England</td>
<td>110</td>
</tr>
<tr>
<td>Wales</td>
<td>12</td>
</tr>
<tr>
<td>NI</td>
<td>4</td>
</tr>
<tr>
<td>Total</td>
<td>126</td>
</tr>
</tbody>
</table>

Primary Producers

53. We do not envisage any impact on primary producers sending animals to slaughter, as there are no additional requirements for the production of Food Chain Information. The new operational procedures use existing information routes for decision making purposes at ante mortem and post mortem inspection.

Enforcement

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7 http://food.gov.uk/science/research/choiceandstandardsresearch/meatcontrolsprojects/mc1002/
54. The immediate impact will be on those officials who work in approved pig slaughterhouses, such as Meat Hygiene Inspectors (MHIs) and Official Veterinarians (OVs). Changes will also impact on those in related operational management functions, such as Service Delivery Managers (SDMs), Lead Veterinarians (LVs), as well as their equivalents in Northern Ireland; Senior Meat Inspectors (SMIs) and Divisional Veterinary Officers/Supervisory Veterinary Officers (DVOs/SVOs). For the purpose of this impact assessment, we have not differentiated officials directly employed by FSA and those who are contracted staff. FSA internal data shows that there are a total number of 382 officials affected, see Table 4a below. Table 4b shows the current hourly cost rates for these officials.

Table 4a: Total number of officials in pig slaughterhouses in England, Wales and Northern Ireland (2013)

<table>
<thead>
<tr>
<th></th>
<th>England</th>
<th>Wales</th>
<th>NI</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Meat Hygiene Inspectors</td>
<td>178</td>
<td>6</td>
<td>18</td>
<td>200</td>
</tr>
<tr>
<td>Official veterinarians</td>
<td>113</td>
<td>12</td>
<td>4</td>
<td>124</td>
</tr>
<tr>
<td>Service Delivery Managers</td>
<td>27</td>
<td>4</td>
<td>-</td>
<td>31</td>
</tr>
<tr>
<td>Lead Veterinarians</td>
<td>12</td>
<td>2</td>
<td>-</td>
<td>14</td>
</tr>
<tr>
<td>Senior Meat Inspector</td>
<td>-</td>
<td>-</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Divisional Veterinary Officer</td>
<td>-</td>
<td>-</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>330</td>
<td>24</td>
<td>28</td>
<td>382</td>
</tr>
</tbody>
</table>

Table 4b: Hourly Cost Rates of officials affected (2013)

<table>
<thead>
<tr>
<th></th>
<th>England</th>
<th>Wales</th>
<th>NI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Meat Hygiene Inspectors</td>
<td>£28.50</td>
<td>£28.50</td>
<td>£27.20</td>
</tr>
<tr>
<td>Official veterinarians</td>
<td>£36.80</td>
<td>£36.80</td>
<td>£44.23</td>
</tr>
<tr>
<td>Service Delivery Managers</td>
<td>£31.60</td>
<td>£31.60</td>
<td>-</td>
</tr>
<tr>
<td>Lead Veterinarians</td>
<td>£43.25</td>
<td>£43.25</td>
<td>-</td>
</tr>
<tr>
<td>Senior Meat Inspector</td>
<td>-</td>
<td>-</td>
<td>£30.71</td>
</tr>
<tr>
<td>Divisional Veterinary Officer</td>
<td>-</td>
<td>-</td>
<td>£47.72</td>
</tr>
</tbody>
</table>

Consumers

55. Evidence from EFSA suggests that the main public health risk associated with pig slaughter is microbiological contamination, and that incision and palpation could increase this risk. While we accept that there is a risk of presence of undesirable microorganisms on a carcase, the method of operation of slaughterhouses does not always permit knife sterilisation and effective hand washing between carcases. A move to a system of visual inspection could therefore have a public health benefit in a reduction of this risk.

Options Appraisal
Option 1: Do nothing: do not update UK operational procedures in line with the EU regulation

Costs and Benefits

56. There are no costs or benefits associated with this option. This option is the baseline for comparison.

Option 2: Update UK operational procedures in line with the EU regulation

Costs

Enforcement

Familiarisation cost (One-Off Cost)

57. The new amendment will generate a familiarisation cost to enforcement officers who will need to familiarise themselves with the new changes. This includes MHIs and OVVs, as well as those in operational functions such as SDMs, LVs, SMIIs and DVOs/SVOs. As Table 4a shows, there were in total 382 officials in England, Wales and Northern Ireland in 2013.

58. Familiarisation costs can be monetised by multiplying the hourly cost rates with the hours required for familiarisation. We envisage that it will take an official about one hour to read and familiarise themselves with the changes. Multiplying the number of officials in each occupational group (see Table 4a) by their respective wage rates (see Table 4b), and then again by the time required by official (1hr) generates a total cost of familiarisation of £12,348 to the sector. Table 5a below shows total familiarisation costs by country.

Table 5a: Total familiarisation cost to enforcement authority by country (£)

<table>
<thead>
<tr>
<th></th>
<th>England</th>
<th>Wales</th>
<th>NI</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Meat Hygiene Inspectors</td>
<td>5,073</td>
<td>171</td>
<td>490</td>
<td>5,734</td>
</tr>
<tr>
<td>Official veterinarians</td>
<td>4,158</td>
<td>442</td>
<td>177</td>
<td>4,777</td>
</tr>
<tr>
<td>Service Delivery Managers</td>
<td>853</td>
<td>126</td>
<td>-</td>
<td>980</td>
</tr>
<tr>
<td>Lead Veterinarians</td>
<td>519</td>
<td>87</td>
<td>-</td>
<td>606</td>
</tr>
<tr>
<td>Senior Meat Inspector</td>
<td>-</td>
<td>-</td>
<td>61</td>
<td>61</td>
</tr>
<tr>
<td>Divisional Veterinary Officer/</td>
<td>-</td>
<td>-</td>
<td>191</td>
<td>191</td>
</tr>
<tr>
<td>Supervisory Veterinary Officer</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>10,604</td>
<td>826</td>
<td>919</td>
<td>12,348</td>
</tr>
</tbody>
</table>

59. In order for one-off costs to be compared to annual costs on an equivalent basis across the time span of the policy, one-off costs are converted into Equivalent Annual Costs (EACs) by dividing the one-off cost by an annuity factor.8 The total one-off familiarisation cost under

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8 The annuity factor is essentially the sum of the discount factors across the time period over which the policy is appraised. For a policy with a life span of 10 years and a discount rate of 3.5% the annuity factor is approximately 8.6. The equivalent annual cost formula is as follows:
this new requirement is £12,348 which generates a total EAC of £1,435. Table 5b below shows the EAC by country.

Table 5b: Total familiarisation equivalent annual costs to enforcement authority by country (£)

<table>
<thead>
<tr>
<th></th>
<th>England</th>
<th>Wales</th>
<th>NI</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>EACs</td>
<td>1,232</td>
<td>96</td>
<td>107</td>
<td>1,435</td>
</tr>
</tbody>
</table>

**Training costs (One-Off Costs)**

60. The FSA has carried out a skill gap analysis to identify the training required for officials to deliver the revised operational procedures. The analysis concluded that officials working in slaughterhouses already have the skills required to carry out visual inspection of pigs to identify abnormalities, as visual checks on carcases and offal form a part of their existing work. However, officials will need training on the new operational procedures, and training on how their professional judgement can be used to best advantage as part of these procedures. The proposed operational procedures would also mean that officials may be required to use hand-held hooks to assist with carcase and offal handling.

61. The main skill gaps relate to:

a. the circumstances under which a batch of animals or individual carcase require further inspection (i.e., the circumstances in which palpation of organs or incision of lymph nodes is required);

b. how to determine which further inspection tasks are required in each circumstances (i.e., which suspected conditions would require the incision of which lymph nodes or palpation of which organs); and

c. the safe use of hand-held hooks.

62. The primary target audience for training will be officials directly involved in front line delivery (MHIs and OVs). Those in the operational hierarchy with management functions for OVs and MHIs will also require training. This includes Service Delivery managers (SDMs) and Lead Veterinarians (LVs) for England and Wales. In Northern Ireland those include Senior Meat Inspectors (which carry out basically the same function as SDMs in England and Wales but also may be called upon to carry out post mortem inspection duties), and Divisional Veterinary Officers/ Supervisory Veterinary Officers which essentially perform a similar function to LVs in England and Wales (see Table 4a). The training delivery methods are still being finalised, but we envisage that a training session would take approximately four hours per official.

63. Multiplying the total number of officials requiring training (see Table 4a) by the hourly cost rate as presented in Table 4b, and then again by the time required by official (4hr) generates a total cost of training of £49,392 to the UK. Table 6a below shows total training costs by UK region, whilst Table 6b shows the associated EACs.

Table 6a: Total training cost to enforcement, by country (£)

<table>
<thead>
<tr>
<th></th>
<th>England</th>
<th>Wales</th>
<th>NI</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Meat Hygiene Inspectors</td>
<td>20,292</td>
<td>684</td>
<td>1,958</td>
<td>22,934</td>
</tr>
<tr>
<td>Official veterinarians</td>
<td>16,634</td>
<td>1,766</td>
<td>708</td>
<td>19,108</td>
</tr>
</tbody>
</table>

\[ a_{t,r} = \sum_{j=0}^{t-1} \prod_{i=0}^{j} \left( \frac{1}{1 + r_i} \right) \]
### Table 6b: Total training annual equivalent cost to enforcement, by country (£)

<table>
<thead>
<tr>
<th></th>
<th>England</th>
<th>Wales</th>
<th>NI</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>EACs</td>
<td>4,928</td>
<td>384</td>
<td>427</td>
<td>5,738</td>
</tr>
</tbody>
</table>

### Increase in Post mortem verification (Negligible Cost)

64. OVs or LVs verify the post mortem inspection of a sample of carcases and offal that have been inspected by MHIs⁹. In GB, the frequency of verification is based on the number of days the slaughterhouse operates. In a pig slaughterhouse that operates on four or five days per week, the OV or LV will carry out verification tasks on three days per week. For those that operate fewer than four days a week, the OV or LV will carry out verification on a daily basis. The sample size for the verification tasks depend on the throughput of the establishment. In NI, a random representative sample of carcases and offal, based on throughput, are checked on each day of production.

65. To provide assurance that visual inspection is effective in detecting conditions and the procedures are correctly implemented, the FSA intends to require that the inspection team carries out verification tasks on a daily basis for a period of six months. This means that slaughterhouses that operate on four or five days a week will see an increase in verification checks. The aim would be to check around 15% of throughput on a daily basis for the 6 month period, which keeps the checks achievable within the working day by the current inspection team. The increased verification could therefore be encompassed within existing daily activities, and would not place an increased burden on industry or enforcement.

### Consultation Question 1:

It is our assumption that having the inspection team carry out verification tasks on a daily basis during the first six month will not increase the burden on industry or enforcement. We invite stakeholders to comment on whether this assumption is correct. If you disagree, please provide us with as detailed information and data as possible for us to monetise this potential cost.

### Food Business Operators (Slaughterhouses)

#### Familiarisation Costs (One-Off Cost)

66. There are 126 approved pig slaughterhouses in England, Wales and Northern Ireland (see table 2). The new operational procedures place no new obligations on FBOs. However, we expect that most slaughterhouse managers will wish to familiarise themselves with the new procedures that officials are undertaking in their establishments. Familiarisation costs can be

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quantified by multiplying the wage rate of the official carrying out the familiarisation by the number of hours required for familiarisation. It is our assumption that it will be the slaughterhouse manager (wage rate of £25.810) that will familiarise himself/herself, and that familiarisation would take approximately 1 hour per slaughterhouse. This generates a total cost of familiarisation to slaughterhouses of £3,251 (EAC of £378), as shown in Table 7 below.

Table 7: Familiarisation Costs and EACs, by country (£)

<table>
<thead>
<tr>
<th></th>
<th>England</th>
<th>Wales</th>
<th>NI</th>
<th>UK</th>
</tr>
</thead>
<tbody>
<tr>
<td>Familiarisation Cost</td>
<td>2,838</td>
<td>310</td>
<td>103</td>
<td>3,251</td>
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<tr>
<td>Familiarisation EAC</td>
<td>330</td>
<td>36</td>
<td>12</td>
<td>378</td>
</tr>
</tbody>
</table>

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**Reporting Cases of Endocarditis (Non-Monetised Cost)**

67. As mentioned in paragraphs 49-51, some food business operators may choose to start incising porcine hearts to remove blood clots for quality assurance purposes. If porcine endocarditis is identified, FBOs will be asked to inform officials so that the condition can be recorded for animal health and welfare surveillance purposes. As shown in Table 2 above, the prevalence of endocarditis detected in pig hearts over the past two years amount to an average of 0.025% of total offal throughput. This suggests that the cost of reporting is likely to be minimal; however, the cost will also be dependent on the reporting arrangements adopted, and whether the reporting of endocarditis can be incorporated in existing reporting arrangements. We have at this stage been unable to monetise this potential cost, but we envisage it to be negligible.

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Consultation Question 2:

We invite stakeholders to comment on whether our assumption that reporting cases of endocarditis is likely to impose minimal costs on Food Business Operators. If you disagree, please provide as detailed information and data as possible (e.g. expected reporting arrangements adopted, associated time and resource requirements), so that we can monetise this potential cost.

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**Increase in Number of Detained Carcases (Non-Monetised Cost)**

68. There may be a temporary increase in the number of carcases being detained for further inspection to compensate for uncertainty whilst MHI’s and OVs familiarise themselves with the new system. This might have the effect of slowing down the production line and increase the inspection time per carcase. We have not been able to estimate the level of this temporary increase, so we are at this stage unable to monetise this potential cost.

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Consultation Question 3:

It is our assumption that the new requirements may cause a temporary increase in the number of detained carcases, and that this may slow down line speed and increase the inspection time per carcase. We invite stakeholders to comment on whether this assumption is correct. If you agree or disagree, please provide us with as detailed information and data as possible for us to be able to monetise this potential cost.

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Red Offal

69. Meat inspectors carry out post mortem inspection of red offal such as lungs and liver (see Table 1). The current legislation details when meat and offal ought to be declared unfit for human consumption, but it does not however detail who should remove the unfit part/organ. Currently, if any red offal is deemed unfit for human consumption by the meat inspector, then the meat inspector rejects and removes the affected organ.

70. With visual inspection, we are proposing that meat inspectors no longer carry knives as routine. This means that while they will declare meat unfit for human consumption where appropriate by tagging or marking the affected organ, it may no longer be appropriate for them remove the affected part or organ.

71. To apply the changes effectively, we are exploring two options during the series of trials we will run in pig approved slaughterhouses; 1) where plant staff remove the affected part/organ, 2) where meat inspectors continue to remove affected part/organ.

Consultation Question 4

Meat inspectors are required to declare if red offal is unfit for human consumption, but the legislation does not specify who should remove any abnormalities found. As meat inspectors would no longer routinely carry knives, we are proposing that removal of abnormalities should be carried out by the FBO. We invite stakeholders to comment on whether they agree with this approach. If you disagree, please provide as detailed information and data as possible so that we can monetise any potential cost.

Wider Impacts

Animal Health, Welfare: Fewer Cases of Endocarditis Detected (Non-Monetised Cost)

72. Table 2 above shows the prevalence of endocarditis in pig hearts for the last two years. The study ‘Risk and Benefit Assessment for Visual-Only Meat Inspection of UK Indoor and Outdoor Pigs’ (see paragraph 51) estimated that around 300-400 cases of endocarditis in pigs would not be detected if a visual meat inspection system was introduced across British slaughterhouses at current volumes of pig production; however, the study concluded that the public health risk would remain negligible. This is because the risk to public health from the zoonotic agents causing endocarditis was assessed to be negligible under both visual inspection and the current inspection system using routine palpation and incision. Zoonotic transmission is rare in the UK, and it is linked with occupational exposure rather than foodborne infection from pork. This potential cost to animal welfare and production is very difficult to monetise and we have therefore not been able to do so.

Consumers

73. The new operational procedures are not expected to generate additional costs to consumers. The FSA welcomes your views on this assumption.

Benefits

Slaughterhouses
Reduction in inspection time per carcase (Non-Monetised)

74. The changes to operational procedures are expected to lead to a reduction in inspection time per carcase. This could reduce the total inspection cost in some pig slaughterhouses and therefore provide an efficiency gain as slaughterhouses may be able to allocate their resources more efficiently.

75. It is difficult to quantify this benefit as each slaughterhouse is different, and the benefits will vary depending on a number of variables such as the current line speed, the layout of the slaughterhouse and the organisation of inspection points. For these reasons we have been unable to monetise this benefit at this time.

Consultation Question 4:
It is our assumption that the new requirement will reduce inspection times per carcase which may lead to efficiency benefits to slaughterhouses. We invite stakeholders to comment on whether this assumption is correct. If you agree or disagree, please provide us with as detailed information and data as possible for us to be able to monetise this potential benefit (for example in terms of a reduction in time and resources needed).

Enforcement

Lower frequency of knife-related accidents (Non-Monetised)

76. Under the new operational procedures, the use of knives will no longer be required as routine. In GB between 1st April 2011 and 31st March 2012, 29 accidents involving a knife were recorded in red meat slaughterhouses, with an associated cost to the FSA of just over £20,000. It has not been possible to extract the relevant figures associated with pig or multi species slaughterhouses, but it is envisaged that visual inspection could generate a benefit in terms of a reduction in the number of knife-related accidents amongst FSA employees. We have, however, been unable to monetise this potential benefit.

Flexible Resource Allocation (Non-Monetised)

77. The new operational procedures are expected to lead to a reduction in inspection time per carcase. This would introduce flexibility in the resource allocation of inspectors and would allow a greater focus on high risk areas. We have however been unable to obtain any estimates of the potential time saving per slaughterhouse arising from the operational procedures, and we have therefore been unable to monetise this benefit.

Consumers

Potential for a lower risk of cross-contamination in pork slaughterhouses (Non-Monetised)

78. Research has suggested that incising lymph nodes and palpating organs as routine may contribute to the risk of cross-contamination of carcases with foodborne hazards such as Salmonella spp. or Yersinia spp. If officials no longer undertake these tasks as routine, there could be benefits to public health protection. A study carried out at EU level on the “Estimation of the relative contribution of different food and animal sources to human
Salmonella infections in the European Union\textsuperscript{11} shows that the proportion of Salmonella reported cases attributable to pigs in the UK between 2007-2009 was 11.7\% against other animal source.

79. The Annual Report of the FSA’s Chief Scientist (2012/2013)\textsuperscript{12} estimates that there are around a million cases of foodborne illness in the UK each year. In 2012, there were 9,184 confirmed cases of salmonella across the UK. The estimated cost of foodborne illness for UK was around £1.8billion in 2011. Any reduction in cases of foodborne illness would be welcome, but it would be difficult to link improvements specifically to these changes in operational procedures.

**Summary of Total Costs and Benefits under Option 2**

80. As can be seen from Table 8 below, we envisage that the new requirements will generate benefits to society in terms of reduced inspection time per carcase to industry and to enforcement, a benefit to consumer from lower risk of cross-contamination, and a benefit to enforcement in terms of lower frequency of knife-related accidents. We have however been unable to monetise any of these potential benefits.

81. Table 8 also shows that we envisage that the new requirements will result in familiarisation costs (paragraphs 57-59) and training costs (paragraphs 60-63) to enforcement (we envisage that increased verification can be carried out with no additional costs, see paragraphs 64-65), at a total one-off cost to enforcement of £61,740 (PV over ten years).

82. In addition we envisage that the new requirements will generate costs to industry in terms of familiarisation costs (paragraph 66), the reporting of endocarditis in red offal (paragraph 67), as well as a potential increase in the number of detained carcases (paragraph 68). We have however only been able to monetise costs of familiarisation to industry, which means that the total monetised cost to industry from new requirements is £3,251 (PV over ten years).

83. We also envisage a cost to animal health and welfare in terms of the potential that fewer cases of endocarditis being detected, but we have been unable to monetise this cost (paragraph 69).

84. Since we have been unable to monetise any benefits from the new requirements, this means that they generate a net cost to society of £64,990 (NPV over ten years), whilst the net cost to industry is £3,251 (NPV over ten years).

**Table 8: Summary of Total Costs and Benefits under Option 2**


\textsuperscript{12} http://food.gov.uk/multimedia/pdfs/publication/cstar_2013.pdf
Rationale and evidence that justify the level of analysis used in the Impact Assessment (proportionality approach)

85. There are likely to be benefits to business from the new operational procedures, but as set out above these are impossible to measure with any certainty at this stage. We will continue to generate evidence during the consultation period and will revisit the level of analysis for the final Impact Assessment.

Risks and assumptions

86. Countries outside the EU do not have to apply the new changes unless they wish to export to the EU. Some UK slaughterhouses export pig meat and have to meet trading specifications of the importing countries, which may include application of certain palpation or incision inspection tasks. This means that the number of businesses affected may be an overestimate.

One In Two Out Status

87. The changes result from EU legislations amendments and therefore fall outside the scope of One In Two Out.

Specific Impact Tests

Competition Assessment

88. Our assessment is that the new requirements are unlikely to affect competition. At this stage we do not foresee any changes to slaughterhouses’ layouts that might generate a cost to be necessary. If changes in layout were necessary, large slaughterhouses are likely to have funds for such change, which could make them more competitive. In light of responses following the consultation exercise we will revisit our position.
Small Firms Impact Test
89. Small and medium sized businesses are not expected to be adversely affected by the proposed measures, and may in fact benefit from increased line speed. Micro businesses are not exempted from the measure, as the change to operational procedures is expected to be a reduction in burdens rather than an increase.

Sustainability
90. The three aspects of sustainable development (economic, social and environmental) have been considered in this Impact Assessment. Under Option 2 the social and environmental impacts are negligible and the economic impact is as described above.

Equality Impact and Human rights
91. The amendment is not expected to have any impact on equality or human rights.
Title: Amendments to the Salmonella process hygiene criterion for carcasses of pigs (as laid down in Regulation (EC) 2073/2005) and to requirements for its verification by the competent authority (as laid down in Regulation (EC) 854/2004)

Impact Assessment (IA)

IA No: 1

Lead department or agency: Food Standards Agency

Other departments or agencies: Impact Assessment (IA)

Date: 24/03/2014

Stage: Consultation

Source of intervention: EU

Type of measure: Other

Contact for enquiries: Carles Orri, carles.orri@foodstandards.gsi.gov.uk, 020 7276 8406

Summary: Intervention and Options

Cost of Preferred (or more likely) Option

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<thead>
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<th>Business Net Present Value</th>
<th>Net cost to business per year (EANCB on 2009 prices)</th>
<th>In scope of One-In, Two-Out?</th>
<th>Measure qualifies as</th>
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<tbody>
<tr>
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<td>£0.00</td>
<td>£0.00</td>
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<td>NA</td>
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</table>

What is the problem under consideration? Why is government intervention necessary?
The European Food Safety Authority (EFSA) published its scientific opinion on modernisation of pig meat inspection in October 2011, which identified Salmonella as the key zoonotic risk in pig meat. Following this, the Commission has introduced amendments to official controls on pig meat, including strengthened controls on Salmonella in pig carcasses and competent authority (CA) verification and reporting on compliance with the Salmonella process hygiene criterion (PHC). Government intervention is necessary to reduce the risk to consumers from Salmonella contamination and to ensure compliance with new and amended requirements for the Salmonella PHC, for official verification of Food Business Operator (FBO) compliance with PHC and for CA reporting of results.

What are the policy objectives and the intended effects?
The policy objectives are to reduce the risk to consumers from Salmonella contamination in pig carcasses by enhancing Salmonella controls in the slaughterhouse as a result of stricter parameters for the Salmonella PHC and ensuring that the new CA verification and reporting requirements are fulfilled.

What policy options have been considered, including any alternatives to regulation? Please justify preferred option (further details in Evidence Base)
The following options have been considered.

Option 1 - Do nothing. Do not introduce the new requirements amending Regulation (EC) 2073/2005 and Regulation (EC) 854/2004. This option would mean that amendments to the Regulations are not made and no other action is taken. This option would mean that the UK is non-compliant with EU legislation which would risk infraction procedures.

Option 2 – Apply the new requirements amending Regulation (EC) 2073/2005 and Regulation (EC) 854/2004
Preferred option. This option includes the introduction of new Salmonella PHC parameters and requirements for CA verification of FBO compliance with the PHC. This is the preferred option as it enhances current controls with the aim of reducing the risk from Salmonella contamination. Regular consultation with UK industry during EU negotiations has informed our preferred option.

Will the policy be reviewed? It will be reviewed. If applicable, set review date: Month/Year

Does implementation go beyond minimum EU requirements? No

Are any of these organisations in scope? If Micros not exempted set out reason in Evidence Base.

<table>
<thead>
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<td>Yes</td>
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<td>Yes</td>
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</table>

What is the CO₂ equivalent change in greenhouse gas emissions? (Million tonnes CO₂ equivalent)

Traded: Non-traded:

I have read the Impact Assessment and I am satisfied that, given the available evidence, it represents a reasonable view of the likely costs, benefits and impact of the leading options.

Signed by the responsible FSA Director: ............................................. Date: ___________
**Summary: Analysis & Evidence**

**Policy Option 1**

**Description:** Do nothing. Do not introduce the new requirements amending Regulation (EC) 2073/2005 and Regulation (EC) 854/2004

**FULL ECONOMIC ASSESSMENT**

<table>
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<th>Price Base Year 2012</th>
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<th>Time Period Years 10</th>
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**COSTS (£m)**

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<td>High</td>
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<td>Optional</td>
</tr>
<tr>
<td>Best Estimate</td>
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<td>n/a</td>
<td>n/a</td>
</tr>
</tbody>
</table>

**Description and scale of key monetised costs by ‘main affected groups’**

None. This is the baseline against which all other options are appraised.

**Other key non-monetised costs by ‘main affected groups’**

None. This is the baseline against which all other options are appraised.

**BENEFITS (£m)**

<table>
<thead>
<tr>
<th></th>
<th>Total Transition (Constant Price)</th>
<th>Average Annual (excl. Transition) (Constant Price)</th>
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<tr>
<td>Best Estimate</td>
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</table>

**Description and scale of key monetised benefits by ‘main affected groups’**

None. This is the baseline against which all other options are appraised.

**Other key non-monetised benefits by ‘main affected groups’**

None. This is the baseline against which all other options are appraised.

**Key assumptions/sensitivities/risks**

Discount rate (%): 3.5

The assumption is that the proposal is not introduced and there would be no change to the current situation.

**BUSINESS ASSESSMENT (Option 1)**

<table>
<thead>
<tr>
<th>Direct impact on business (Equivalent Annual) £m:</th>
<th>In scope of OIOTO?</th>
<th>Measure qualifies as</th>
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</thead>
<tbody>
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<td>Net: n/a</td>
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</table>
## Summary: Analysis & Evidence

**Policy Option 2**

**Description:** Apply the new requirements amending Regulation (EC) 2073/2005 and Regulation (EC) 854/2004

### FULL ECONOMIC ASSESSMENT

<table>
<thead>
<tr>
<th>Price Base Year</th>
<th>PV Base Year</th>
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#### COSTS (£m)

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<th>Total Cost (Present Value)</th>
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<td><strong>Best Estimate</strong></td>
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</tbody>
</table>

**Description and scale of key monetised costs by ‘main affected groups’**

**One-Off Costs: Slaughterhouses:** familiarisation: £542 (PV ten years);

**One-Off Costs: Enforcement:** familiarisation: £1,012 (PV ten years);

**Ongoing Costs: Enforcement:** official reporting to European Commission: £238 (PV over ten years).

**Other key non-monetised costs by ‘main affected groups’**

**Ongoing Costs: Slaughterhouses:** inability to move to reduce sampling frequency; increase in the frequency of corrective action;

**Ongoing Indirect Cost: Farms:** potential increase in on-farm investigations;

**Ongoing Costs: Enforcement:** increase in monitoring of corrective action; potential one-off cost of setting up a system for data exchange; reporting of compliance to EC.

#### BENEFITS (£m)

<table>
<thead>
<tr>
<th></th>
<th>Total Transition (Constant Price)</th>
<th>Average Annual (excl. Transition) (Constant Price)</th>
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</table>

**Description and scale of key monetised benefits by ‘main affected groups’**

None.

**Other key non-monetised benefits by ‘main affected groups’**

We have been unable to monetise any benefits to consumer health from more stringent Salmonella controls and reduced risks to consumers.

**Key assumptions/sensitivities/risks**

Currently we lack sufficient data to monetise most potential costs.

Assumption that familiarisation will take one hour for enforcement officers; assumption that familiarisation will take one hour for slaughterhouses. Assumption that farms will not incur any costs of familiarisation as they are not directly affected by the proposal.

### BUSINESS ASSESSMENT (Option 2)

<table>
<thead>
<tr>
<th>Direct impact on business (Equivalent Annual) (£m):</th>
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<tr>
<td>Net: £0.00</td>
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</table>
Evidence Base (for summary sheets)

Problem under consideration

1. In 2011, the European Food Safety Authority (EFSA) published a scientific opinion on the modernisation of pig inspection, focussing on the public health hazards (biological and chemical) to be addressed by meat inspection. In this context, EFSA concluded that Salmonella was the main biological hazard for public health due to its prevalence and impact on human health, and indicated a series of risk reduction measures.

   - a provision concerning Food Business Operators (FBOs), namely the revision of the existing process hygiene criterion (PHC) for Salmonella.
   - measures concerning the Competent Authority (CA):
     - specific requirements for official verification of the correct implementation of the PHC by FBOs.
     - reporting on the number of Salmonella positive samples collected as part of official activities to verify compliance with the PHC.
     - to require an action plan from Food Business Operators (FBOs) repeatedly failing to meet the PHC and to strictly supervise its outcome.

3. This impact assessment covers England, Wales and Northern Ireland. FSA Scotland will produce a separate Impact Assessment.

Rationale for intervention

4. Intervention is needed to implement Regulation (EU) 217/2014 and Regulation (EU) 218/2014 to improve consumer protection by reducing the presence of Salmonella on pig carcasses and improving official verification of FBO compliance. Adequate systems must be in place by June 2014 for the UK to comply with the new sampling, verification and reporting requirements and to realise the benefits of a stricter Salmonella criterion and compliance verification system.

5. Salmonella is one of the commonest causes of food poisoning in the UK and can result in serious illness or death. Salmonella food poisoning has significant economic effects on society and industry through medical costs, loss of working time and consumer confidence in certain foods, and the costs of control.

Policy background

EU Hygiene Regulations

6. EU food hygiene rules for FBOs are set out in Regulation (EC) 852/2004 and Regulation (EC) 853/2004. Regulation (EC) 854/2004 lays down rules for CAs. These three Regulations, which came into force on 1 January 2006, include rules that govern the placing on the market of meat for human consumption and lay down, respectively, hygiene requirements for all food businesses, specific rules for foods of animal origin, and

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requirements for the organisation of official controls on products of animal origin for human consumption. The Regulations together are known as the Hygiene Package.

7. Official controls on meat are prescribed by directly applicable EU legislation. Their objective is to detect and prevent public health hazards such as foodborne pathogens or chemical contaminants. Meat inspection also plays an integral role in the overall monitoring system for certain animal diseases and the verification of compliance with animal welfare standards.

Revision of the Hygiene Package

8. In July 2009, the European Commission undertook a review of the experience gained from the implementation of the Hygiene Package since 2006. It concluded that, overall, the experience of the Hygiene Package was positive and that there was no need for a fundamental overhaul. However, the Council of the EU invited the Commission to prepare legislative proposals for the modernisation of meat hygiene official controls in slaughterhouses.

9. In May 2010, the Commission asked EFSA to carry out risk assessments on official meat controls and to recommend alternative approaches to inspection. EFSA’s work was prioritised by species and its scientific advice (known as Scientific Opinion) on pig inspection was published in October 2011.5

10. The Opinion identified Salmonella as a priority target for the inspection of swine meat in abattoirs due to its prevalence and impact on human health. EFSA also concluded that the current meat inspection regime does not address current foodborne hazards, which are mostly microbiological in nature and cannot therefore be detected by the naked eye. Therefore, EFSA made a series of recommendations which included risk reduction measures in the abattoir, which focused on prevention of microbial contamination through robust process hygiene-based measures.

11. An EU-wide baseline survey on slaughter pigs carried out in 2006-2007 informed the EFSA Opinion in relation to the estimated prevalence of Salmonella spp. on carcasses across Europe. For the 2006-2007 study, in the UK, 660 pigs were sampled in total at 18 abattoirs. Samples were taken from carcass surfaces of randomly selected pigs in the participating slaughterhouses. The survey report was published by EFSA in June 2008.6 The UK abattoir prevalence estimate was 13.5% for all Salmonella types compared to an EU average prevalence of 8.3%. A similar study was conducted in 2013 but results were not available at the time of publication of this draft impact assessment.

Salmonellosis in humans

12. Salmonellosis is an infection of animals and man caused by a group of bacteria called Salmonella. These can live in the digestive tract of a wide range of mammals (including people), birds and reptiles and are present worldwide. Infection in humans may follow contact with infected animals or contaminated items or environment. Symptoms of human salmonellosis can include fever, diarrhoea and abdominal cramps. This is usually fairly short-lived and often does not cause any obvious disease. However, although rare, it can be life-threatening if it infects the bloodstream.

13. The epidemiology of salmonellosis in humans, which can be transmitted from pigs, is complex. There are many distinct types of Salmonella that can manifest themselves in different ways in pigs and humans, and the links between live pigs and human infection are not always straightforward. Pigs can be a source of infection for other food animal species and companion animals, as well as environmental contamination.

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6 Report of the Task Force on Zoonoses Data Collection on the analysis of the baseline survey on the prevalence of Salmonella in slaughter pigs. Part A. The EFSA Journal, 135
14. In 2012, 8,798 cases of laboratory confirmed salmonellosis in humans were reported in the UK. For every laboratory confirmed report of disease made to national surveillance schemes, there are estimated to be 4.7 unreported cases. This means the total number of cases in the UK in 2012 was approximately 50,000.

15. In 2010, an analysis of the costs and benefits of setting a target for the reduction of Salmonella in slaughter pigs estimated that the total annual human health losses at EU level due to Salmonella in pigs to be approximately €90 million (£75m) (and a total cost of €600 million (£500m) for Salmonella as a whole). This corresponds to €600 (£500) per human case.

Microbiological criteria for foodstuffs

16. Microbiological criteria for are set out in Regulation (EC) 2073/2005. The safety of foodstuffs is mainly ensured by a preventative approach, such as implementation of good hygiene practice and application of procedures based on hazard analysis and critical control point (HACCP) principles. Microbiological criteria can be used in the validation and verification of HACCP procedures and are established at EU level, where their application provides additional public health benefits. These microbiological criteria are supported by risk assessment and scientific opinion from organisations such as WHO/FAO and EFSA.

17. The Regulation defines two types of microbiological criteria:
   - process hygiene criteria (PHC): criteria to assess the hygiene of food production processes.
   - food safety criteria: limits for certain microorganisms above which a foodstuff is deemed unacceptably contaminated.

18. Microbiological testing results support the validation and verification of HACCP procedures and other hygiene control measures which will be reviewed where results indicate contamination is occurring at unacceptable levels. Slaughter and dressing operations provide many opportunities for contamination of carcasses with bacteria that may be associated with animal infection or the slaughterhouse environment. Testing against the PHC provides an indication of the operator’s capability to manage contamination during slaughter, dressing and production processes.

19. The Regulation describes the requirements for the PHC for Salmonella in pig carcasses. The UK, making use of the flexibility within the Regulation, has adapted the testing requirements based on the slaughterhouse throughput level and risk:
   - Slaughterhouses with a throughput level above 100,000 animals per annum: FBOs must sample and test five pig carcasses each week for Salmonella. In any 10-week period, the number of positive samples (or c value) must not exceed five (out of the 50 samples taken or n value), otherwise corrective action is required. If results are satisfactory over a period of 30 consecutive weeks, these slaughterhouses are eligible to move to a reduced testing frequency of five carcasses once every two weeks.
   - Slaughterhouses with a throughput level of 37,500 to 100,000 animals per annum: FBOs must sample and test five pig carcasses once every four weeks. The same c and n value as for a higher throughput level apply, as well as the requirement of corrective action in response to unsatisfactory results. These slaughterhouses are however not eligible to move to a reduced testing frequency.
   - Slaughterhouses on a throughput level below 37,500 per annum: FBOs are exempt from testing.

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8 http://ec.europa.eu/food/food/biosafety/salmonella/docs/fattening_pigs_analysis_costs.pdf
Table 1: Sampling regime for pig slaughterhouses in the UK

<table>
<thead>
<tr>
<th>Annual throughput</th>
<th>Sampling frequencies</th>
<th>Reduced frequency if results are satisfactory</th>
</tr>
</thead>
<tbody>
<tr>
<td>Over 100,000</td>
<td>5 carcasses once a week for 30 weeks (30x5=150 samples)</td>
<td>5 carcasses once every 2 weeks.</td>
</tr>
<tr>
<td>100,000 - 37,500</td>
<td>5 carcasses once every 4 weeks</td>
<td>No reduction</td>
</tr>
<tr>
<td>Below 37,500</td>
<td>No testing required</td>
<td></td>
</tr>
</tbody>
</table>

20. FBOs must test samples using the reference method or an alternative that has been validated according to the requirements in the Regulation.

21. The Regulation requires the FBO to analyse the trend of testing results and if the trend is towards unsatisfactory results, take action to reduce microbiological risk. This includes: improvements in slaughter hygiene and review of process controls, origin of animals and of the biosecurity measures in the farms of origin.

Amendments to the Regulations

22. Following publication of the EFSA Opinion on pig inspection, the Commission developed legislative proposals to tackle the risk from Salmonella contamination in slaughterhouses and increase consumer protection.

23. The Commission presented initial proposals (to amend Regulation (EC) 2073/2005 and Regulation (EC) 854/2004) at the Standing Committee on the Food Chain and Animal Health (SCoFCAH) meeting on 21 September 2012. The proposals were subject to lengthy negotiations and considerable revision, ultimately achieving qualified majority vote of Member States (MSs) in May 2013. The UK industry was updated and consulted throughout the EU negotiations.

Amendments to the Salmonella PHC

24. The initial draft proposal amending criterion 2.1.4 (Salmonella in carcasses of pigs), as set out in Regulation (EC) 2073/2005, prescribed a five-fold increase in the sampling regime, whereby FBOs would be expected to sample 25 carcasses a week without exceeding the maximum threshold of 25 Salmonella positive samples in any 10-week period. The UK opposed the draft proposal on the basis of it being disproportionate when compared to the potential positive effect on consumer protection. This proposal would have increased sampling and testing costs significantly but, as the ratio of acceptable number of positives to the total number of samples taken (1:10) had not changed, the UK had reservations about the likely positive impact on public health.

25. Following a number of proposals from the Commission and Member States (MSs) and various suggested combinations of sample levels and acceptable limits, consensus was reached on a final proposal which maintained the current level of sampling\(^9\) (this is 50

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\(^9\) The UK uses an adapted the sampling regime based on risk – please refer to Table 3. The sampling regime (frequency of sampling) has not changed as a result of the amendment to the Salmonella PHC.
samples over a 10-week period\textsuperscript{10} but lowered the tolerance for positives (c value) from five to three. Therefore, the new threshold for the Salmonella PHC is three positive samples over any 10-week period. Other provisions in the Regulation, such as sampling frequency flexibility, have not been amended by Regulation (EU) 217/2014.

Amendments to official verification

26. Regulation (EC) 2073/2005 contains a general requirement for the CA to verify compliance with the rules and criteria laid down in the Regulation. The current procedures for official verification of FBO compliance with the Salmonella PHC are described in detail in the Manual for Official Controls\textsuperscript{11}. The Official Veterinarian (OV) is to monitor the sampling, transport of samples to the laboratory, laboratory methods used and provision of results at slaughterhouses. The interval between checks varies, depending on the sampling and audit frequency. The OV is also tasked with liaising with the FBO or representative at agreed intervals and reviewing the results.

27. The OV is also responsible for verifying that where any further action by the FBO is required in regard to unsatisfactory testing results, this action is taken promptly and is documented within the HACCP based procedures. The OV is also responsible for taking appropriate enforcement action in the event of failure to take corrective action by the FBO, although anecdotal evidence indicates that enforcement action as a direct result of non-compliance with the Salmonella PHC is limited. Furthermore, failure to meet PHC does not result in withdrawal or recall of product.

28. Regulation (EU) 218/2014, which amends Regulation (EC) 854/2004, introduces a requirement that the CA collects testing data as part of the verification process. The approaches for a more robust official verification procedure are as follows:
   a) Official sampling; and/or
   b) Collection of FBO data on Salmonella PHC; and/or
   c) Collection of national control programme data on Salmonella.

Action on repeated failures to comply with the PHC

29. Regulation (EU) 218/2014 specifies that the CA must require FBOs to draw up an action plan if testing results against the Salmonella PHC are unsatisfactory on several occasions. While the need for corrective action by the FBO in the case of non-compliance with the PHC is not new, greater focus is now given to monitoring by the CA of the outcome of corrective actions. This is captured in the requirement that the CA must strictly supervise the outcome of the action plan.

Reporting of testing results

30. Furthermore, the text includes a requirement that the total number and the number of Salmonella positive samples, irrespective of the approach used for verification (a, b or c above), be reported by MSs to the Commission as part of the yearly report of zoonoses and zoonotic monitoring.

Description of options

31. Two options have been identified with regard to the amendments to Regulation (EC) 2073/2005 and Regulation (EC) 854/2004 (as per Regulation (EU) 217/2014 and Regulation (EU) 218/2014):

- Option 1: do nothing; and

\textsuperscript{10} or 10 sampling events if sampling is not done weekly.

\textsuperscript{11} http://www.food.gov.uk/enforcement/monitoring/meat/manual/
ANNEX B (SALMONELLA)

- Option 2: apply the new requirements as described.

OPTION 1: DO NOTHING

32. Under this option, Regulation (EU) 217/2014 and Regulation (EU) 218/2014 amending the current legislative requirements, which aim to improve public health and compliance with the Salmonella PHC, would not be given effect. In practical terms, this would mean:
   - not implementing a lower c value for the Salmonella PHC
   - not implementing a more robust procedure for official verification of FBO compliance with the Salmonella PHC
   - not reporting on Salmonella PHC sampling results to the Commission

33. Salmonellosis has been reported to result in 15,000 days in hospital and 200 deaths each year. Slaughterhouses are a key point in the pig meat production chain where stricter controls may have a significant effect on Salmonella contamination. Doing nothing would mean that the public health benefits from implementing more robust Salmonella control and compliance measures would not be accrued, and that measures that may reduce the cost of Salmonellosis to society are not implemented.

34. This option means that the UK would fail to comply with EU Regulations by not implementing Regulation (EU) 217/2014 and Regulation (EU) 218/2014 which could lead to infringement proceedings. By not observing the revised Salmonella PHC parameters, UK FBOs would not be compliant with the amended Regulation (EC) 2073/2005.

OPTION 2: APPLY AMENDMENTS TO REGULATION (EC) 2073/2005 AND REGULATION (EC) 854/2004

35. This is the preferred option. It involves putting the mechanisms in place to apply and give effect to Regulation (EU) 217/2014 and Regulation (EU) 218/2014 amending Regulation (EC) 2073/2005 and Regulation (EC) 854/2004. The key elements of this option are:

*Implementation of a lower c value for the Salmonella PHC*

36. Since 2006, when Regulation (EC) 2073/2005 came into force, FBOs have been required to sample pig carcasses for Salmonella as a criterion indicating the acceptable functioning of their production processes. FBOs have since put in place sampling and testing procedures, as necessary, to ensure compliance with the microbiological criteria legislation.

37. Under this option, the threshold for unsatisfactory results (i.e. the number of Salmonella positive samples before the need for corrective action is triggered), will be lowered from five to three. Other elements such as the sampling regime (i.e. number of samples to be taken per week and sampling flexibilities) remain unchanged.

38. The provision for reduced sampling frequency, subject to obtaining satisfactory results for 30 consecutive weeks and plant throughput, will remain in place. The exemption from testing for small slaughterhouses will also remain.

*Official verification of compliance with the Salmonella PHC requirements*

39. Regulation (EC) 882/2004, which entered into force in January 2006, includes requirements for MSs to ensure that official controls are carried out regularly, including verification of FBO compliance with the microbiological criteria laid down in Regulation (EC) 2073/2004.

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13 Regulation (EC) 882/2204, Title II, Chapter I, Article 3
40. Option 2 entails collection by the CA of testing data for official verification of FBO compliance with the Salmonella PHC. Three alternatives are provided for data collection:

a) Official sampling (in addition to FBO sampling). At least 49 random samples to be taken by the CA in each slaughterhouse each year. The number of samples may be reduced in small slaughterhouses based on a risk evaluation; and/or

b) Collection of all information on the total number and the number of Salmonella positive samples taken by FBOs in accordance with the PHC requirements set out in Regulation 2073/2005; and/or

c) Collection of all information on the total number and the number of Salmonella positive samples taken within the frame of national control programmes.

41. It must be noted that these implementation options are not mutually exclusive. Each MS’s CA may implement one of the above, or a combination of the above, in their territory as appropriate. These three approaches (a, b and c) are further described below.

42. **Approach (a) (official sampling).** The requirement is for the CA to undertake sampling using the same method and sampling area as FBOs in order to verify compliance with the Salmonella PHC. As the purpose of this task is to verify that approved pig slaughterhouses comply with EU Food Hygiene Regulations, the cost of carrying out the sampling would come under ‘regulated work’ for which FBOs are charged. However, informal consultation with stakeholders during negotiations on the legislative amendments highlighted that this approach was not seen as proportionate by the UK abattoir sector as it would increase the burden on FBOs, who already carry out extensive testing, and focused only on slaughterhouses. The Regulation already includes provisions for the CA to carry out additional testing, as necessary, to verify FBO testing against the PHC. Therefore, this approach is not considered further.

43. **Approach (b) (collection of FBO sampling data).** This is the preferred approach. Since 2006, FBOs are required to sample and test pig carcasses for Salmonella. Under this approach FBOs would make their sampling result available to the CA. There are already data exchange mechanisms between some FBOs and the CA which could be used for this purpose. Otherwise, FBOs may choose to enter the results on the CA electronic interface or provide the CA with the data. As with approach a, the costs of collecting the data would be considered ‘regulated work’ and therefore chargeable to FBOs. This is consistent with the current UK approach for risk-based CA sampling where the majority of sampling should be carried out by FBOs and further official sampling is only carried out if there are concerns with the FBO or the sampling and testing carried out.

44. **Approach (c) (national control plan data).** There is currently no national control plan for Salmonella in pigs in the UK, therefore this approach cannot be considered in the short or medium term.

*Requirement for corrective action and action plans*

45. Under Option 2, FBOs will be required to draw up an action plan if the Salmonella PHC is not complied with on several occasions. There is currently a general requirement for FBOs to implement corrective action when PHC are not met. This requires improvements in slaughter hygiene with review of process controls and animal origin\(^\text{14}\). The new Regulation introduces a specific requirement for an action plan from the FBO which may increase

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\(^{14}\) Actions currently required in the abattoir may include: investigation of the hygiene of slaughter and dressing; improvement of the clarity of instructions issued to staff and increased staff training; improved cleaning of process equipment and the lairage; scheduling animals from farms with a history of Salmonella last in the day; undertaking special conditions during slaughter of animals with a history of Salmonella; and undertaking serotyping of Salmonella positive isolates to help identify the source. In addition, it may be required that suppliers of the animals carry out an investigation of the biosecurity and hygiene on the farm and transport to the abattoir.
attention to Salmonella control at all stages of the chain, including on farm. There is also greater focus on CA monitoring of the outcome of corrective actions.

Reporting on Salmonella PHC verification data

46. The total number and the number of Salmonella positive samples must be reported to the Commission, via EFSA, in accordance with Article 9(1) of Directive 2003/99/EC. Reports, and any summaries of them, must be made publicly available. Although it is an existing requirement that each year MSs send to the Commission a report on trends and sources of zoonoses, zoonotic agents and antimicrobial resistance, the amendment effectively modifies the list of zoonoses that MSs must report on, adding Salmonella PHC results to the list.

47. The report must differentiate between samples taken under approach a, b and c. Approach b requires data transfer between FBOs and the CA. Some FBOs currently have mechanisms in place to allow for the exchange of data, such as inspection results.

Sectors and Group affected

Industry

Pig slaughterhouses

48. Only approved pig slaughterhouses with an annual throughput over 37,500 animals per annum will be affected by the changes, since slaughterhouses with a lower throughput level are exempt from testing (see Table 1 above). In 2013, there were in total 137 approved slaughterhouses in England, Wales and Northern Ireland, 21 of which were producing at a throughput level above 37,500 pigs per annum. Table 1 below shows these slaughterhouses by UK country and throughput level.

Table 2: Total number of affected pig slaughterhouses in the UK

<table>
<thead>
<tr>
<th>Per annum throughput</th>
<th>England</th>
<th>Wales</th>
<th>NI</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Above 100,000</td>
<td>12</td>
<td>0</td>
<td>3</td>
<td>15</td>
</tr>
<tr>
<td>100,000-37,500</td>
<td>5</td>
<td>0</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>Total</td>
<td>17</td>
<td>0</td>
<td>4</td>
<td>21</td>
</tr>
</tbody>
</table>

49. All these slaughterhouses will incur a familiarisation cost as they will need to be aware of the changes to testing requirements. No changes have been introduced to the current sampling regime. This means that high throughput abattoirs (i.e. slaughtering over 100k animals a year) will continue to have the option to move to reduced testing frequency as long as their sampling results remain satisfactory. However, as have been outlined above, from June 2014, the threshold for the acceptable number positive samples will be lowered from five to three. This means that slaughterhouses could be more likely to obtain unsatisfactory results, which is likely to have an effect on:

- For slaughterhouses with an annual throughput of above 37,500 animals: the frequency of corrective action needed may increase;
- For slaughterhouses with an annual throughput of above 100,000 animals: their ability to move to a reduced testing frequency may be reduced.
Farmers

50. The amended threshold for the number Salmonella positive samples may have an indirect effect on pig farmers. Following unsatisfactory results, slaughterhouses are expected to implement corrective action which may include a review of on-farm biosecurity. While it is envisaged that slaughterhouses will first review their slaughter hygiene and process controls, it is possible that a lower threshold may require more extensive corrective action, which may trigger reviews of on-farm biosecurity and implementation of additional controls for Salmonella. Anecdotal evidence is that such on-farm reviews are very rare. However, as a result of greater attention to on-farm Salmonella control plans by slaughterhouses, farmers may be under increased pressure to control Salmonella. Most farmers have Salmonella controls plans in place, particularly if they belong to an assurance scheme (as it is often a requirement), but farmers may be under pressure to reduce Salmonella prevalence in their holdings if this is identified as the reason for high Salmonella contamination in the slaughterhouse. The actions that farmers take to control Salmonella will be specific to each holding and will vary depending on the source of contamination. As the impact on farmers is indirect we do not envisage any familiarisation costs to this group (there are no new requirements on farmers outlined in the amendments to the Regulations).

Table 3: Total number of Pig Holdings in the UK

<table>
<thead>
<tr>
<th></th>
<th>England</th>
<th>Wales</th>
<th>NI</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pig holdings</td>
<td>7,900</td>
<td>1,407</td>
<td>895</td>
<td>10,202</td>
</tr>
</tbody>
</table>

Enforcers

51. The FSA verifies compliance with the microbiological testing requirements for Salmonella testing in approved slaughterhouses in England, Scotland and Wales, and the Department of Agriculture and Rural Development (DARD) carries out meat hygiene official controls in approved slaughterhouses on behalf of the FSA in Northern Ireland. The introduction of the requirements to carry out official sampling for verification purposes and/or to collect FBO sampling data by the CA, and to report on official verification data will have an impact on official resources. Procedures and resources will need to be in place in order to give effect to these requirements and to supervise action plans as a consequence of repeatedly failing to meet the PHC. Enforcement officers will also incur familiarisation costs as they will need to be aware of the changes.

52. Official controls in slaughterhouses are delivered by OVs and Meat Hygiene Inspectors (also known as Official Auxiliaries). It is envisaged, however, that changes to the current Salmonella controls will only affect OVs as they are responsible for monitoring the sampling, transport to the laboratory, laboratory methods and provision of results where sampling and testing is required. There are currently 27.5 OVs (FTE) permanently based at the 21 slaughterhouses which have a throughput over 37,500 for which sampling is required (see Table 2 above).

Table 4: Number of FTE OVs Affected by the Proposal

<table>
<thead>
<tr>
<th></th>
<th>England</th>
<th>Wales</th>
<th>NI</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>OVs affected</td>
<td>23.5</td>
<td>0</td>
<td>4</td>
<td>27.5</td>
</tr>
</tbody>
</table>

Consumers

53. As indicated by EFSA in its Opinion, Salmonella is a priority target in pig inspection due to its prevalence and impact on human health. The purpose of microbiological testing (against PHC) is to ensure that process controls are reviewed where results indicate contamination is occurring. By lowering the number of Salmonella positive results deemed acceptable, tolerance for Salmonella contamination in the slaughterhouse is reduced. The objective of
this measure is to increase process hygiene in abattoirs which is expected to have a beneficial effect on food safety and bring about public health benefits to consumers.

**Wider Impacts**

54. The strengthening of the Salmonella controls could have wider benefits. Salmonella is a sensitive issue among British consumers. A Salmonella scare, such as the one in 1988 linking British egg production and Salmonella, or an outbreak of illness associated with this pathogen could lead to a loss in consumer confidence in food safety controls. This could have a serious impact on pig meat producers and the wider meat industry.

**Option appraisal**

**OPTION 1: DO NOTHING**

**COSTS AND BENEFITS**

55. There are no costs or benefits associated with this option as it is the baseline against which all other policy options are appraised. The baseline assumes that all other variables in the baseline remain unchanged for the lifetime of the policy, including current levels of consumer protection associated with the control of Salmonella contamination in slaughterhouses and the level of compliance with the process hygiene criterion for Salmonella.

56. Under this option, the public health benefits from implementing the new Salmonella control and compliance measures would not be accrued. Also, consumer confidence in food safety controls could be reduced if action is not taken to improve official controls on pig meat in response to the EFSA Opinion highlighting Salmonella as the key zoonotic risk.

57. Moreover, this option entails not being in compliance with EU legislation which could lead to infraction proceedings. The maximum fine that could be imposed on the UK is some €703,000 per day or £256 million per year.\textsuperscript{15}

**OPTION 2: IMPLEMENTATION OF AMENDMENTS TO REGULATION (EC) 2073/2005 AND REGULATION (EC) 854/2004**

**COSTS**

Costs to Industry

**SLAUGHTERHOUSE SECTOR**

**Familiarisation Costs (One-Off Costs)**

58. There will be a one-off cost to slaughterhouses from reading and familiarising themselves with the new requirements. Familiarisation costs can be quantified by multiplying the time it takes for familiarisation by the wage rate of the person carrying it out. It is our assumption that it will be the slaughterhouse manager (wage rate of £25.8\textsuperscript{16}) that is responsible for familiarisation and that it will on average take one manager per slaughterhouse one hour to familiarise themselves and disseminate the information to other key staff. Multiplying the wage rate by the number of slaughterhouses (21, see Table 1) and hours required (1) generates a total familiarisation cost to slaughterhouses of £542, see Table 5 below.

\textsuperscript{15} http://www.scotland.gov.uk/Topics/International/Europe/Legislation/Infractions

Table 5: Familiarisation Costs to Slaughterhouses (£)

<table>
<thead>
<tr>
<th></th>
<th>England</th>
<th>Wales</th>
<th>NI</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Familiarisation</td>
<td>310</td>
<td>0</td>
<td>77</td>
<td>542</td>
</tr>
</tbody>
</table>

59. In order for one-off costs to be compared to annual costs on an equivalent basis across the time span of the policy, one-off costs are converted into Equivalent Annual Costs (EACs) by dividing the one-off cost by an annuity factor.\(^{17}\) The total one-off familiarisation cost to UK industry in this proposal is £542 which yields an equivalent annual cost of £63 over a ten year period. Table 6 below shows the EAC for UK.

Table 6: Familiarisation Equivalent Annual Costs

<table>
<thead>
<tr>
<th></th>
<th>England</th>
<th>Wales</th>
<th>NI</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Familiarisation</td>
<td>36</td>
<td>0</td>
<td>9</td>
<td>63</td>
</tr>
</tbody>
</table>

Inability to move to a reduced testing frequency (Ongoing Cost)

60. For slaughterhouses with a throughput over 100,000 pigs, a consequence of lowering the threshold for the number of Salmonella positive samples from five to three is that slaughterhouses may not be able to meet the eligibility criteria for reduced testing as frequently. This is dependent on achieving satisfactory results for 30 weeks; from June 2014, this will mean not having more than three positive results every 10 weeks over a period of 30 weeks (a total maximum of nine positive results).

61. Only slaughterhouses that slaughter more than 100,000 pigs per year are eligible for reduced sampling. Slaughterhouses producing 100,000 or fewer pigs per year are either ineligible for reduced frequency or not required to test. Therefore, a change in the threshold will potentially affect 15 plants currently slaughtering more than 100,000 pigs a year.

62. We currently have limited data to monetise the impact of this change. We have, however, carried out some indicative analysis based on the EU baseline survey from 2006/07\(^{18}\). This survey showed a UK abattoir prevalence of 13.5% for all Salmonella types. Based on this prevalence, analysis suggests that a lowering of the \(c\) value from 5 to 3 would reduce the probability of an average plant to achieve satisfactory results, after a 10 week period, from 32% to 8%. Due to data limitations we have, however, been unable to calculate any robust estimates of this potential cost.

Consultation Question 1

We currently have limited data to monetise the impact of the lowering of the \(c\) value from five to three. We invite stakeholders to comment on the impact of this requirement:

- How would your current sampling frequency change in terms of number of per annum tests taken?
- How would your sampling costs change in terms of per annum pounds spent on sampling?

Increased corrective action (Ongoing Cost)

\(^{17}\) The annuity factor is essentially the sum of the discount factors across the time period over which the policy is appraised. The equivalent annual cost formula is as follows:

\[
a_{t,r} = \sum_{j=0}^{t-1} \prod_{i=0}^{j} \left( \frac{1}{1 + r_i} \right)
\]
63. Unsatisfactory results require corrective action by the slaughterhouse which includes improvements in slaughter hygiene and review of process controls, origin of animals and of the biosecurity measures in the farms from which pigs are sourced. This requirement is already in place, however, implementing a lower c value means that corrective action may be required more often. The magnitude of this cost will depend on the prevalence of Salmonella in the animals and the slaughterhouse’s ability to control contamination. The new Regulation also specifies that, if the PHC is not complied with on several occasions, the CA must require an action plan from the FBO and strictly supervise its outcome. We have at this stage been unable to monetise the implication of these requirements.

Consultation Question 2
We invite stakeholders to comment on whether the lowering of the threshold from five to three may increase their costs of corrective action:

- How would the frequency of corrective action change, in terms of per annum occasions?
- How would your per annum costs change, in terms of time and resources spent on corrective action?
- How would the requirement of an action plan impact on costs – how much additional time and resources are likely to be spent on implementing an action plan per annum?

Official verification (Negligible Cost)

64. Under the preferred approach for verification (Approach b, CA collection of FBO sampling data), the slaughterhouse will make their sampling data available to the CA. There are various possibilities for data exchange: (i) automatic electronic data transfer; (ii) electronic interface for FBO manual input of data; and (iii) the FBO makes the data available to the CA in hard form so it can enter the data on the system. Under all these approaches we envisage that the cost to the FBO would be minimal. Some FBOs already have systems in place for the automatic transfer of data, and for those FBOs, costs will be minimal. For FBOs which choose to input results manually, we also envisage costs to be minimal (inputting results into the system is estimated to take less than half a minute per week, hence in total less than 30 minutes per annum). For FBOs which choose to provide sample results in hard form for the CA to input them into the system, this work would be considered ‘Regulated work’ and is therefore chargeable to the FBO. However, as noted above, the processing costs have been considered negligible and would therefore be absorbed by the FSA as part of the discharge of official duties. It is our working assumption that the third approach is the most likely approach to go ahead. We therefore envisage that the cost to slaughterhouses associated with this requirement would be minimal.

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19 Biosecurity measures encompass good hygiene practices on farm including precautions taken when entering or leaving any premises with farm animals to prevent the spread of animal diseases.
FARM SECTOR

Increased Number of On-Farm Investigations (Non-Monetised Cost)

65. The proposal might have an indirect effect on farmers. In order to address unsatisfactory results, slaughterhouses are expected to take corrective action which may include a review of on-farm biosecurity and Salmonella control measures in place at farms from which animals are sourced. The revised c value is likely to have an effect on the frequency at which corrective actions are taken in the slaughterhouse, which may result in an increased number of investigations of the biosecurity and hygiene on the farm and transport to the abattoir. Farmers may be under pressure from slaughterhouses to reduce Salmonella prevalence in their holdings if this is identified as the reason for high Salmonella contamination in the slaughterhouse. However, the actions that farmers take to control Salmonella will be specific to each holding and will vary depending on the source of contamination. Only farmers that send animals to those slaughterhouses which process more than 37,500 pigs a year may potentially be affected by this, as smaller plants are exempt from testing. We have at this stage been unable to monetise the implication of this requirement.

Consultation Question 4

We invite stakeholders to comment on the potential costs to farmers from an increase in the number of on-farm investigations:

- How would the frequency of reviews of on-farm controls change, in terms of per annum occasions?
- How would your per annum costs change, in terms of time and resources spent on on-farm investigations?
- Would the proposal be associated with any familiarisation costs to farmers?

Costs to Enforcement

Familiarisation Costs

66. There will be a one-off cost to enforcement from reading and familiarising themselves with the new requirements. Familiarisation costs can be quantified by multiplying the time it takes for familiarisation by the wage rate of the official carrying it out. As outlined in paragraph 28 above, it is the OVs that are responsible for the monitoring of Salmonella controls. There are currently 27.5 full-time employed OVs that will be affected by the proposal and therefore will need to familiarise themselves with the proposal. It is our assumption that it will take approximately one hour per OV to familiarise themselves and disseminate the information to other key staff. Multiplying the hourly wage rate on an OV (£36.8 in England/Wales and £44.2 in Northern Ireland20) by the number of slaughterhouses (21, see Table 1) and hours

---

20 FSA internal data
required (1) generates a total familiarisation cost to enforcement of £1,042. Table 7 below shows the total familiarisation cost to enforcement by country as well as the associated Equivalent Annual Costs (for explanation see paragraph 59).

Table 7: Familiarisation Costs to Enforcement (£)

<table>
<thead>
<tr>
<th></th>
<th>England</th>
<th>Wales</th>
<th>NI</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Familiarisation</td>
<td>865</td>
<td>0</td>
<td>177</td>
<td>1,042</td>
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<tr>
<td>EAC</td>
<td>100</td>
<td>0</td>
<td>21</td>
<td>121</td>
</tr>
</tbody>
</table>

**Increased corrective action (Ongoing Cost)**

67. The lowering of the threshold for the number of acceptable positive samples may result in FBO corrective action and action plans after repeated failure being required more frequently. This could have an effect on OV resources as OVs are required to monitor that corrective action is taken and to supervise the outcome of action plans. We have been unable to monetise the associated costs as we currently do not have sufficient information to be able to do so.

**Consultation Question 5**

Currently OVs need to monitor that corrective action is taken. We invite stakeholders to comment on the costs to enforcement from a potential increase in the frequency of corrective action:

- How would the per annum costs change, in terms of time and resources spent on monitoring that corrective action has been taken?
- What would be the per annum costs of supervising the outcome of action plans in terms of time and resources spent?

**Official verification (Negligible Cost)**

68. Under the preferred approach for verification (Approach (b), CA collection of FBO sampling data), the slaughterhouse will make their sampling data available to the CA. There are various methods for data exchange: (i) automatic electronic data transfer; (ii) electronic interface for FBO manual input of data; and (iii) the FBO makes the data available to the CA in hard form so it can enter the data on the system. Under all the three methods, the CA may incur a one-off cost for setting up a data capture/exchange system. Currently we are uncertain about which of the three methods above will be used for the exchange of data, but we are likely to start with (iii) which carries negligible costs to slaughterhouses. We anticipate the cost to the FSA of setting up this system will be negligible (as described above) and we have therefore not monetised this cost.

**Costs of reporting on Salmonella PHC official verification data (Negligible Cost)**

69. Although the requirement to report on the total number and the number of Salmonella positive samples taken as part of the official verification is new, the UK already reports yearly on information on monitoring of zoonoses in accordance with Directive 2003/99/EC. Therefore, the costs associated with adding this dataset to the report have been assessed as minimal. We envisage that it should not require more than one official spending two hours per annum interrogating the system and producing a report. This would generate a cost to the CA of approximately £28\(^{21}\) per annum.

**BENEFITS**

**Benefits to Consumers**

*Reduced risk to consumer health from Salmonellosis*

70. There are multiple factors that can contribute to the presence of Salmonella contamination on pig carcasses, from carcass dressing practices and slaughterhouse process controls to Salmonella levels on the farm and transport conditions. However, a stricter Salmonella PHC means that it is likely that action will be taken more regularly to identify and address sources of contamination. As a result, levels of Salmonella in pig meat are likely to decrease. Therefore, the risk to consumers is likely to decrease. The effect of reduced levels of Salmonella in pig meat on cases of human Salmonellosis is difficult to assess; however, it can be expected that lower levels of the pathogen may lead to fewer cases of food poisoning due to improper cooking or cross-contamination with other foods. Based on estimates of the cost of Salmonella to society\(^\text{22}\), each human case prevented will mean a saving of €600 (£500).

**Summary of All Costs and Benefits under Option 2**

71. At this stage we have had insufficient information to monetise many costs, the summary of costs in this section is therefore not representative of the real cost of the proposal. We invite stakeholders to provide us with as detailed information as possible for us to monetise costs.

72. As can be seen in Table 8 below, Option 2 generates costs to slaughterhouses in terms of familiarisation (£542 PV over ten years), as well as costs resulting from the reduced ability to move to a reduced sampling frequency (non-monetised), a potential increase in the frequency of corrective action (non-monetised) and from the provision of data for the verification of compliance (negligible cost). Farms may be indirectly affected by Option 2, as reviews of on-farm controls may increase, but we have been unable to monetise this cost. Enforcement will incur costs from familiarisation (£1,012 PV over ten years), from a potential increase in the number of corrective action that needs monitoring, a potential cost in setting up a data exchange system for the collection of verification data (non-monetised), and from the new requirement of annual reporting to the European Commission (assessed as negligible at a present value over ten years of £238).

73. As outlined above, due to lack of data, we have been unable to monetise a large proportion of costs. We have also been unable to monetise any benefits from this proposal. The net impact is therefore a net cost to society of £1,821 (NPV over ten years), and the net impact on industry is a net cost of £542 (NPV over ten years).

\(^{22}\) [http://ec.europa.eu/food/food/biosafety/salmonella/docs/fattening_pigs_analysis_costs.pdf](http://ec.europa.eu/food/food/biosafety/salmonella/docs/fattening_pigs_analysis_costs.pdf)
Table 8: Total Costs and Benefits under Option 2 (£)

<table>
<thead>
<tr>
<th>COSTS</th>
<th>Year 0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>Total</th>
<th>EAC/p.a.</th>
<th>PV</th>
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</thead>
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<tr>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Familiarisation</td>
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<td>0</td>
<td>0</td>
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<td>542</td>
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<tr>
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<td>1,021</td>
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<tr>
<th>BENEFITS</th>
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<th>3</th>
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<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>Total</th>
<th>EAC/p.a.</th>
<th>PV</th>
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<td><strong>TOTAL BENEFITS</strong></td>
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<td></td>
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<td><strong>NET IMPACT</strong></td>
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<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
<td>Total</td>
<td>EAC/p.a.</td>
<td>NPV</td>
</tr>
<tr>
<td>Net society (cost)</td>
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<td>28</td>
<td>28</td>
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<td>1,859</td>
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<td>1,021</td>
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<td>Net industry (cost)</td>
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<td>0</td>
<td>0</td>
<td>542</td>
<td>63</td>
<td>542</td>
</tr>
</tbody>
</table>

### Summary and the preferred option

74. Two options have been considered in relation to the application of amendments to Regulation (EC) 2073/2005 and Regulation (EC) 854/2004 (as per Regulation (EU) 217/2014 and Regulation (EU) 218/2014): do nothing (Option 1) and implementation of amendments (Option 2). Under Option 1, the amendments to the Regulations would not be given effect in the UK, despite being directly applicable EU law. The potential public health benefits from a more frequent review of slaughterhouse process hygiene associated with a stricter Salmonella criterion would not be realised. This option also carries the risk of EU infraction procedures against the UK for not implementing the Regulations.

75. Option 2 (Implementation of amendments) is the preferred option. This option entails:

- implementing a lower threshold for the number of Salmonella positive samples deemed satisfactory taken by FBOs as part of the validation and verification of the correct functioning of their procedures based on HACCP principles and good hygiene practice.
- collecting testing data as part of official verification of FBO compliance with the Salmonella PHC. Three approaches are available for data collection: official sampling in addition to FBO sampling (Approach a), collection of FBO testing data (Approach b), and collection of testing data taken within the frame of national control programmes (Approach c). The preferred approach is Approach b.
- reporting on the total number and the number of Salmonella positive samples collected as part of the official verification process.

76. Option 2 is the preferred option to enhance current controls and to improve verification on FBO compliance with the Salmonella PHC. Reviews of slaughterhouse hygiene and process controls, and biosecurity on farm as necessary, in order to address unsatisfactory
Salmonella testing results will likely result in reduced levels of Salmonella in pig meat, providing increased consumer protection.

Consultation Question 6
Do stakeholders agree that Option 2 should be the preferred option? It would be helpful if an explanation could be provided to support opinions, particularly where other options are preferred.

One In, Two Out
Title: Impact assessment for the implementation of the revised Trichinella requirements in England and Wales.

IA No: FOOD0060

Lead department or agency: Food Standards Agency

Other departments or agencies: AHVLA, Devolved Countries

Impact Assessment (IA)

Date: 24 March 2014
Stage: Consultation
Source of intervention: EU
Type of measure: Other
Contact for enquiries: Keira Benefer 020 7276 8350

Summary: Intervention and Options

Cost of Preferred (or more likely) Option

<table>
<thead>
<tr>
<th>Total Net Present Value</th>
<th>Business Net Present Value</th>
<th>Net cost to business per year (EANCB on 2009 prices)</th>
<th>In scope of One-In, Two-Out?</th>
<th>Measure qualifies as In/Out/zero net cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>-£1.97</td>
<td>-£0.76</td>
<td>£0.08</td>
<td>No</td>
<td>In/Out/zero net cost</td>
</tr>
</tbody>
</table>

What is the problem under consideration? Why is government intervention necessary?

A new EU Regulation amending the Trichinella controls in the current version of Regulation (EC) 2075/2005 comes into force in June 2014, which moves away from requiring all pigs to be tested for this parasite to a more risk-based regime. This purpose of the EU Regulation is to set up suitable controls to protect public health. The Regulation is directly applicable in the UK and requires the Competent Authority to ensure that the necessary testing requirements are implemented. Government intervention is necessary to ensure that consumer health is protected and the risk from Trichinella contamination is minimised.

What are the policy objectives and the intended effects?

This measure is part of the wider legislative framework which is intended to ensure that food is safe to eat. The UK has a long-term objective to secure derogations from Trichinella testing, which will help to support and further trade in the medium and long term - the new regulation provides a clear path to securing that recognition, whilst ensuring that safeguards are in place to protect consumer health. With regard to Trichinella, Great Britain and Northern Ireland are two separate epidemiological units with differing industry profiles, so whilst Regulation will have different effects in GB and NI, the overall objectives apply to the whole of the UK.

What policy options have been considered, including any alternatives to regulation? Please justify preferred option (further details in Evidence Base)

Option 1: Do nothing - continue to test all sows and boars plus a proportion of fattening pigs, including those for export, not delineated by housing conditions.

Option 2: Implement the new EU Regulation - for England and Wales this would require testing of all sows and boars (as is currently undertaken) and to introduce testing controls for all pigs not kept in controlled housing. This is the preferred option as this will support the long term policy objective to secure derogations from testing for England and Wales and remove the prospect of Commission action for non-compliance or under-implementation. Full compliance will therefore support and protect the UK pig industry.

Will the policy be reviewed? It will/will not be reviewed. If applicable, set review date: Month/Year

<table>
<thead>
<tr>
<th>Does implementation go beyond minimum EU requirements?</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Are any of these organisations in scope? If Micros not exempted set out reason in Evidence Base.</td>
<td>Micro Yes</td>
</tr>
<tr>
<td>What is the CO2 equivalent change in greenhouse gas emissions? (Million tonnes CO2 equivalent)</td>
<td>Traded:</td>
</tr>
</tbody>
</table>

I have read the Impact Assessment and I am satisfied that, given the available evidence, it represents a reasonable view of the likely costs, benefits and impact of the leading options.

Signed by the responsible FSA Director: ___________________________ Date: ______________________
## Summary: Analysis & Evidence

**Policy Option 1**

**Description:** Do nothing (i.e. maintain current testing regime in England and Wales)

### FULL ECONOMIC ASSESSMENT

<table>
<thead>
<tr>
<th>Price Base Year 2013</th>
<th>PV Base Year 2013</th>
<th>Time Period Years 10</th>
<th>Net Benefit (Present Value (PV)) (£m)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Low: Optional</td>
</tr>
<tr>
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<td></td>
<td>High: Optional</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Best Estimate: n/a</td>
</tr>
</tbody>
</table>

#### COSTS (£m)

<table>
<thead>
<tr>
<th></th>
<th>Total Transition (Constant Price)</th>
<th>Average Annual (excl. Transition) (Constant Price)</th>
<th>Total Cost (Present Value)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>Optional</td>
<td>Optional</td>
<td>Optional</td>
</tr>
<tr>
<td>High</td>
<td>Optional</td>
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</tr>
<tr>
<td>Best Estimate</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
</tr>
</tbody>
</table>

**Description and scale of key monetised costs by ‘main affected groups’**
None. This is the baseline against which all other policy options are appraised.

**Other key non-monetised costs by ‘main affected groups’**
None. This is the baseline against which all other policy options are appraised.

#### BENEFITS (£m)

<table>
<thead>
<tr>
<th></th>
<th>Total Transition (Constant Price)</th>
<th>Average Annual (excl. Transition) (Constant Price)</th>
<th>Total Benefit (Present Value)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>Optional</td>
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<td>Optional</td>
</tr>
<tr>
<td>High</td>
<td>Optional</td>
<td>Optional</td>
<td>Optional</td>
</tr>
<tr>
<td>Best Estimate</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
</tr>
</tbody>
</table>

**Description and scale of key monetised benefits by ‘main affected groups’**
None. This is the baseline against which all other policy options are appraised.

**Other key non-monetised benefits by ‘main affected groups’**
None. This is the baseline against which all other policy options are appraised.

### Key assumptions/sensitivities/risks

**Discount rate (%)**

3.5

The current requirements have been under-implemented in the UK and the FVO has regularly highlighted this shortcoming. There could thus be possible significant costs for infraction proceedings were the Commission to decide to take action for long-standing non-compliance; this would also have an impact on trade for industry, particularly with regard to third country export.

### BUSINESS ASSESSMENT (Option 1)

<table>
<thead>
<tr>
<th>Direct impact on business (Equivalent Annual) £m:</th>
<th>In scope of OITO?</th>
<th>Measure qualifies as</th>
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</thead>
<tbody>
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<tr>
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<tr>
<td>Net: n/a</td>
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</table>
**Summary: Analysis & Evidence**

**Policy Option 2**

**Description:** Full compliance in England and Wales (core testing regime to meet a) and testing all outdoor pigs to meet point b))

**FULL ECONOMIC ASSESSMENT**

<table>
<thead>
<tr>
<th>Price Base Year 2013</th>
<th>PV Base Year 2013</th>
<th>Time Period Years 10</th>
<th>Net Benefit (Present Value (PV)) (£m)</th>
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<tr>
<td></td>
<td></td>
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**COSTS (£m)**

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</table>

**Description and scale of key monetised costs by ‘main affected groups’**

**Industry:** one-off costs: familiarisation to slaughterhouses £3,354 (PV); setting up in-house lab: £244,000 (PV); familiarisation to farmers: £80,040 (PV); Ongoing costs: Trichinella testing: £428,802 (PV).

**Enforcement:** one-off costs: familiarisation: £4,784 (PV).

**Food Standards Agency:** one off costs: mapping exercise: £10k (PV); Training of OVs: £4,784 (PV); ongoing costs: Trichinella testing: £1,195,194 (PV).

**Other key non-monetised costs by ‘main affected groups’**

We have been unable to monetise the requirement of audits and verification on-farm. However, these will be integrated as far as possible within existing inspections and visits to minimise burdens on farmers.

<table>
<thead>
<tr>
<th>BENEFITS (£m)</th>
<th>Total Transition (Constant Price)</th>
<th>Average Annual (excl. Transition) (Constant Price)</th>
<th>Total Benefit (Present Value)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>Optional</td>
<td>Optional</td>
<td>Optional</td>
</tr>
<tr>
<td>High</td>
<td>Optional</td>
<td>Optional</td>
<td>Optional</td>
</tr>
<tr>
<td>Best Estimate</td>
<td>£0</td>
<td>£0</td>
<td>£0</td>
</tr>
</tbody>
</table>

**Description and scale of key monetised benefits by ‘main affected groups’**

We have been unable to monetise any potential benefits.

**Other key non-monetised benefits by ‘main affected groups’**

**Industry:** the implementation of the new Regulation will enable the UK to take advantage of derogations if test results show no Trichinella infestation. More stringent testing will also help support trade in pigs.

**Consumers:** Strengthened Trichinella testing may have health benefits to consumers, although the risk from Trichinella in the UK has been assessed as negligible.

**Key assumptions/sensitivities/risks**

Discount rate (%) 3.5

We have assumed that 3% of total pig population is in non-controlled housing, as informed by trade organisations. Currently 95% of Trichinella testing is carried out in in-house labs at a cost of 60 pence, whilst the remainder are carried out in private labs at a cost of £4.09. We have assumed that these proportions will apply to the additional testing as required by the Regulation.

**BUSINESS ASSESSMENT (Option 2)**

<table>
<thead>
<tr>
<th>Direct impact on business (Equivalent Annual) £m:</th>
<th>In scope of OI00?</th>
<th>Measure qualifies as</th>
</tr>
</thead>
<tbody>
<tr>
<td>Costs: £0.1</td>
<td>Yes/No</td>
<td>IN/OUT/Zero net cost</td>
</tr>
</tbody>
</table>
Evidence Base (for summary sheets)

Rationale for intervention

1. Although UK evidence from testing indicates that the risk from Trichinella is low in the UK, the parasite can cause serious illness in humans. Consumers generally do not have sufficient information or knowledge to understand the risks associated with Trichinella; government intervention is therefore necessary to ensure that there are safeguards in place to protect consumer health. The previous EU requirements on Trichinella, requiring all pigs to be tested for this parasite, are currently under-implemented in the UK as it was the view of the UK government that these requirements were neither risk-based, nor proportionate. However, a new EU Trichinella regulation comes into force in June 2014, which moves to a more risk-based regime. The Competent Authority is required to ensure that these testing requirements are implemented.

2. This represents a significantly reduced requirement for industry as a whole, compared to the previous requirements – it is far more proportionate and more accurately reflects the level of risk associated with the various pig housing systems used in England and Wales. The regulation also provides a clear pathway for securing derogations from testing requirements (which would formerly have been captured within ‘negligible risk recognition’), which has been a long standing aim of the UK. This proportionate, risk-based approach is one that the UK has long advocated in discussions with the European Commission and at international fora such as Codex and World Organisation for Animal Health (OIE).

3. Failure to implement the new EU Regulation would result in a significant risk of infraction proceedings being taken against the UK, given the long-standing UK policy of under-implementation of the previous requirements (regularly highlighted by the Food and Veterinary Office (FVO)). This would have wider ramifications for government and industry, including the potential jeopardy of recently established trade with third countries.

4. Full implementation of these requirements is a necessary step towards building a strong evidence base and attaining the derogations from testing available in the Regulation. It also provides a platform to support current trade and possible expansion, particularly if the criteria for the relevant derogation can be met.

5. This Impact Assessment covers England and Wales. Northern Ireland and Scotland will produce separate IAs.

Policy objectives

6. This measure is part of the wider legislative framework which is intended to maintain public health protection and ensuring that food is safe to eat. The other policy objectives are to reduce unnecessary burdens by making controls more risk-based (which is reflected in this Regulation) and to protect and enhance export opportunities, contributing to the growth agenda (Trichinella testing is a key requirement for pig exports). The UK has a long-term objective to secure derogations from the testing requirements for Trichinella, which will help to support and further trade in the medium and long term - the new Regulation provides a clear path to securing that recognition, whilst ensuring that safeguards are in place to protect consumer health.
Current regulatory regime

7. Trichinella is a parasitic worm which infects pigs, horses, wildlife such as foxes and rats, as well as humans. It is transmitted by eating infected muscle tissue and can be transferrable to humans through undercooked food. It can cause serious illness, from vomiting, fever and severe muscular pain up to cardiac problems, but can also be treated effectively if caught within 10 days of infection. The existing evidence we have from our testing indicates that there is a very low risk to public health in the UK from Trichinella. The last case from meat produced in Great Britain was in 1977 and the most recent human cases were a cluster of 8 in North London in 2000, which was traced to the personal import of pork salami from Serbia. The FSA also provides extensive advice to consumers on the safe and hygienic preparation and cooking of pork.

8. Under current EU law (EC Regulation 2075/2005), every pig slaughtered for human consumption should be tested for Trichinella. The UK considers that this is not proportionate or risk based, failing to take into account the different levels of risk for pigs raised indoors, in controlled housing, compared to the risk for pigs which spend varying periods of their life outdoors. As such, this requirement has been under-implemented in the UK. We have maintained a core testing programme with all sows, boars, horses and wild boar tested in approved slaughter premises and a number of slaughterhouses test in their own on-site labs, although only some of the testing data from these laboratories is available to the Central Competent Authority (CCA).

9. The UK applied unsuccessfully in June 2006 to the Commission for recognition as a region of negligible Trichinella risk; the response from the Commission and Member States focussed on the need for testing more outdoor pigs and presenting GB and NI data separately, as they have different epidemiological profiles. Applications for recognition were put on hold as the Commission developed the revised proposals, which include clear criteria for derogations from testing (along the lines of negligible risk recognition), but achieving derogations from testing requirements remains a long-term objective for the UK – the new Regulation has clear criteria for securing derogations from testing after three years, provided testing is carried out in accordance with the legislation and no positives are found.

New EU Regulation

Testing requirements for pigs

10. The new, directly applicable, EU Regulation comes into force in June 2014 and is significantly more risk-based and proportionate than the controls in the current version of 2075/2005. It recognises the different risks of different housing systems and this is reflected in the testing requirements. It also has clear criteria for securing negligible risk recognition by compartment, which is a key objective for the UK. The definition of a compartment is flexible, describing a group of holdings which apply controlled housing conditions. This can be on a geographic basis or, for example, an integrated production system. It is also possible for all holdings applying controlled housing conditions in a Member State to be considered as one ‘compartment’. It should also be noted that this Regulation dovetails with the direction of travel at Codex Alimentarius (which develops harmonised international food standards for trade and consumer protection) and the World Organisation for Animal Health (OIE), the international trade and veterinary organisations – these bodies are also reviewing the control, testing and negligible risk requirements for Trichinella, with a view to greater
consistency between the various international standards. This should also have trade benefits, with clarity on standards and the status of derogations from testing requirements.

11. The new testing requirements are predicated on the identification of controlled housing holdings, a type of animal husbandry where pigs are kept at all times under conditions controlled by the FBO with regards to feeding and housing. It will therefore be necessary to identify the pattern of holdings across England and Wales, helping to ensure that these are accurately reflected in the Food Chain Information accompanying the animals from the farm to the slaughterhouse and to be used as a basis to establish compartments, as this will be a requirement for presenting the necessary data for implementing the derogations from testing.

12. The nature of the holding will then determine the testing requirements at the slaughterhouse. These testing requirements for pigs are that:

   “a) all carcases of breeding sows and boars or at least 10% of carcases of animals sent in for slaughter each year from each holding being officially recognised as applying controlled housing conditions, shall be examined for Trichinella, and

   (b) all carcases from holdings not being officially recognised as applying controlled housing conditions shall be systematically examined for Trichinella”

   With regard to requirement (a), the core testing programme in England and Wales already sees all breeding sows and boars tested at approved slaughterhouses, with the cost of this being met by the FSA. We therefore consider that this allows England and Wales to successfully meet the first requirement of the testing regime.

13. The second requirement is that all pigs not from controlled housing conditions must be tested for Trichinella. This reflects the greater risk of infection for pigs that spend time outdoors. However, the picture in England and Wales is nuanced, as some pigs will spend their entire lives outdoors (such as those for the free range market) and many in controlled housing, but others will spend varying degrees of time outside. For example, large numbers of pigs will spend some time outdoors but then be ‘finished’ indoors, in what is considered controlled housing (i.e. under conditions controlled by the FBO with regards to feeding and housing, such as inside a shed).

14. There is a useful degree of flexibility in the definition of controlled housing. Alongside the general requirements relating to issues such as pest control and secure storage of feed, which carry over from the previous regulation, there is scope for pigs to have some access to outdoor facilities provided that “the food business operator can show by a risk analysis to the satisfaction of the competent authority that the time period, facilities and circumstances of outdoor access do not pose a danger for introduction of Trichinella in the holding”. It is the intention that as part of the mapping exercise for holdings and compartments, the FSA will use existing evidence, such as wildlife testing data, to inform the risk analysis and mapping.

15. In terms of how many pigs in practice would not be from controlled housing and therefore subject to Trichinella testing, initial discussions with industry representatives and BPEX suggest that 3% (c.243k) of the England and Wales pig population could be considered in this category and would therefore require testing – these would include pigs that spend either all or the vast majority of their lives outdoors, with little or no time spent in controlled housing.

16. Of the population of pigs that spend time both outdoors and in controlled housing, initial discussions suggest that as the majority spend most of their time in controlled housing with only a small proportion of their lives outdoors, they could then be considered as being in controlled housing, as defined by the Regulation. However, where the line is drawn will need to be supported by appropriate epidemiological evidence and a risk assessment.
17. Whilst we have some flexibility in the definition of a controlled housing holding, this will nonetheless represent an increase in the testing requirement for England and Wales. We anticipate that this will mean increased testing at a number of slaughterhouses and this will have implications in practical and cost terms – it is highly likely that this may encourage more plants to explore the prospect of setting up an in-house lab, which has costs for government in terms of ensuring that the lab meets the required standards and a capital outlay for the FBO.

18. However, given the nature of the responses received from the Commission and Member States in response to the UK application for negligible risk recognition and the logic of the wider UK advocacy for a risk-based approach to testing, we consider that this approach is reasonable. We also consider that, with the scope for being more flexible in assessing controlled housing holdings and the clear criteria for derogation from testing requirements (along the lines of negligible risk recognition), this represents a proportionate approach to testing which is practicable.

Testing requirements for horses and wild boar

19. The new Regulation also requires that “Carcasses of horses, wild boar and other farmed and wild animal species susceptible to Trichinella infestation shall be systematically sampled in slaughterhouses or game-handling establishments as part of the post-mortem examination.” This carries over the requirements of the existing Regulation and this is already carried out in GB. As this is logically consistent with the general intention to test animals at greater risk of exposure to infection, such as wild boar and horses, we intend to continue to test all horses and wild boar in slaughterhouses and game handling establishments. In addition, we will continue with our programme of surveillance with regard to susceptible wildlife, such as foxes.

Food Chain Information (FCI)

20. The FCI accompanying the animals from the farm to the slaughterhouse will need to capture whether the pigs need to be tested for Trichinella (i.e. if they come from a non-controlled housing holding or are a breeding sow/boar). We propose to capture this very simply with a single box, to tick where the pigs need to be tested. This will be integrated into the revision of the existing FCI forms and as such should not represent an additional cost to farmers.

Auditing and verification of controlled housing conditions

21. Whilst the FSA will conduct an exercise to map controlled housing holdings and compartments, it is a requirement that this be supported by a structured, risk-based audit and verification programme. The Competent Authority is obliged to “ensure that audits are carried out periodically of holdings officially recognised as applying controlled housing conditions” and that “the frequency of audits shall be risk-based, taking account of disease history and prevalence, previous findings, the geographical area, local susceptible wildlife, animal husbandry practices, veterinary supervision and farmers' compliance”.

22. It is intended that auditing of controlled housing holdings will be integrated as far as possible into existing farm inspections, remaining consistent with the recommendations made by the Farming Regulation Task Force. We are also exploring what role can be played by third party accreditation bodies which would help to minimise the impact on farmers.
Derogations from testing requirements

23. Aside from the continuing derogations from testing where the carcases have undergone suitable freezing treatment (as defined in the regulations) or are from un-weaned pigs aged less than 5 weeks, there is scope for what was previously described as negligible risk recognition. However, as the Regulation has been brought closely into line with the OIE requirements and terminology, negligible risk status for a country or region is no longer recognised and instead, such recognition is linked to compartments applying specific controlled housing conditions.

24. The mapping of controlled housing holdings and compartments has already been outlined. A compartment is essentially a common group and in the context of Trichinella, could be a geographic area or an integrated system. The new regulation allows for all of the controlled housing holdings in a Member State to be considered as a single compartment but this could present a risk were a positive to be found (the entire compartment would have any derogations from testing suspended subject to further investigation), so the assessment and mapping of compartments will be supported by a risk assessment.

25. Within those controlled housing compartments, the requirements for derogation is that there must have been “no autochthonous Trichinella infestations in domestic swine kept in holdings officially recognised as applying controlled housing conditions have been detected in the Member State in the past 3 years”. During this period, a testing regime compliant with the requirements set out earlier must have been fully implemented. We consider that this requirement for the derogation is a realistic aim for England and Wales.

26. Alternatively, the other option is for the Member State to present “historical data on continuous testing carried out on slaughtered swine population provide at least 95% confidence that the prevalence of Trichinella does not exceed 1 per million in that population”. We have made previous assessments of the UK testing data with a view to this standard, but do not have the necessary volumes of testing over a suitable number of years to meet the statistical threshold. The assessment of historical data put the confidence percentage of 1 per million prevalence level at 85-90%. To attain the requisite 95% confidence threshold would have required a least 1.5 - 2 million additional Trichinella tests carried out per year, which would mean, at considerable expense, a very significant increase in testing for a period of several years. We do not consider this a realistic prospect for securing derogation from the specified testing requirements.

Laboratories and permitted testing methods

27. The permitted testing methods for Trichinella will remain the same under the new regime and are set out in the legislation. With regard to carrying out testing, we anticipate that many FBOs may decide to set up their own in-house laboratory, rather than sending samples to an external laboratory for testing. Whilst there is a capital cost incurred in setting up an in-house laboratory, this approach does mean that carcases can be turned round more quickly. Based on information from industry and current practice, we envisage that larger slaughterhouses will opt for the in-house lab option, whilst very small slaughterhouses may prefer either to send samples to an external laboratory or, as already happens in some parts of the country, use the in-house laboratory of a larger FBO nearby – this innovative approach has proved useful, subject to proper procedures to ensure traceability and remove the possibility for cross-contamination.

Sensitivities

28. Trichinella testing is an important aspect of international trade in pig meat, both within the EU and with third countries. The Trichinella testing regime of a Member State is part of trade agreements and can come under close scrutiny, so ensuring compliance with EU
regulations is critical both to safeguard existing trade agreements and facilitate future trading opportunities, particularly with third countries.

29. The current Trichinella requirements, set out in EU Regulation 2075/2005, have been under-implemented in the UK and this has been cited in numerous Food and Veterinary Office audit reports over the last few years, with specific recommendations to address this matter. Should the new Trichinella requirements not be fully implemented then not only would this present a risk to international trade but there would also be a significant risk of infraction proceedings against the UK.

Policy options

Policy Option 1 - DO NOTHING:

30. This will involve maintaining the current core testing programme, without specifically targeting any pigs not in controlled housing conditions for more testing. The plants that conduct testing to meet third country requirements would continue to test all pigs for the foreseeable future, until such as time as these requirements are amended; such a review could not begin to take place until the relevant Codex chapter (which frames international trade standards in this area) has been agreed.

31. This option would mean no additional costs and the framework for this is already in place, so the administrative burden would be minimal. However, this approach would mean that we continue to be non-compliant with EU testing requirements and given that this would be perceived by the Commission as persistent refusal to comply, previous experience in other policy areas suggests that it would carry a significant risk of infraction proceedings. These proceedings would represent a large cost to government in financial and administrative terms and jeopardise EU and third country trade.

Policy option 2 - FULL COMPLIANCE:

32. This will involve maintaining the current core testing programme to fulfil the first requirement. Meeting the requirement to test all pigs not from controlled housing and identify compartments will necessitate a mapping exercise by the FSA, supported by epidemiological analysis and a suitable risk analysis, together with a programme of audit and verification to support the identification of holdings. This will also require increased testing at slaughterhouses which process pigs that are not from controlled housing holdings and is highly likely to result in an increase in businesses seeking to set up in-house laboratories.

33. Whilst the core testing programme will continue, this option involves an increase in the testing of pigs not from controlled housing and will have costs for government and industry. However, if fully implemented, this will support current and future expansion of trade and provide the necessary evidence for application of derogations from testing in due course.

Sectors and Groups Affected

Slaughterhouses

34. Under Option 2, breeding sows and boars will continue to be tested as they are at present within the core testing programme that has been in place for some years. This fulfils the first component of the testing requirements. To fulfil the second part of the testing requirements, slaughterhouses will need to test all pigs from non-controlled housing conditions. The FSA
pig plant data for 2013 shows that there are a total of 130 slaughterhouses in England and Wales which slaughter pigs. Of these, 56 slaughterhouses slaughter pigs only and 74 are multi-species slaughterhouses, which slaughter pigs as well as other species.

35. A total of 8.12m pigs were slaughtered in these 130 plants. There is a significant amount of consolidation in the pig industry. For example, the 11 largest pig-only plants account for 6.8m of the 8.12m pigs slaughtered. The 9 largest multi-species plants account for a further 743,000 pigs, which means that combined together the 20 largest plants account for 7.54m (93%) out of 8.12m pigs slaughtered in England and Wales. The remaining 580k pigs are slaughtered in 120 small, medium and micro plants.

36. All 130 of these plants could be affected, as they could potentially slaughter pigs from non-controlled housing conditions, and could therefore incur increased costs of additional testing. The calculations below reflect this possibility. However, given that almost 93% of pigs are processed in the largest 20 plants, it is not unreasonable to expect that a significant proportion of pigs not in controlled housing will be processed at these 20 plants, a number of which already test all of their pigs for Trichinella.

Table A: Number of Slaughterhouses Potentially Affected by Size (England and Wales)

<table>
<thead>
<tr>
<th></th>
<th>Micro</th>
<th>Small</th>
<th>Medium</th>
<th>Large</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>England</td>
<td>57</td>
<td>41</td>
<td>4</td>
<td>13</td>
<td>115</td>
</tr>
<tr>
<td>Wales</td>
<td>12</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>15</td>
</tr>
<tr>
<td>Total</td>
<td>69</td>
<td>44</td>
<td>4</td>
<td>13</td>
<td>130</td>
</tr>
</tbody>
</table>

Source: FSA pig plant data (2013); Micro: slaughterhouses killing less than 5,000 pigs per annum; Small: 5,000 to 37,500 pigs per annum; Medium: 37,500 to 100,000 pigs per annum; Large: over 100,000 pigs per annum.

Consultation Question 1
We would welcome any evidence regarding the distribution of pigs from non-controlled housing:

- In England and Wales, respectively, what proportion of pigs from non-controlled housing is slaughtered in micro, small, medium, large slaughterhouses, and what proportion is already tested for Trichinella?

Farmers

37. We anticipate that the effect on farmers will be low. The only impact on farmers is that they need to ensure that information about housing conditions is included in the FCI accompanying the pigs to the slaughterhouse. As mentioned above, this will be captured by one single, additional box on the FCI form, which farmers will need to tick if pigs have been reared under non-controlled housing conditions.

Table B: Number of Holdings Affected (England and Wales)

<table>
<thead>
<tr>
<th></th>
<th>England</th>
<th>Wales</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total no. of holdings</td>
<td>7900¹</td>
<td>1407²</td>
<td>9307</td>
</tr>
</tbody>
</table>

Source: 2012 Census data

¹ Some holdings will have both breeding and fattening pigs.
² The Welsh figures include non-commercial holdings, so the actual figure of holdings with pigs going for slaughter will be significantly lower.
Food Standards Agency

38. Under Option 2, the FSA will incur costs arising from the mapping of controlled housing and compartments. The Agency will also have the cost of providing support and advice on setting up new in-house laboratories. There will be also a cost to the FSA with regard to training for OVs in slaughterhouses as Trichinella testing is done under their supervision and they will need to be familiar with the testing requirements to provide appropriate verification that testing is being carried out correctly.

Enforcement

39. There will be a cost to Official Veterinarians in terms of familiarising themselves with the new requirements regarding the definition of controlled housing and integrating such verification into existing audit processes, although we are exploring how far this can be supported by third party accredited schemes.

Consumers

40. The main direct impact of this proposal is increased testing for Trichinella by slaughterhouses, which could potentially generate health benefits to consumers, although, as mentioned above, the risk of Trichinella in the UK has been assessed as low. As the number of additional pigs to be tested is estimated to be around 3% of the England and Wales pig populations, many of which may well already be tested given the consolidation within the industry, the impact of this measure on consumers in terms of price changes is expected to be negligible.

Option Appraisal

Policy Option 1 - DO NOTHING

Costs and Benefits

41. There are no costs or benefits associated with this option. This is the baseline against which all other options are appraised.

Policy option 2 - FULL COMPLIANCE:

Costs

Costs to Slaughterhouses

Familiarisation Costs (One-Off Costs)

42. There will be costs to slaughterhouses from the need to familiarise themselves with the new Regulation. Although not all slaughterhouses will be affected by the requirement of additional testing we envisage that most slaughterhouses will want to familiarise themselves with the new requirements to ensure that they meet legal requirements. Familiarisation costs can be monetised as a time cost, multiplying the time required for familiarisation by the wage rate of the employee carrying out the familiarisation. We envisage that it will be business managers (wage rate of £25.80\(^3\)) who will need to familiarise themselves with the

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new requirements and that this will take approximately one hour per business. Multiplying
the wage rate by the number of hours required and the number of slaughterhouses (see
Table A) generates a total cost to England and Wales slaughterhouses of £3,354.

Table C: Familiarisation costs to slaughterhouses in England and Wales (£)

<table>
<thead>
<tr>
<th>Familiarisation</th>
<th>England</th>
<th>Wales</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2,967</td>
<td>387</td>
<td>3,354</td>
</tr>
</tbody>
</table>

In order for one-off costs to be compared to annual costs on an equivalent basis across the
time span of the policy, one-off costs are converted into Equivalent Annual Costs (EACs) by
dividing the one-off cost by an annuity factor.\(^4\) The total one-off familiarisation cost under
this proposal is £3,354, which generates a total EAC of £390.

Table D: Familiarisation Equivalent Annual Costs (£)

<table>
<thead>
<tr>
<th>EAC</th>
<th>England</th>
<th>Wales</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>345</td>
<td>45</td>
<td>390</td>
</tr>
</tbody>
</table>

Consultation Question 2

We invite stakeholders to comment on whether our estimates of familiarisation costs to
slaughterhouses seem reasonable or not. Please provide us with as detailed information
and data as possible (e.g. hours required, grade involved) for us to be able to monetise this
cost.

Costs from Additional Testing (Ongoing Cost)

43. Under Option 2, there will be costs to slaughterhouses that slaughter pigs from non-
controlled housing conditions. FSA pig plant data suggest that there are around 8.12m pigs
that go for slaughter in England and Wales each year, out of which approximately 3%
(243,600) are from what would be considered as holdings not operating controlled housing
conditions (also known as ‘outdoor pigs’) and therefore would have to be tested under
the proposal. This therefore amounts to an additional 243,600 samples per annum. However,
as noted earlier, given the consolidation of the industry and the fact that almost 93% of pigs
are processed in the 20 largest plants, it is not unreasonable to expect that a significant
proportion of these pigs may already be subject to testing, as the 20 largest plants include
those that test for export and some businesses which already have an in-house laboratory
for Trichinella testing.

44. Based on existing structures within industry which sees the vast majority (c. 95%) of
Trichinella testing being conducted through the in-house laboratory route (which is much
cheaper and which means that carcases can be moved through more quickly), we anticipate
that 95% (231,420) of the pigs not from controlled housing will go through ‘in-house’ labs at

\[ a_{t,i} = \sum_{j=0}^{i-1} \prod_{r=0}^{j} \left( \frac{1}{1 + t_r} \right) \]

\(^4\) The annuity factor is essentially the sum of the discount factors across the time period over which the policy is appraised. For a policy with a
life span of 10 years and a discount rate of 3.5% the annuity factor is approximately 8.6. The equivalent annual cost formula is as follows:
60p per test; and that the remaining five percent (12,180) would go through the private accredited laboratory route which means an estimated cost of £4.09 per pig tested\(^6\).

45. Based on these assumptions, we can calculate that the cost of additional tests carried out in in-house laboratories is £138,852\(^6\) and the cost of additional tests carried out privately is £49,816. As the cost of in-house testing is borne entirely by the FSA (with the exception of those FBOs that test for export), the total cost to the slaughterhouse sector under this proposal is £49,816\(^7\). To note is that this cost could be an overestimate as a proportion of slaughterhouses already carry out tests for Trichinella on all pigs they slaughter. Currently the distribution of these costs across slaughterhouses by country and size is unclear. Table \(E\) below shows these costs.

46. It should also be noted that the assessment of the costs of any additional testing required to meet the requirements of the Regulation are based on the current framework for Trichinella charging and the existing distribution of costs between FSA and industry (i.e. FSA bearing the cost of testing for all sows and boars and all outdoor pigs tested in in-house laboratories). As such, this does not represent a commitment for the structure of any future charging framework.

Table \(E\): Total cost of additional of additional testing (£)

<table>
<thead>
<tr>
<th></th>
<th>No. tests</th>
<th>Cost per test</th>
<th>Total cost</th>
</tr>
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<tbody>
<tr>
<td>In-house tests</td>
<td>231,420</td>
<td>£0.6</td>
<td>£138,852</td>
</tr>
<tr>
<td>(borne by FSA)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Private tests</td>
<td>12,180</td>
<td>£4.09</td>
<td>£49,816</td>
</tr>
<tr>
<td>(borne by industry)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total cost to</strong></td>
<td></td>
<td></td>
<td><strong>£49,816</strong></td>
</tr>
<tr>
<td><strong>industry</strong></td>
<td></td>
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</tbody>
</table>

47. It should be noted that if the testing requirements are properly implemented for three years and there are no positive results for Trichinella in the pig population, then the UK will be in a position to apply for derogations from the testing requirements which may help to reduce costs.

**Consultation Question 3**

We invite stakeholders to comment on whether our estimates of the cost of additional testing seem reasonable or not:

a. Do you agree with our assumption (informed by discussions with industry and BPEX) that approximately 3% of the total pig population in England and Wales are likely to be reared in non-controlled housing conditions? What proportion of these pigs are likely to already be tested for Trichinella?

b. Do you agree with our assumption that approximately 95% of additional tests under this proposal would be carried out in-house at a cost of 60 pence per sample?

c. Do you agree with our assumption that approximately 5% of additional tests under this proposal would be carried out privately at a cost of approximately £4.09 per sample?

---

\(^5\) This estimated figure for cost per animal tested through private accredited laboratories is based on current testing costs.

\(^6\) \(0.95 \times 243,600 \times £0.6 = £138,852\)

\(^7\) \(0.05 \times 243,600 \times £4.09 = £49,816\)
If you agree, or disagree, please provide us with as detailed information and data as possible for us to monetise this potential cost.

*Potential Costs from Moving to In-House Testing (One-Off Cost)*

48. The new testing requirements will result in an increase in the number of Trichinella tests that slaughterhouses need to carry out. Testing must be carried out using the methods set out in the regulation at a designated laboratory and many slaughterhouses may therefore consider setting up their own in-house lab, rather than using a private accredited laboratory. Although this cost would not technically be a direct cost, as setting up an in-house lab is not a direct requirement of the new Regulation, initial discussions with stakeholders suggest that in practice this would be the most likely outcome of the policy.

49. Engagement with stakeholders and information from current practice suggests that the cost of setting up an in-house laboratory is around £3-5k (this covers the capital investment in kit and materials, it does not include staff costs); however, this figure can vary depending on the scale of the operation. Based on current information about testing practices, we would expect that micro plants will either seek to make an arrangement to use the in-house laboratory of a nearby FBO or send samples to a private accredited laboratory nearby. The recent increased interest from small plants in setting up their own in-house testing indicates that most in this sector would seek to set up their own laboratory, as would the medium and larger businesses, mainly because this facilitates faster turnaround of carcases. We currently do not know how many slaughterhouses there are that already have in-house labs, but if we assume a high-impact scenario where all small, medium and large slaughterhouses would need to set up an in-house laboratory, the total one-off cost to industry would be between £183,000 and £305,000 (using the cost range of £3-5k above), with a best guess estimate of £244,000 (based on the average of the range). Table F below show the central (best guess) scenario. However, given that some of these slaughterhouses may already have in-house labs, this is likely to be an overestimate.

Table F: Costs to slaughterhouses from setting up an in-house lab (£)

<table>
<thead>
<tr>
<th></th>
<th>Micro</th>
<th>Small</th>
<th>Medium</th>
<th>Large</th>
<th>Total</th>
<th>EAC</th>
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<tbody>
<tr>
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<td>16,000</td>
<td>52,000</td>
<td>232,000</td>
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<td>0</td>
<td>0</td>
<td>12,000</td>
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<tr>
<td>Total</td>
<td>0</td>
<td>176,000</td>
<td>16,000</td>
<td>52,000</td>
<td>244,000</td>
<td>28,347</td>
</tr>
</tbody>
</table>

**Consultation Question 4**

We invite stakeholders to comment on whether our estimates of the cost of setting up in-house labs seem reasonable or not. If you agree, or disagree, please provide us with as detailed information and data as possible for us to be able to monetise this cost, in particular:

a. What proportion of micro, small, medium and large slaughterhouses are likely to set up an in-house lab as a result of the new requirements?

b. What would be the approximate one-off cost to set up an in-house laboratory?

c. Would there be any costs involved for plants that make arrangements to use the in-house lab of a nearby FBO?
Costs to Farmers

Familiarisation (One-Off Cost)

50. The main direct impact on farmers from the new Regulation is that the food chain information that need to accompany pigs from the farm to the slaughterhouse will need to include information on whether the pigs are from non-controlled housing or not (see paragraph 20 above). To farmers this essentially means ticking a box if the pigs they supply are from non-controlled housing. We envisage that this will involve some familiarisation costs to farmers. Familiarisation costs can be monetised by multiplying the wage rate of the person carrying out familiarisation by the time required. We envisage that it will be the farm manager (wage rate of £17.28) that will familiarise themselves with the changes, and that half an hour per farm would be sufficient; as only a proportion of the new requirements apply to farmers. Multiplying the wage rate by the time required, and again by the number of farms (see Table B) generates a total one-off cost of familiarisation to farmers of £80,040. Table G below shows the familiarisation costs to farmers and the associated equivalent annual costs.

Table G: Familiarisation Costs to Farmers (£)

<table>
<thead>
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<td>Familiarisation</td>
<td>67,940</td>
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<tr>
<td>EAC</td>
<td>7,893</td>
<td>1,406</td>
<td>9,299</td>
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</table>

Changes to Requirements on Provision of Food Chain Information (Ongoing Cost)

51. As outlined above, the new Regulation requires that FCI includes information on whether pigs are from non-controlled housing or not. The amendment to the FCI form will consist of one additional box, which the farmer will need to tick to indicate whether or not the farm has controlled housing conditions, and therefore whether or not the pigs need to be tested for Trichinella. We envisage that this requirement will result in a negligible cost to farmers, as they already need to fill in the rest of the form, and the additional tick will require negligible time.

Consultation Question 5

We invite stakeholders to comment on whether our estimates of the cost to farmers in the following areas seem reasonable or not:

a) changes to FCI
b) familiarisation

Please provide us with as detailed information and data as possible for us to be able to monetise this cost.

Costs to Enforcement

Familiarisation (One-Off Cost)

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52. There will be costs to enforcement from the need to familiarise themselves with the new Regulation. We envisage that the main impact will be on OVs as they are responsible for monitoring Trichinella testing. We envisage that familiarisation would require one OV per slaughterhouse and that familiarisation would take approximately one hour. As mentioned above, familiarisation costs can be monetised as a time cost, multiplying the time required for familiarisation by the wage rate of the employee carrying out the familiarisation. Multiplying the wage rate of an OV (£36.8, FSA internal data) by the number of hours required and the number of slaughterhouses (see Table A) generates a total cost to enforcement of £4,784. Table E below shows the familiarisation costs to enforcement as well as the associated Equivalent Annual Costs.

Table H: Familiarisation Costs to OVs (£)

<table>
<thead>
<tr>
<th></th>
<th>England</th>
<th>Wales</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Familiarisation OVs</td>
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<tr>
<td>EAC</td>
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<td>64</td>
<td>556</td>
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</tbody>
</table>

Consultation Question 6

We invite stakeholders to comment on whether our estimates of familiarisation costs to enforcement seem reasonable or not. If you agree, or disagree, please provide us with as detailed information and data as possible for us to be able to monetise this cost.

Training (One-Off Cost)

53. We anticipate that enforcement officers will incur training costs as a result of the Regulation, as they are responsible for the supervision of Trichinella testing. These costs will be borne by the FSA and costs have therefore been presented in the section on costs to the Food Standards Agency (see paragraph 56).

Audit and Verification On-Farm (Ongoing)

54. With regard to the costs of auditing and verification, in line with the recommendations of the Farming Regulation Task Force, this will be integrated as far as possible within existing AHVLA inspections and visits, as a number of the criteria for determining whether a holding has controlled housing relate to core issues such as biosecurity and compliance with animal by-products regulations. These factors are also assessed in audits by accredited third party assurance schemes and we anticipate that the on-farm verification can be supported by such third party schemes. The final costs associated with this aspect of enforcement, including related issues such as communication, have still to be determined.

Costs to Food Standards Agency

Cost of mapping controlled housing (One-Off)

55. The new Regulation requires that all pigs from non-controlled housing conditions are tested for Trichinella. The FSA is currently undertaking an exercise to map controlled housing holdings (see paragraph 32 above), supported by evidence from historic testing data and wildlife surveillance. The estimated cost to the FSA associated with this mapping exercise is £10k.

Cost of Additional Testing for Trichinella (Ongoing)
56. The new Regulation requires that all pigs from non-controlled housing conditions are tested for Trichinella. As outlined in paragraphs 43 to 48 above, this will generate costs both to slaughterhouses and to the FSA. Currently all costs of in-house testing are borne entirely by the FSA, and as this will continue under the new proposal, the total additional costs to the FSA from this Regulation are £138,852.

Costs of Training OVs (Borne by the FSA) (One-Off Costs)

57. We anticipate that the Regulation will result in training costs to OVs. These costs will be borne by the FSA. We envisage that training will take one OV per slaughterhouse approximately one hour and consist of an on-line course. Just as familiarisation costs, training costs can be monetised as a time cost. Multiplying the wage rate of an OV (£36.8, FSA internal data) by the number of hours required and the number of slaughterhouses (see Table A) generates a total cost to enforcement of £4,784. Table I below shows the familiarisation costs to enforcement.

Table I: Costs of Training OVs (Borne by the FSA) (£)

<table>
<thead>
<tr>
<th>Costs of Training OVs</th>
<th>England</th>
<th>Wales</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>4,232</td>
<td>552</td>
<td>4,784</td>
</tr>
</tbody>
</table>

Benefits

Benefits to Consumers

Benefits to Consumers from more Stringent Trichinella Controls (Non-Monetised)

58. Although UK evidence from testing indicates that the risk from Trichinella is low in the UK, the parasite can cause serious illness in humans. The aim of the new EU Regulation is to minimise this risk and can therefore have public health benefits.

Benefits to Industry

Potential to Secure Derogations from Trichinella Testing (Non-Monetised)

59. The UK has a long-term objective to secure derogations from Trichinella testing. The new Regulation provides a clear path to securing that new recognition, which applies if no infections have been detected in pigs reared in controlled housing conditions for a period of three years. UK evidence from testing indicates that the risk from Trichinella is low and it is the FSA’s view that this is a realistic prospect for the UK. Compliance with the European requirements, which are in turn aligned with those governing trade and animal health and are in development at international level (Codex and OIE), will also help support further trade in the medium and long term.

Summary of All Costs and Benefits under Option 2

60. The new EU Regulation will result in a total cost to industry of £756,196 (PV over ten years). This cost consist of costs in present value terms to slaughterhouses of familiarisation (£3,354); one-off costs incurred from the setting up of an in-house laboratory (£244,000); ongoing costs from additional testing (£428,802). It also consists of a one-off cost in present
value terms to farmers of familiarisation (£80,040). (The additional cost to farmers from providing additional FCI information has been estimated to be negligible as it would only require farmers to tick an additional box on a form they will already need to fill in.)

61. The Regulation will result in a total cost to society of £1,970,959, which consists of the costs to industry outlined in previous paragraph, as well as costs to enforcement (in present value terms) of familiarisation £4,784; and costs arising from audit and verification (currently non-monetised); it also consists of costs to the Food Standards Agency (in present value terms) from the mapping of non-controlled housing conditions (one off cost of £10k); a one-off cost from the training of Official Veterinarians (£4,784) and ongoing costs from additional Trichinella (the part of these costs that are borne by the FSA – the in-house testing).

62. The Regulation is also envisaged to potentially result in health benefits from more stringent Trichinella testing. Another potential benefit is that, by implementing the Regulation, the UK may be eligible to take advantage of derogations from Trichinella testing in the future (see paragraph 58), which would reduce costs to industry.

63. Since we have been unable to monetise any of these benefits, the net impact on society from the proposal is a net cost of £1,970,959 (NPV over ten years); and the net impact on industry is a net cost of £756,196 (NPV over ten years). Table J below shows the spread of costs and benefits over the expected life span of the policy of 10 years. Net present values have been calculated against a discount rate of 3.5%.

Table J: Summary of Total Costs and Benefits under Option 2

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<td>188,668</td>
<td>7,733,544</td>
<td>728,977</td>
<td>7,733,544</td>
</tr>
</tbody>
</table>

OITO Status
This is an EU-derived measure so is outside the scope of OITO.
QUESTIONS FOR CONSULTEES

1. We would welcome any evidence regarding the distribution of pigs from non-controlled housing:
   - In England and Wales, respectively, what proportion of pigs from non-controlled housing is slaughtered in micro, small, medium, large slaughterhouses, and what proportion is already tested for Trichinella?

2. We invite stakeholders to comment on whether our estimates of familiarisation costs to slaughterhouses seem reasonable or not. Please provide us with as detailed information and data as possible (e.g. hours required, grade involved) for us to be able to monetise this cost.

3. We invite stakeholders to comment on whether our estimates of the cost of additional testing seem reasonable or not:
   a. Do you agree with our assumption (informed by discussions with industry and BPEX) that approximately 3% of the total pig population in England and Wales are likely to be reared in non-controlled housing conditions? What proportion of these pigs are likely to already be tested for Trichinella?
   b. Do you agree with our assumption that approximately 95% of additional tests under this proposal would be carried out in-house at a cost of 60 pence per sample?
   c. Do you agree with our assumption that approximately 5% of additional tests under this proposal would be carried out privately at a cost of approximately £4.09 per sample?

   If you agree, or disagree, please provide us with as detailed information and data as possible for us to monetise this potential cost.

4. We invite stakeholders to comment on whether our estimates of the cost of setting up in-house labs seem reasonable or not. If you agree, or disagree, please provide us with as detailed information and data as possible for us to be able to monetise this cost, in particular:
   a. What proportion of micro, small, medium and large slaughterhouses are likely to set up an in-house lab as a result of the new requirements?
   b. What would be the approximate one-off cost to set up an in-house laboratory?
   c. Would there be any costs involved for plants that make arrangements to use the in-house lab of a nearby FBO?

5. We invite stakeholders to comment on whether our estimates of the cost to farmers in the following areas seem reasonable or not:
   a. changes to FCI
   b. familiarisation

   Please provide us with as detailed information and data as possible for us to be able to monetise this cost.

6. We invite stakeholders to comment on whether our estimates of familiarisation costs to enforcement seem reasonable or not. If you agree, or disagree, please provide us with as detailed information and data as possible for us to be able to monetise this cost.

What are the expected financial and resource impacts on other Departments

AHVLA: In line with the recommendations of the Farming Regulation task Force, on-farm audits will be integrated as far as possible within the existing audit framework and a number of the
criteria required for controlled housing status relate to core requirements such as pest control, biosecurity and adherence to animal by-products regulations. We are also exploring how this can be supported by the use of accredited third party schemes. The final costs associated with this aspect, including related issues such as communication, have still to be determined.

**Wales**: Wales has 15 plants processing pigs. The Welsh plants range from micro businesses killing 110 pigs per annum to medium-sized FBOs slaughtering up to 7200 animals per year. There is no financial or resource impact on the Welsh Government.

**Summary and preferred option with description of implementation plan**

The preferred Policy Option for implementation in GB is Option 2, full implementation of the requirements set out in the Regulation. This will mitigate the likelihood of action from the European Commission and support the longer term trade objectives of the UK Government.

Implementation will involve:

- Identifying and mapping holdings and compartments in liaison with industry and AHVLA, using wildlife testing and other data to support the risk profile;
- Designing an auditing and verification programme within the existing audit framework and supported by third party accreditation where possible;
- Making an assessment of the demand for in-house laboratories.
- Ensuring that FCI captures the necessary information on farm and that this is communicated successfully to the slaughterhouse.

**Specific Impacts**

Equality considerations: this proposal does not have any impact on equality

Human Rights considerations: this proposal does not have any impact on human rights

**Small Firms Impact Test**

Small Firms considerations: this proposal does not have a disproportionate effect on small firms

**One In, Two Out**

This is an EU-derived measure so is outside the scope of OITO.
Annex C: List of interested parties

Hallmark
Vion
Dunbia
Tulip
Cranswick
Elmkirk
Compassion in World Farming
Soil Association
Which?
Consumer Focus
National Consumer Federation
Unison
National Farmers Union
The British Association for Shooting and Conservation
National Game Dealers Association
Meat Training Council
Association of Meat Inspectors
Small Abattoir Federation
British Meat Processors Association
International Meat Traders Association
National Federation of Meat & Food Traders
Association of Independent Meat Suppliers
National Association of Catering Butchers
British Retail Consortium
Waitrose Ltd
Tesco Stores plc
Aldi Stores Ltd
Lidl UK GmbH
Asda Stores Ltd
Co-operative Group
J Sainsbury plc
Marks & Spencer plc
Morrison Supermarkets plc
Veterinary Public Health Association
British Veterinary Association
Royal College of Veterinary Surgeons
Pig Veterinary Society
British Pig Association
BPEX
Royal Society for Public Health
Chartered Institute of Environmental Health
Assured Food Standards
Red Tractor
Health Protection Agency
British Frozen Food Federation
Leatherhead Food International
Campden BRI
Institute of Food Science and Technology
Meat & Livestock Commercial Services Ltd
The Secretary of State makes the following Regulations in exercise of the powers conferred on him by section 2(2) of and paragraph 1A of Schedule 2 to the European Communities Act 1972(a).

The Secretary of State has been designated for the purposes of that section in relation to measures relating to food (including drink) including the primary production of food(b) and measures in the veterinary and phytosanitary fields for the protection of public health(c).

As required by Article 9 of Regulation (EC) No. 178/2002 of the European Parliament and of the Council laying down the general principles and requirements of food law, establishing the European Food Safety Authority and laying down procedures in matters of food safety(d) there has been open and transparent public consultation during the preparation of the following Regulations.

Title and commencement

1. These Regulations may be cited as the Food Safety and Hygiene (England) (Amendment) Regulations 2014 and come into force on [……2014].

Amendment to the Food Safety and Hygiene (England) Regulations 2013

2. In Schedule 1 (definitions of EU legislation) to the Food Safety and Hygiene (England) Regulations 2013(e), for the definition of “Regulation 2075/2005” substitute the following definition —

""Regulation 2075/2005” means Commission Regulation (EC) No. 2075/2005 laying down specific rules on official controls for Trichinella in meat as last amended in

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(a) 1972 c.68. Paragraph 1A of Schedule 2 was inserted by section 28 of the Legislative and Regulatory Reform Act 2006 (2006 c.51) and has been amended by section 3(3) of and the Schedule to the European Union (Amendment) Act 2008 (2008 c.7).

(b) S.I. 2003/2901.

(c) S.I. 1999/2027.


(e) S.I. 2013/2996.

**Review**

3.—(1) The Food Standards Agency must from time to time —
(a) carry out a review of the operation and effect of regulation 2;  
(b) set out the conclusions of the review in a report; and  
(c) publish the report.

(2) In carrying out the review the Agency must, so far as is reasonable, have regard to how the controls on *Trichinella* set out in Regulation 2075/2005 are executed and enforced in other Member States.

(3) The report must in particular —
(a) set out the objectives intended to be achieved by the regulatory changes made by these Regulations;  
(b) assess the extent to which those objectives are achieved; and  
(c) assess whether those objectives remain appropriate and, if so, the extent to which they could be achieved with a system that imposes less regulation.

(4) The first report under this regulation must be published before the end of the period of five years beginning with the day on which these Regulations come into force.

(5) Reports under this regulation are afterwards to be published at intervals not exceeding five years.

Signed by authority of the Secretary of State for Health.

*Name*

Parliamentary Under Secretary of State,  
Department of Health

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EXPLANATORY NOTE

(This note is not part of the Regulations)

1. These Regulations (to be completed following consultation)

2. A full impact assessment of the effect that this instrument will have on the costs of business and the voluntary sector is available from the Food Safety Group of the Food Standards Agency, Aviation House, 125 Kingsway, London WC2B 6NH and is annexed to the Explanatory Memorandum which is available at www.legislation.gov.uk.
Draft Criteria for Visual Inspection Procedures in Pigs
February 2014

Issue

From 1st June 2014 the default post-mortem inspection criteria for all pigs will be Visual Inspection Procedures (VIPs), as detailed in Regulation (EC) 854/2004 as amended by Part B of Chapter IV of Section IV, POINT 2. A small percentage of pigs will be required to undergo Further Inspection Procedures (FIPs), which may include a range of inspection options such as palpation, incision, and/or sample taking as deemed appropriate by the OV. This paper sets out the criteria for deciding where FIPs may be required.

Purpose of Criteria

The overall purpose of setting up and agreeing the criteria for VIPs or FIPs is to help:

- Official Veterinarians (OVs) and Meat Hygiene Inspectors (MHIs) to make professional judgements/decisions as whether a batch of pigs/carcases or an individual animal/carcase requires FIPs; and
- Food Business Operators (FBOs) to facilitate the application of VIPs or FIPs, for example through identifying abnormal live animals when the OV is not present at the time of unloading pigs, and by setting up and agreeing the written procedures for identifying and marking animals that require FIPs.

Basic Principles

The basic principles that underpin these criteria are:

- New legislation requires that VIPs are the default post mortem procedure for all pigs (including sows and boars) and their offal from June 2014;
- Minimal carcase and offal handling at both VIPs and FIPs will minimise cross contamination in line with scientific evidence;
- Each slaughterhouse is different; the layout, equipment, ante and post mortem inspection facilities and arrangements vary;
- The guidelines/criteria intentionally leave a room for OVs to exercise their professional judgement at ante-mortem inspection, and for OVs/MHIs to exercise their judgment at post-mortem inspection. It is neither possible nor appropriate to cover/describe every condition which might require FIPs;
- However, inconsistencies will be minimised by agreeing the majority of common abnormalities/conditions which would require FIPs;
- Undertaking additional inspection tasks and associated costs for specific third country export requirements is a commercial decision for the FBO;
- Traceability of animals/carcases (batch and individual) up to post-mortem inspection should be ensured by FBOs.
- Other responsibilities, such as vigilance for notifiable diseases, remain unchanged.
INSPECTION CRITERIA AT ANTE AND POST MORTEM INSPECTION

Before outlining the basic inspection criteria at ante and post mortem inspection it is worth noting that:

- The responsibilities for ante mortem and post mortem inspection are not changing - for clarity these are set out in the Annex to this document.

- The current Collection and Communication of Inspection Results (CCIR) list containing the named conditions is being used as a starting position for the OV to consider FIPs. However, the OV is not limited to these conditions. For example, the OV/MHI may decide that an animal or carcase requires FIPs at post mortem inspection because of a suspected notifiable disease that is not on the current CCIR list.

Inspection Criteria at Ante Mortem Inspection

Ante mortem inspection is carried out by the OV and includes an assessment of Food Chain Information (FCI). It may be carried out as clinical observations (routine ante mortem inspection), clinical inspections and/or clinical examinations.

Based on FCI and the outcome of ante mortem, from June 2014 the OV will decide whether there is a need to subject an animal or batch of animals to FIPs at post mortem inspection instead of the default VIPs requirement. The OV’s judgement will take into consideration the “severity” of the abnormality and whether the abnormalities are localised, generalised, and systemic, and/or if there is any indication of possible risks to public health, animal health or welfare.

The OV has three options at ante mortem inspection:

1) To proceed with VIPs at post mortem inspection as the default position;
2) To decide that FIPs are required on the pig carcases and/or offal at post mortem inspection; or
3) To reject the pigs at ante mortem inspection.

For the majority of the conditions listed on the current ante mortem inspection sheet there would be no need for pigs to undergo FIPs.
However, it has been considered that the following conditions from the ante mortem inspection list may justify FIPs at post mortem inspection.

<table>
<thead>
<tr>
<th>Condition</th>
<th>Post Mortem Procedure</th>
<th>Rationale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mastitis</td>
<td>FIPs</td>
<td>Marked/Detained for FIPs only if associated with general signs.</td>
</tr>
<tr>
<td>Moribund, Recumbent</td>
<td>FIPs</td>
<td>Marked/Detained for FIPs or any other examination that OV considers it necessary.</td>
</tr>
<tr>
<td>Orchitis</td>
<td>FIPs</td>
<td>Marked to consider <em>Brucella</em> (occupational zoonoses).</td>
</tr>
<tr>
<td>Slaughtered in lairage</td>
<td>FIPs</td>
<td>Marked/detained for FIPs.</td>
</tr>
<tr>
<td>Suspect emaciation, poor condition</td>
<td>FIPs</td>
<td>Marked/detained for FIPs.</td>
</tr>
<tr>
<td>Suspect fever</td>
<td>FIPs</td>
<td>Marked/detained for FIPs.</td>
</tr>
</tbody>
</table>

**Inspection Criteria at Post Mortem Inspection**

Visual inspection is the default requirement at post mortem. VIPs would be used for some localised carcase/offal conditions and generalised carcase conditions such as contamination, machine damage and bruises. However an additional and detailed examination of the carcase and correlated offal (FIPs) may be justified, if necessary and possible, to ascertain:

1. The cause of the named condition;
2. Whether or not a condition (e.g. contamination, machine damage, as presented) has masked other pathological signs; and
3. The collection of necessary evidence for enforcement purposes (e.g. severe bruising).

The FIPs should be carried out on either a separate detained rail or on a moving line depending on the slaughterhouse layout.
Localised conditions at post mortem inspection

When the MHI/OV observes localised conditions on pig carcases that are listed on the current post mortem inspection list, FIPs normally cannot be justified unless a generalised and septic condition is also observed.

Depending on slaughterhouse layout and local arrangements, the majority of localised abnormalities will be marked and removed on line (and confirmed by verification), without the need for the carcase to be detained.

It has been considered that the following conditions from the post mortem inspection list may justify detaining the carcase or offal for FIPs at post mortem inspection.

<table>
<thead>
<tr>
<th>Condition</th>
<th>Post Mortem Procedure</th>
<th>Rationale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abscess</td>
<td>FIPs</td>
<td>In cases of multiple abscesses (e.g. two or more in posterior or anterior part of the carcase) the carcase may require FIPs.</td>
</tr>
<tr>
<td>TB like lesions</td>
<td>FIPs</td>
<td>In cases of enlarged lymph nodes e.g. mesenteric, submaxilary bronchial, or enlarged area around lymph nodes.</td>
</tr>
</tbody>
</table>

Generalised conditions at post mortem inspection

In some cases when the MHI/OV suspects a generalised carcase condition that is listed on the current post mortem inspection list, the appropriate decision about the fitness of the meat for human consumption cannot be made without further examinations.

It has been considered that the following conditions from the post mortem inspection list may justify detaining the carcase or offal for FIPs at post mortem inspection.
<table>
<thead>
<tr>
<th>Condition</th>
<th>Post Mortem Procedure</th>
<th>Rationale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anaemia</td>
<td>FIPs</td>
<td>Anaemia is rare, but it may be a part of other generalised condition.</td>
</tr>
<tr>
<td>Badly bled</td>
<td>FIPs</td>
<td>A badly bled carcass may mask some other post mortem signs.</td>
</tr>
<tr>
<td>Contamination gut content</td>
<td>VIPs</td>
<td>If masking other conditions, the carcase may be detained for additional examination.</td>
</tr>
<tr>
<td>Cysticercus cellulosae</td>
<td>FIPs</td>
<td>Not present in UK, and would require careful additional examination.</td>
</tr>
<tr>
<td>Emaciation/ Generalised oedema</td>
<td>FIPs</td>
<td>May include a range of inspection options (palpation, incision, sample taking etc.) as appropriate.</td>
</tr>
<tr>
<td>Erysipelas</td>
<td>FIPs</td>
<td>Suspected generalised condition - occupational zoonosis.</td>
</tr>
<tr>
<td>Generalised tuberculosis (suspect)</td>
<td>FIPs</td>
<td>May include a range of inspection options (palpation, incision, sample taking etc.) as appropriate.</td>
</tr>
<tr>
<td>Generalised tumours/ Melanosis</td>
<td>FIPs</td>
<td></td>
</tr>
<tr>
<td>Jaundice</td>
<td>FIPs</td>
<td></td>
</tr>
<tr>
<td>Machine damage</td>
<td>VIPs</td>
<td>If masking other conditions the carcase may be detained for additional examination.</td>
</tr>
<tr>
<td>Poly-Arthritis</td>
<td>FIPs</td>
<td></td>
</tr>
<tr>
<td>Septic Peritonitis</td>
<td>FIPs</td>
<td></td>
</tr>
<tr>
<td>Septic Peritonitis &amp; Pleurisy</td>
<td>FIPs</td>
<td>May include a range of inspection options (palpation, incision, sample taking etc.) as appropriate.</td>
</tr>
<tr>
<td>Septic Pleurisy</td>
<td>FIPs</td>
<td></td>
</tr>
<tr>
<td>Suspect Pyaemia/ Multiple abscesses - Tail bite</td>
<td>FIPs</td>
<td></td>
</tr>
<tr>
<td>Suspect Pyaemia/ Multiple abscesses - Other</td>
<td>FIPs</td>
<td></td>
</tr>
<tr>
<td>------------------------------------------</td>
<td>-------</td>
<td></td>
</tr>
<tr>
<td>Suspect Uraemia/ Abnormal odour</td>
<td>FIPs</td>
<td></td>
</tr>
<tr>
<td>Suspect Fever/ Septicaemia</td>
<td>FIPs</td>
<td></td>
</tr>
<tr>
<td>Suspect Residues</td>
<td>FIPs</td>
<td></td>
</tr>
</tbody>
</table>
ANNEX: Responsibilities for live and slaughtered animals

Responsibilities for live and slaughtered animals are not changing. For the purposes of clarity, the table below sets out the ante mortem and post mortem process from June 2014 with the new requirements highlighted. As is usual with any change of process, FBOs and officials will need to work together to review ante mortem and post mortem processes to ensure they remain effective.

<table>
<thead>
<tr>
<th>Stages</th>
<th>Responsible</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arrival/unloading/lairaging animals including receiving Food Chain Information (FCI).</td>
<td>FBOs</td>
<td>Depends on slaughterhouse arrangements. The OV may carry out ante-mortem inspection at the time of unloading.</td>
</tr>
<tr>
<td>Identification of abnormal animals (either from FCI or from observation at the time of unloading).</td>
<td>FBOs/OVs</td>
<td>FBOs need to check FCI and inform the OV of information that raises health concerns. Depending on slaughterhouse arrangements (e.g. if animals are unloaded with no OV presence) then the FBOs may be responsible for identifying obviously abnormal animals. If an OV carries out ante-mortem at the time of unloading then the OV is responsible for identifying abnormal animals. MHIs may also assist OVs by making initial checks.</td>
</tr>
<tr>
<td>Marking and /or segregation of abnormal animals requiring additional ante mortem inspection e.g. clinical inspection or examination</td>
<td>FBOs</td>
<td>Each slaughterhouse is different. FBOs will have a written procedure which has been agreed with the OV. For example marking abnormal animals may be carried out by the FBO before ante mortem inspection is carried out.</td>
</tr>
<tr>
<td>Ante mortem inspection</td>
<td>OVs</td>
<td>Each slaughterhouse different. The OV decides on the ante mortem inspection procedure (routine, clinical inspection or examination), and based on his /her judgement, whether the animals require FIPs at post mortem inspection.</td>
</tr>
<tr>
<td>Maintaining the carcase identification and separation up to post mortem inspection. Slaughter of marked animals (correctly identified).</td>
<td>FBOs/OVs/MHIs</td>
<td>Each slaughterhouse is different. FBOs will have a written procedure which has been agreed with the OV. The OV establishes the way to communicate ante-mortem findings with MHIs on line.</td>
</tr>
</tbody>
</table>
### Slaughtered Animals - Post Mortem Inspection Arrangements from June 2014

**New Requirements are highlighted in Red**

<table>
<thead>
<tr>
<th>Stages</th>
<th>Responsible</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dressing/Evisceration etc.</td>
<td>FBOs</td>
<td></td>
</tr>
<tr>
<td>Presentation for PMI</td>
<td>FBOs</td>
<td>FBOs to identify and deal appropriately with contamination etc.</td>
</tr>
<tr>
<td>Post mortem inspection</td>
<td>MHIs/ OVs</td>
<td>VIPs as the default post mortem procedure.</td>
</tr>
</tbody>
</table>

**References:**

**Manual for Official Controls (MOC)**
- [http://multimedia.food.gov.uk/multimedia/pdfs/mocmanualch2part1rev60.pdf](http://multimedia.food.gov.uk/multimedia/pdfs/mocmanualch2part1rev60.pdf)

**European Food Safety Authority (EFSA)**

**Animal Health and Veterinary Laboratories Agency (AHVLA)**