EXECUTIVE NOTE

THE CONTROL OF SALMONELLA IN TURKEY FLOCKS (SCOTLAND) ORDER 2009

SSI 2009/417

The above instrument was made under section 1, 8(1) of the Animal Health Act 1981 and paragraph 1A of Schedule 2 to the European Communities Act 1972. It is subject to negative Parliamentary procedure.

Policy Objective

The Control of Salmonella in Turkey Flocks (Scotland) Order 2009 sets out specific sampling requirements for breeding and fattening flocks of turkey of the species *meleagris gallopavo* or *meleagris ocellata)* required by the UK National Control Programme (UK NCP) for Salmonella.

Council Directive (EC) No. 2003/99 concerning the monitoring of zoonoses and zoonotic agents and Council Regulation (EC) No. 2160/2003 concerning the control of salmonella and other food-borne zoonotic agents, provide for the protection of human health against zoonoses and zoonotic agents in animals and products of animal origin.

Commission Regulation (EC) No. 584/2008 follows Regulation 2160/2003 and sets a Community target for the reduction of salmonella in turkey flocks. The aim is to reduce the prevalence of the two most important types of salmonella affecting humans, which are *Salmonella enteritidis* (SE) and *Salmonella typhimurium* (ST).

An EU wide survey established that current levels of these two particular serotypes in the UK are amongst the lowest in Europe at around 0% for SE and 0.3% for ST. As a result, the UK has been set a target of maintaining this level and ensuring that the maximum percentage of turkey flocks remaining positive for these salmonellas is 1% or less by 31 December 2012.

The UK NCP will apply to all turkey breeding flocks with more than 250 birds and all hatcheries with a capacity for more than 1,000 eggs. It also will apply in full to all turkey fattening flocks with more than 500 birds and all hatcheries with a capacity for more than 1,000 eggs. Flocks between 500 and 10,000 which are able to demonstrate that they supply locally will be subject to official control sampling under domestic arrangements. Prevalence results of these flocks will be reviewed at the end of the first year of implementation to assess whether these flocks need further monitoring to control prevalence levels.

The UK NCP requires flock owners to take operator samples three weeks before depopulation. All costs associated with this sampling have to be met by the flock owners. Costs will also be recovered from flock owners for any official sampling work undertaken by Animal Health. Official samples will only be taken from units that have 5,000 birds or more, at which point the use of antimicrobials will be checked for in

accordance with Regulation (EC) No. 1177/2006. Powers to conduct this official sampling are already provided for by virtue of the Zoonoses (Monitoring) (Scotland) Regulations 2007.

In addition, the UK NCP provides specific control measures following the detection of SE or ST to protect human health. These are intended to prepare producers for the microbiological criteria for Salmonella absence in 25 grams in fresh poultry meat. The new Order will implement the UK NCP for Turkey Flocks (which meets requirements under European law).

Consultation

A UK-wide consultation exercise ran from July 2007 to September 2007. In addition, the Scottish Government ran an informal consultation on the Regulatory Impact Assessment with Stakeholders in Scotland from October 2009 to November 2009. Regular working group meetings have taken place with major stakeholders across the UK poultry industry. Stakeholders and Government officials from all UK administrations continue to meet regularly to discuss the implementation of the National Control Programmes. Technical experts at the Veterinary Laboratories Agency, the Food Standards Agency and the Health Protection Agency have also contributed to the programme.

Financial Effects

The implementation of the National Control Programme will have financial implications for organisations, groups and individuals responsible for the health and welfare of poultry. Costs will be borne by the operators and not Scottish Government. Powers to recover costs associated with official sampling, in respect of the UK NCP for Turkey Flocks, will be provided for by way of an amendment to the Zoonoses and Animal By-Products (Fees) (Scotland) Regulations 2009. Presently the Fees Order allows for recovery of costs for services required under Commission Regulation (EC) No. 646/2007, Commission Regulation (EC) No. 1003/2005, Commission Regulation (EC) No. 1168/2006, Commission Regulation (EC) No. 1237/2007 and the Animal By-Products (Scotland) Regulations 2003. All producers that fall within the scope of the NCP will face some increased costs in relation to sampling of their flocks and submitting samples to approved laboratories for testing.

Costs

The routine costs of sampling are based on the costs applicable to the operator and costs applicable to the Competent Authority these can be found in the annex.

Scottish Government Rural Directorate

Annex

Costs

Shared costs – Sampling

The routine costs of sampling are based on the costs applicable to the operator and costs applicable to the Competent Authority (which will be recovered through fee introduction). These costs vary depending upon the differing requirements for Fattening Flocks and Breeding Flocks (rearing and adults). The description of the various costs below broadly follows the structure of the sampling requirements.

FBO Sampling

Fattening flocks

On average, holdings have 2 crops per year and 4 flocks at any one time. The requirement for operators to take samples 3 weeks prior to slaughter in holdings with greater than 500 birds, unless they can demonstrate that they supply locally, therefore translates to a requirement to take 8 sets of samples on average per year. The costs of the different sampling methods per flock are described below in table 1, and are based on farm staff time at £11 per hour plus materials and postage:

Table 1. Fattening flocks FBO sampling

Test	Cost	Proportion of overall tests
Type 1: 2 pairs of boot swabs - pooled to one sample	£6	80%
Type 2: 1 pair boot and 1 dust sample ("may pool")	£5	10%
Type 3: Hand drag swabs if <100 turkeys	£5	10%

Assuming that the current numbers of holdings that are required to collect samples remain constant (679) and that the sampling method chosen is approximately in the ratio as described above, approximately 4346 tests of type 1 (80% X £5432), 543 of type 2 and 543 of type 3 would need to be done. The cost of testing these samples to labs is assumed to be £10 per test.

Hence the cost of sampling to industry would be £32k per annum (4346 X £6 + 543 X £5 + 543 X £5); testing would cost the industry be £54k per annum (5432 X £10).

It should however be noted that 85 percent of turkey production is under assurance schemes. If we assume that all of the large producing (>10,000 birds) holdings are part of assurance schemes and hence are already carrying out similar testing procedures, only those holding between 500 and 10,000 birds will need to carry out additional testing. It is assumed that 50% of these holdings will apply for the small quantity derogation, meaning they will no longer be required to carry out FBO sampling. For the purposes of cost calculation therefore it is assumed that 37% of all

679 holdings (50% of the 497 holdings with between 500 and 10,000 birds) with greater than 500 birds will be required to carry out FBO testing above what is already performed.

The estimated per annum costs of FBO sampling for Fattening flocks to industry are therefore £31k (£86k X 37%), based on the cost of administering the tests and the cost of testing the samples.

Breeding Flocks – rearing

On average holdings with Breeding flocks of rearing age are assumed to have 4 flocks at a given time and 2 crops per year. Given that each flock needs to be sampled 3 times at different stages of crop life each holding will need to take 24 samples per year for testing.

The costs of each different sampling method are described below and as before are based primarily on farmer's time:

Table 2. Breeding flocks - rearing FBO sampling

Tests	Cost	Proportion of overall tests
Type 1: Liners from 5 baskets covering 1m² and dead on arrival poults	£6	5%
Type 2: 2 pairs of boot swabs - pooled to one sample	£6	90%
Type 3: 1 pair boot and 1 dust sample ("may pool")	£5	5%

Assuming that all holdings involved with greater than 250 turkey's at any one time are required to carry out testing (97), and that each holding will be required to carry out 24 tests per annum, this translates to a total of 2,328 tests per year for the industry. It is assumed for the purposes of the cost calculation below that the types of tests taken are taken in the proportions described above.

Hence the cost of sampling to industry would be £14k per annum (116 X £6 + 2095 X £6 + 116 X £5); testing would cost the industry be £23k per annum (2328 X £10).

Approximately 90 percent of breeder holdings are already required to carry out testing much like that required by the NCP. In these cases the sampling requirements under the NCP are not applicable costs.

Together with the costs of having samples tested at approved labs at £10 per test, this translates to a cost for industry of £3.7k per annum (£37k X 10%).

Breeding flocks – adults

Each holding is assumed to have 3 flocks at any one time and 2 crops per year. The requirement of testing every 3rd week during the laying period (of March to July) and

3 weeks before slaughter translates to each flock requiring on average around 8 tests. Overall therefore each holding will on average be required to undertake 48 tests. Given that 109 holdings are assumed to have to perform these tests during the year, this means 5,323 tests would be undertaken.

Note that testing during the laying period can be done at the hatchery or holding, carried out by the CA or FBO respectively. It has been assumed for the purposes of the cost calculations that these testing responsibilities will be shared equally by the CA and FBO. Hence 2,616 test will be undertaken by the industry and CA at the holdings and hatchery respectively.

In common with the other types of flocks, the cost of sample tests at approved labs is estimated to be £10 per test. However for tests performed by the CA, testing of samples will be carried out by a VLA lab, with the associated testing cost of £15.30 per test. The costs for sample testing are would therefore be £26k per annum for FBOs and £40k for the CA.

(26k = £10 X 2616; 40k = £15.3 X 2616)

The costs of each different sampling method are described below and as before are based primarily on farm staff time (for FBO sampling) or CA time (for hatchery sampling). The costs for hatchery sampling can be broken down into average time costs for an Animal Health Officer at £56 per hour (2 hours travelling and 2hrs on the visit), time costs for an Administrative Officer at £46 per hour (0.5hr) and consumables, invoicing and management costs (£61):

Table 3. Breeding flocks - adults FBO sampling

Tests	Cost	Proportion of overall tests
Type 1: Pooled faeces (300)	£12	0%
Type 2: 5 pairs boot swabs	£10	50%
Type 3: 1 pair boot swabs, dust samples taken with 900cm² swabs	£5	50%

Table 4. Breeding flocks - hatchery CA sampling

Tests	Cost	Proportion of overall tests
Type 1: Liners from 5 baskets covering 1m²	£10	33%
Type 2: 900cm² swabs or fluff from 5 places	£6	33%
Type 3: 10g broken eggshells from 25 hatchers	£5	33%

For industry, assuming a split as described above between each testing option, this translates to a cost of £20k per year for sampling (1308 X £10 + 1308 X £5).

Given the small number of hatcheries in the UK (3), it is assumed that samples from multiple holdings could be tested on one visit. As the limited laying period is assumed to be from March to end July, it is estimated that each hatchery will need to

be visited on one occasion during the laying period each week. This translates to 25 visits to each hatchery per annum.

Given the costs per visit as described above, equating to £309 per visit, this means that the costs from CA sampling at the hatchery to the Government will be £23k per annum (3 X 25 X £309).

In addition to these costs to the CA from hatchery sampling however, there are costs applicable to FBOs from accompanying the CA whilst visiting the hatchery. Assuming that each visit on average takes approximately 2 hours and that farm staff time is worth £14 per hour (plus 30% for overheads as this is an administrative burden); this translates to an average cost per visit of £27 (£13.7 X 2) to the FBO.

As before, approximately 90 percent of breeder holdings are assumed to be already required to carry out testing much like that required by the NCP. In these cases the sampling requirements under the NCP are not applicable costs.

Therefore the overall costs to industry from sampling and testing are equal to £7k (£48k*10% plus £2k) and to the CA £63k.

Table 5. Summary of costs from sampling requirements

		To industry	To the CA	Total per annum
Fattening flocks	Sample gathering	£ 11,530	£ -	£ 11,530
	Sample testing	£ 19,880	£ -	£ 19,880
Breeding flocks – rearing	Sample gathering	£ 1,385	£ -	£ 1,385
	Sample testing	£ 2,328	£ -	£ 2,328
Breeding flocks – adults	Sample gathering	£ 1,962	£ 23,193	£ 25,155
	Sample testing	£ 2,616	£ 40,025	£ 42,641
	Accompanying CA for sampling	£ 2,049		£ 2,049
	Total	**£ 41,751**	**£ 63,218**	**£ 104,969**

Competent Authority sampling

The Fees Regulations will be amended to include turkey costings and it is likely that government will maintain the same charging regime as with other NCPs.

The various requirements are set out in Annex 1. Sampling at a holding is assumed to take approximately 2 hours of an Animal Health Officers time (£56 per hour), as well as an average of 2 hours travel. Each visit is also assumed to take approximately 0.5 hours of an AO's time (£46 per hour) plus consumables, management and invoicing costs (£61). The costs relating to each type of sample

are assumed to be equal (i.e. that each type of sample takes an equal amount of CA time to perform). Each sample visit is therefore estimated to cost £309 to the CA.

In each testing visit it is assumed that the type of test taken is random and that samples need to be tested at a cost of £15.30 per test at VLA labs.

Fattening flocks

There are 4 aspects to the sampling requirements for the CA for Fattening flocks.

If all flocks are tested at 10% of holdings with at least 500 fattening turkeys, this translates to 18 visits per annum under official NCP rules and 50 visits per annum under the National Survey. Evidence suggests that up to 4 holdings that are expected to test positive for *Salmonella* Enteritidis or *Salmonella* Typhimurium in a given year. This means that 4 visits will be carried out per year for this reason. Likewise the requirement to test those holdings previously testing positive, given the above, means that an extra 4 visits will be carried out per year. It is assumed that the Competent Authority will additionally wish to carry out 10 additional visits per year.

Each fattening turkey holding is expected to have 4 flocks at any one time and that all flocks will be tested. This means that on average 86 visits will be carried out per year and therefore that 344 samples will be taken.

Overall the costs to the CA are therefore estimated to be £27k per annum from visits (83 X 309) and £5.3k for sample testing by the VLA (£15.3 X 344). £6.7k of this figure will however be recovered by the CA from the industry, relating to costs of visits where the FBO has tested positive or where the CA considers it necessary. These costs are discussed further in the section “Shared Costs – Cost of a positive test for Salmonella” below.

In addition to these costs to the CA, there are costs applicable to FBOs from accompanying the CA whilst visiting the holdings during the 10% of visits carried out per year at random. Assuming that each visit on average takes approximately 2 hours and that farmers time is worth £14 per hour (including 30% for overheads), this translates to an average cost per visit of £27.

Table 6. Fattening flocks CA sampling

		CA costs	CA costs	FBO costs	
	Number of visits	Sample gathering	Sample testing (£15.30 per test)	Accompanying CA	Total costs
Requirement of all flocks being tested on 10% applicable holdings	68	£ 20,997	£ 4,155	£ 1,855	£ 27,008

Therefore the overall costs of CA sampling the industry is £1.9k: this is an administrative burden to the industry. The costs to the CA are estimated to be £25k.

Breeding Flocks – rearing

There are no requirements for the CA to carry out sampling for rearing Breeding flocks as part of the NCP.

Breeding Flocks – adults

There are 3 aspects to the sampling requirements for the CA for laying flocks.

If all flocks are tested at 10% of holdings with at least 250 breeding turkeys between the ages of 30 and 45 weeks, this translates to 11 of visits per annum. Evidence suggests that 2 holdings may be expected to test positive for *S. enteritidis* or *S. typhimurium* in a given year. This means that 2 visits will be carried out per year for this reason. Likewise the requirement to test those holdings previously testing positive, given the above, means that 2 additional visits will be carried out per year.

Each breeding turkey holding is expected to have 3 flocks at any one time and that all flocks will be tested. This means that on average 15 visits will be carried out per year and therefore 45 samples will be taken.

Overall the costs to the CA are therefore assumed to be £4.6k per annum from visits (15 X £309) and £700 for sample testing by the VLA (45 X £15.3). £1.8k of this figure will however be recovered by the CA from the industry, relating to costs of visits where the FBO has tested positive or where the CA considers it necessary. These costs are discussed further in the section "Shared Costs – Cost of a positive test for Salmonella" below.

In addition to these costs to the CA, there are additional costs applicable to FBOs from accompanying the CA in their sampling. Assuming that each visit on average takes approximately 2 hours and that farmers time is £14, this translates to an average cost per visit of £28.

Table 7. Breeding flocks official sampling

		CA Costs		FBO costs	
Visits due to	Number of visits	Sample gathering	Sample testing (£15.30 per test)	Accompanying CA	Total costs
Requirement of all flocks being tested on 10% applicable holdings	11	£ 3,402	£ 505	£ 301	£4,207

Therefore the overall costs of CA sampling to the CA are £3.7k and to industry is £300.

Shared costs - Administrative costs

There are two main types of administrative costs that are shared by each of the options, all falling on the industry. In these cases the costs refer to the farm manager time of fulfilling these obligations, plus 30% overheads.

Costs of record keeping

A requirement of the legislation is that holdings keep a record of the testing results. This is assumed to take 6 hours at a holding per year on average.

Costs of reading the legislation
It is assumed that familiarisation will take 2 hours per annum.

Note that not all holdings will encounter additional costs from record keeping. For those holdings currently part of assurance schemes (overall 596 holdings) there is no cost assumed from record keeping.

Table 8. Additional Administrative Costs

	Number of holdings	Per holding affected	Industry total
Record keeping (not part of assurance scheme)	270	£ 82	£ 22,126
Familiarisation with the legislation	866	£ 27	£ 23,664
Total for holdings outside of assurance scheme		£ 109	£ 45,790

Taken together these costs equate to an additional administrative burden on the industry of £46k per annum (£109 per holding fully implementing the legislation and not part of an assurance scheme).

Shared costs - Costs of a positive test for Salmonella

As mentioned above, the costs of follow up visits from the CA to re-sample FBO flocks in the case of a positive test will be recovered from FBOs. In addition, the costs of testing samples will also be recovered.

For fattening holdings, it is assumed that a maximum of 8 such visits will occur per annum, based on the need to re-test positive samples this year and the previous year. Given a cost per visit for the CA of £309 per visit (based on sample visit costs above) and sample testing costs of £61 (4 X £15.30), the costs to the fattening industry is estimated to be £3.5k per annum (8 X £309 + 8 X £61).

Likewise, for holdings with adult breeding flocks, it is assumed that a maximum of 4 such visits will occur per annum, based on the need to re-test positive samples this year and the previous year. Given a cost per visit for the CA of £309 per visit (based

on sample visit costs above) and sample testing costs of £46 (3 X £15.30), the costs to the breeding industry is estimated to be £1.7k per annum (4 X £309 + 4 X £46).

In addition to follow up visits from the CA to re-test FBO samples, there are further costs related to positive tests including clean up and disinfection. Assuming that a maximum of 4 fattening holdings and 2 Breeding holdings will test positive for *Salmonella* Enteritidis or *Salmonella* Typhimurium in a year as above and that the costs of clean up are £550, the additional costs to industry are estimated to be £3.3k.

However, if we assume that only one of the positive tests at Fattening holdings and only one of the positive tests at Breeding holdings / hatcheries occurs in farms not part of an assurance scheme, the costs of clean up are significantly less. For those farms that are part of assurance schemes, we can assume that the majority of the clean up and disinfection procedures are already completed following a positive test. The cost to members is assumed to be £50.

The overall costs therefore of positive tests per annum to the industry are therefore expected to be £6.4k (£3.5k + £1.7k + £50 X 4 + £550 X 2).

Table 9. Costs of positive FBO tests for Salmonella

	Fattening holdings	Adult/Laying Breeding holdings
Number of positive tests per annum	4	2
Recovered costs to the CA from sample visit	£ 309	£ 309
Recovered costs to CA from VLA testing	£ 61	£ 46
CA charges sum	£ 2,964	£ 1,421
Cost of positive tests (assurance)	£ 50	£ 50
Cost of positive tests (non-assurance)	£ 1,650	£ 50
Cost of positive charges sum	£ 1,700	£ 100
Total	£ 4,664	£ 1,521

THE CONTROL OF SALMONELLA IN TURKEY FLOCKS (SCOTLAND) ORDER 2009

IMPLEMENTATION OF THE REQUIREMENTS UNDER COUNCIL REGULATION (EC) 2160/2003 AND COMMISSION REGULATION (EC) 584/2008

REGULATORY IMPACT ASSESSMENT

SCOTTISH GOVERNMENT
November 2009

1 Title of proposal

1.1 The title of proposal is The Control of Salmonella in Turkey Flocks (Scotland) Order 2009 (Turkey Order). This Order will implement the UK National Control Plan for Turkey Flocks (Turkey NCP) in Scotland. Turkeys are flocks of domestic fowl of the species *Meleagris gallapavo* or *Meleagris ocellatta* produced for fattening or breeding purposes. The NCP will come into effect in 2010 as required by Council Regulation (EC) 2160/2003 and Commission Regulation (EC) 584/2008.

2. Purpose and Intended Effect

The Objective

2.1 The proposed legislation sets out the monitoring and controls primary producers must follow to reduce or maintain the prevalence of *Salmonella enteritidis* and *Salmonella typhimurium* in turkey flocks on holdings in Scotland to the target levels set out in Commission Regulation (EC) 584/2008. This is a maximum of 1% of breeding or fattening turkey flocks remaining positive for *S. enteritidis* or *S. typhimurium* by 31 December 2012.

Background

2.2 The Scottish Government is working in partnership with key industry representatives to implement National Control Programmes (NCPs) in the pig and poultry sectors under EU Regulation 2160/2003. The overall objective of the NCPs is to improve public health through the detection and control of salmonellas of human health significance in primary production. The enhanced monitoring requirements should ensure that information on *Salmonella* status can be more easily compared across the EU, and the aim for a more unified approach to the control of *Salmonella* can be achieved. NCPs have been introduced for breeding, laying and broiler flocks of domestic fowl of the species *Gallus gallus*. Over the next two years NCPs will be introduced for fattening (2010) and breeding pigs (2011) in all Member States.

2.3 The turkey NCP, to be enforced by The Control of *Salmonella* in Turkey Flocks (Scotland) Order 2009 (Turkey Order), meets the requirements of EU legislation to reduce (and/or maintain) the level of *Salmonella* infection of public health significance in turkey breeding and fattening flocks in the EU, and in turn aims to help reduce the level of human infection caused by *Salmonella*. The turkey NCP seeks to accomplish this by ensuring that *Salmonella* serovars of human health significance are detected and controlled in turkeys and their environment in order to reduce any risk they may pose to human health further along the food chain.

2.4 The NCP will apply to all turkey breeding flocks with more than 250 birds and all hatcheries with a capacity for more than 1,000 eggs; and all turkey fattening flocks with more than 500 birds and all hatcheries with a capacity for more than 1,000 eggs. Flocks between 500 and 10,000 which are able to demonstrate that they supply locally will be subject to official control sampling under domestic arrangements. Prevalence results of these flocks will be reviewed at the end of the first year of implementation to assess whether these flocks need further monitoring to control prevalence levels.

The establishment of baseline prevalence of *Salmonella*

2.5 Council Regulation (EC) 2160/2003 on the control of *Salmonella* and other specified zoonotic agents was agreed by the Secretary of State in 2003. This was in response to the opinion on zoonoses adopted on 12 April 2000 by the Scientific Committee on Veterinary Measures relating to public health. That opinion found that the measures in place in some Member States at the time to control food-borne zoonotic infections were insufficient and that the epidemiological data that Member States were collecting was incomplete and not fully comparable. It was agreed that the reduction of prevalence levels of salmonellas of public health significance were of particular importance and as a result the EU agreed in 2003 to set targets for reducing prevalence at the farm level.

2.6 Community targets have been set for reducing the prevalence of *Salmonella* serovars (infections) of public health significance in pigs (fattening and breeding) and poultry (breeders, layers, broilers and then turkeys). The breeding flock and the broiler flock sector had met their targets when legislation was implemented. The laying flock sector is expected to meet its target during the period of the NCP.

2.7 Surveys were carried out in all Member States, between October 2006 and September 2007, in order to determine a baseline prevalence level for *S. enteritidis* and *S. typhimurium* on turkey fattening holdings with at least 500 birds, in order to provide the scientific basis for setting a Community reduction target. A similar survey for turkey breeding flocks covering all flocks on holdings with 250 birds took place which was also used to set a reduction target. To meet the sampling frame required by the Commission 343 holdings (318 fattening flocks selected at random and 25 breeding flocks) were selected.

2.8 Further information on turkey surveys can been found in the EFSA report: EFSA publishes EU-wide survey on Salmonella levels in turkeys. After the results were examined, a baseline figure for reduction was set. The target is a maximum percentage of turkey breeding and fattening flocks remaining positive for *S. enteritidis* and *S. typhimurium* of 1% or less by 31 December 2012 across the EU Community as a whole.

2.9 With a prevalence of 0.89% for SE in turkey breeding flocks the UK has one of the lowest prevalence rates in the EU, which is well below the EU target and demonstrates the success of the UK industry in controlling *Salmonella*. The prevalence in turkey fattening flocks was 4.6% for SE/ST, however later research and surveillance suggests a decrease in this percentage to minimal levels.

The establishment of National Control Programmes

2.10 The first NCP covered breeding flocks of domestic fowl and came into operation in March 2007, under The Poultry Breeding Flocks and Hatcheries (Scotland) Order 2007. This set out the official controls necessary to verify the target level for breeding flocks established by EU Regulation 1003/2005. Under the NCP, the target level of adult breeding flocks (comprising at least 250 birds) remaining positive for the five serovars (*Salmonella enteriditis, S. typhimurium, S. hadar, S. infantis and S. virchow*) is 1% or less by 31 December 2009. The UK breeding flock sector had met this target when the legislation was implemented. In December 2007 the Scottish Government

was able to report that the breeding flock sector had met the requirements of the NCP and the prevalence estimate for UK flocks was well below the target set.

2.11 The NCP for laying flocks followed on from the NCP for breeding flocks. This NCP was implemented under the Control of *Salmonella* in Poultry (Scotland) Order 2008 ("the Poultry Order") which came in to force in September of that year. The Poultry Order not only implemented the NCP for laying flocks but also the NCP for breeding flocks while revoking, the earlier, Poultry Breeding Flocks and Hatcheries (Scotland) Order 2007. The Poultry Order was itself revoked by the Control of Salmonella in Poultry (Breeding, Laying and Broiler Flocks) Order 2009. As well as implementing the Broiler NCP, this instrument implements the Breeding Flocks NCP and the Laying Flocks NCP.

2.12 The NCP for turkey flocks complies with Regulations 2160/2003, 199/2009, 213/2009 and 584/2008. This legislation should ensure a consistent approach to the reduction of salmonellas of public health significance across the EU and equivalent protection of human health from turkey meat imported from other European Community Member States. Over the next 2 years separate NCPs will be drawn up for fattening and breeding pigs.

2.13 The UK NCP for turkey flocks was submitted for approval by the Commission in December 2008 after the setting of the reduction target by Regulation 584/2008 and has now been provisionally approved by the EU Commission. The *Salmonella* control programme for flocks of turkeys will start in every Member State on 2 January 2010 at the latest. Regulation 2160/2003 sets a general framework for control programmes which the NCP for turkeys integrates:

- Minimum sampling requirements detailing the phases of production which sampling must cover. The majority of this sampling is carried out by the operator, although the NCP requires that some samples are collected under the control of the Competent Authority in order to determine progress towards reduction targets set by EU legislation and to monitor the implementation.

- The relevant guides for good bio-security and animal husbandry which cover issues such as rodent control to reduce the risk of introducing and maintaining *Salmonella* on the farm, the prevention of between-flock transmission (for instance through insufficient disinfection and pest control in poultry houses) and the monitoring of feed production. Guidance produced by the Food Standards Agency (FSA) on feed and food safety is also of relevance.

- The respective responsibilities of the Competent Authorities (CA) and food and feed business operators and the method of approval of laboratories for analysis of samples.

- The measures to be taken following the detection of zoonoses and zoonotic agents, to protect public health. These should help prepare producers for the specific measures laid down in Annex II of the Zoonoses Regulation 2160/2003 when a turkey flock is suspected of being infected with *S. enteritidis* or *S. typhimurium*. These are likely to be enforced under separate legislation when the microbiological criteria for *Salmonella* absence in 25 grams has been clarified by the Commission (due to come into force at the end of 2010).

The registration of poultry operators and record keeping at farms.

2.14 Relevant current national legislation is described in page 19 (paragraph 2.2.0) of the NCP. The structure and organisation of the relevant Competent Authorities (CAs) is described in page 12 (paragraph 1.5.0) of the NCP.

Rationale for government intervention.

2.15 The NCP will bring UK standards into harmony with those in other Member States. It will ensure that UK producers cannot be undercut through competition with producers in other EU Member States and third countries without equivalent standards. NCPs are now in place for layers and breeders. This will ensure that the turkey sector is part of an integrated approach to *Salmonella* control.

2.16 The UK is committed to reducing *Salmonella* serotypes of public health significance at national and European Community level. Currently, there is no statutory monitoring programme for *Salmonella* in turkeys in the UK. Existing surveillance for *Salmonella* involves voluntary monitoring with the requirement for all laboratories which isolate *Salmonella* from a turkey flock or its environment to report the finding, and supply the isolate to the National Reference Laboratory to be recorded and analysed.

2.17 These reports provide useful information on the serovars which are most common in the birds, and indicate trends. However they do not give information on the number of holdings or flocks sampled and so it is not possible to monitor the prevalence of *Salmonella* in turkey flocks from these figures. The number of reports which have been made depend on the level and sensitivity of monitoring undertaken by the producers. Therefore, in order to establish whether or not the turkey sector continues to meet the reduction target, government must ensure that all flocks are monitored for *Salmonella* in a regular and consistent manner which complies with obligations under European law.

2.18 It is recognised that some Farm Assurance Schemes in the poultry sector set out monitoring and testing requirements beyond those currently recommended as good practice. The Farm Assurance Schemes are encouraged to incorporate the sampling programme in their codes of practice.

2.19 By covering breeding as well as fattening flocks the NCP should establish comprehensive monitoring and controls which should minimise the risk of *Salmonella* being brought onto holdings from the breeding farms. The results of the EU survey of turkey flocks indicate that industry actions to control *Salmonella* over recent years have contributed to a low baseline level for the UK. However, non-compliance with the monitoring and controls which other Member States should have in place would undermine future attempts to promote the reputation of the poultry sector. It would also have an impact on producers wishing to trade within the EU. Although some of these products would be redirected into domestic consumption, this may result in them losing value.

Establishment of Salmonella Reduction Targets

2.20 The reduction targets are set by Regulations made under Regulation 2160/2003 (as amended by Regulation 199/2009). The reduction target for breeding flocks was set

by Regulation 1003/2005 (recently amended by Regulation 213/2009), Regulation 1168/2005 for layers and Regulation 646/2007 for broilers. Regulation SANCO/5541/2009 which amends Regulation 798/2008 lays down provisions with regards to *Salmonella* control in turkeys in certain third countries. The purpose of Regulation 584/2008 for turkeys is:

a. To reduce or maintain the prevalence of salmonellas of public health significance in flocks of breeding and fattening turkeys on holdings in the UK producing turkeys for meat for human consumption and breeding turkeys at least to the target levels set out in Regulation (EC) No 584/2008 which is a maximum percentage of turkey flocks remaining positive for *Salmonella enteritidis* and *Salmonella typhimurium* to 1% or less by 31 December 2012.

b. Set out requirements and testing methods under the control of the Competent Authority to verify the achievement of the Community target.

c. Set out requirements and testing methods to be performed by the operator.

d. Ensures that samples are submitted to a laboratory authorised by the Competent Authority (CA), which applies quality assurance systems that conform to the requirements of the current EN/ISO standard.

3. Consultation

External

3.1 Regular meetings have been held with major stakeholders in the UK Industry to discuss the requirements and implications of Regulation 2160/2003 and 584/2008 for the turkey flock sector and the draft NCP. A formal written consultation has not taken place because the requirements of the Regulations are directly applicable to, and legally binding, on all Member States.

Internal

3.2 During the drafting of the NCP, Scottish Government officials have also worked with colleagues in the other Government Administrations and technical experts (from Veterinary Laboratories Agency and Food Standards Agency).

4. Sampling and testing requirements of the National Control Programme

4.1 The NCP requires that samples are collected from birds and their environment for the detection of *Salmonella*. Sampling of fattening and breeding flocks are summarised in the table at Annex 2.

Sampling of poultry breeding flocks

4.2 For poultry breeding flocks we have identified three possible options which comply with the legislation:

1	Official sampling at the hatchery and FBO sampling at the holding.
2	NCP sampling (official and FBO) at hatchery and industry voluntary sampling on the holding.
3	Industry voluntary sampling at the hatchery and NCP sampling (official and FBO) at the holding.

4.3 After the target was set, meetings were held with industry representatives to discuss the sampling requirements for turkey breeding flocks. Industry representatives expressed a preference for option 1 which would separate hatchery and holding sampling and reduce the potential for transfer between hatchery and the holding.

4.4 If this option is adopted, it will need to be ensured that industry can trace samples taken at the hatchery to flocks. It should also be noted that collecting samples at the hatchery will lead to more complicated sampling methods.

A.	**Do you support option 1?**
B.	**Do you agree that adoption of this option would enable samples to be traced to the individual flocks? If not, could you explain why?**
C.	**If you do not support option 1 which option would you prefer and why?**

Sampling of fattening flocks

4.5 The table above covers all the sampling methods currently required for fattening flocks.

5. Application and Scope

5.1 The NCP applies to all of the UK and therefore this RIA considers UK wide costs. Furthermore, the assumptions behind the costs and benefits sections are not specific to Scotland. Although The Turkeys Order applies to Scotland only, parallel legislation is expected to be introduced in Wales, Northern Ireland and England. This SSI will be made under the powers of the Animal Health Act 1981.

5.2 The Scottish Government is the Competent Authority (CA) for implementation of the Turkey NCP in Scotland. It will be supported by the Veterinary Laboratories Agency, Animal Health agency and Food Standards Agency. In Wales the Welsh Assembly Government is the CA for implementation of the NCP, in Northern Ireland it is the Department of Agriculture and Rural Development (DARD) and in England it is the Department of Environment, Food and Rural Affairs (Defra).

5.3 The Turkey NCP will apply to all turkey breeding flocks with more than 250 birds and all hatcheries with a capacity for more than 1,000 eggs. Throughout the UK there are 679 holdings that are expected to fall under the remit of the NCP. This breaks down to 497 holdings of between 500 and 10000 birds and 182 holdings with greater than 10000 birds. In Scotland, there are no holdings with in excess of 10000 birds and there are 9 seasonal holdings with between 500 and 10000 birds. The NCP only applies to those who keep broilers on a commercial basis.

5.4 It is important that all operators consider what they need to do to meet the requirements of the Turkey NCP and, in particular, whether the sampling and testing requirements apply to them. In enforcing these requirements Government

needs to adopt a risk based approach and focus its resources on companies in which the majority of production takes place or on the operations that present the greatest risk of passing on *Salmonella* infection to the consumer.

5.5 All turkey holdings are required to register with the GB poultry register. Government will focus enforcement resources on the larger holdings, while retaining powers to investigate any holdings, irrespective of size, on which it is considered that there may be increased risks of chicken meat for direct human consumption being produced from infected flocks. Enforcement of the NCP is an important issue for industry and consumers. We would be interested to hear the views of all consultees on the approach to auditing compliance which is covered in the implementation options.

5.6 This NCP focuses on *S. enteritidis* and *S. typhimurium* only which are considered to be the serovars of most human health significance due to their occurrence in the human population. It is possible for the NCP to cover other *Salmonella* serovars, however when this was discussed with industry representatives they expressed the view that it should focus on SE and ST.

6. Devolution

6.1 As stated previously, this RIA covers the costs and benefits to the UK. However, the Turkey Flocks Order will apply to Scotland only. It is expected that parallel national legislation will be introduced in Wales, Northern Ireland and England.

7. Risk Assessment

7.1 The immediate risk is that the failure to bring the Turkey Flocks Order into force could result in the absence of powers to enforce the monitoring and controls required to implement the NCP. Without these powers, government could fail to support the overarching objective of the European Commission to reduce or maintain the low prevalence of *Salmonella* serovars of major human health significance in turkey flocks in Member States and could face infraction proceedings. Non-compliance would also reduce government and industry ability to ensure that *Salmonella* does not spread to the wider food chain with subsequent adverse effects on human health. This would be a breach of community obligations and a failure to meet EU standards on health. There could also be a trade restriction on UK turkey movements within the EU, which would have a substantial cost to some turkey producers.

8. Implementation options

Options for management of the National Control Programme

8.1 The implementation options below focussed on the collection, testing and auditing of operator and Competent Authority (CA) samples required by the NCP. Regulations 2160/2003 and 584/2008 require that government or a Control Body acting on the government's behalf should play a substantial role in the monitoring of the NCP.

8.2 The agent of the CA with overall responsibility for the NCP will be staff from Animal Health although the day to day management of the NCP could be delegated to LVIs or auditors from an Independent Control Body (ICB). Over the next three years officials from these organisations will manage the monitoring and controls of the NCP by:

- undertaking and/or supervising the collection of CA samples
- monitoring and auditing the operator sampling
- providing support to industry control programmes which operate under the NCP (if industry wishes to adopt these).

8.3 The Turkey Flocks Order as drafted will enforce the minimum sampling and record keeping requirements of the EU legislation. Government will retain full powers to collect samples and check records to implement the NCP. As previously stated under existing arrangements all samples collected under the NCP are tested at an approved laboratory.

Option 1 – do nothing (continue with sampling and testing under current arrangements)
Option 2 – implement the NCP on a voluntary basis only
Option 3 – for management of the NCP to be under the direct control of government
Option 4 - for responsibilities for the management and auditing of the NCP to be shared by government and industry (this is the preferred option)
Option 5 - For turkey companies to establish their own company control programme as part of the NCP.

8.4 Option 1: Do nothing (continue with sampling and testing under current arrangements)

8.4.1 The measures required by Regulations 2160/2003 and 584/2008 cannot be implemented through current legislation and administration. It is possible that a number of the larger producers might be willing to adopt the controls on a voluntary basis. However, unless government can ensure that the controls and testing by all eligible producers meets new requirements on a voluntary basis, England will fail to have the same public health measures in place as those that will be implemented in other Member States.

8.4.2 Secondly, failure to implement the NCP – or partial implementation – would be a breach of Community obligations as well as a potential threat to public health. The NCP establishes comprehensive monitoring and controls which should minimise the risk of *Salmonella* in turkey flocks. Non-compliance would prevent the turkey flock sector from reinforcing and benefiting from the NCPs which have been established for breeding flocks, laying flocks and broilers.

8.4.3 Finally, although the current prevalence of *Salmonella enteritidis* and *Salmonella typhimurium* on turkey holdings is relatively low, it could still represent a reservoir for potential dissemination and amplification of existing and 'new' *Salmonellas,* which could be a future public health concern. Large sites in particular provide a possible focus of infections. It should also be noted that improved hygiene and bio-security to reduce *Salmonella* can be beneficial for wider disease control purposes.

8.5 Option 2: Implement the NCP on a voluntary basis only.

8.5.1 Under this option the NCP would be implemented on a voluntary basis without the government having powers to enforce. It is possible that a number of larger producers, in particular those which export turkey meat, might be willing to adopt the controls on a voluntary basis.

8.5.2 This approach would be a saving to government for enforcement costs and avoidance of on-farm inspections. It would also show a "light touch" approach to implementation in light of industry achieving target.

8.5.3 The viability of this option would be contingent on government being able to ensure that the controls and testing by all eligible producers meets the new requirements without enforcement powers. At the present time this is not possible. If the UK failed to have the same public health measures in place as those other Member States it would be regarded by the Commission as a partial implementation of the legislation and open the UK to infraction proceedings. If *Salmonella* levels on UK holdings increased it might also be considered to be a potential threat to public health. Moves at EU level towards compartmentalisation, whereby areas or companies can be approved as having met specific standards of controls and monitoring mean that this is an option could be explored in the future.

8.6 Option 3: For management of the NCP to be under the direct control of government.

8.6.1 The measures required by the legislation cannot be implemented through current legislation and administration. Under this option government would take full responsibility for monitoring and auditing the sampling and bio-security requirements of the NCP. Such an arrangement would be likely to involve at least annual farm visits to all eligible holdings to check the operator sampling and the operator's arrangements for requirements such as cleansing and disinfecting between flocks, record keeping and sourcing of feed.

8.6.2 This option would have the advantage of ensuring a comprehensive system which could be managed directly by government and minimise possibilities for non-compliance. It would also be a level playing field between companies and be amenable to a quick response to outbreaks from government.

8.6.3 The costs to producers and government would be high. In the UK there are 866 premises (breeding and fattening) to which the requirements of the NCP can be applied. Official control samples will need to be collected from 10% (87) of these holdings. All of these holdings will need to be audited for the collection of operator samples. Unlike layer flocks government officials do not have a programme for regular visits to turkey holdings (apart from IPPC inspections). There is an expense to government of setting up and maintaining a monitoring system. If the auditing was conducted on a cost recovery basis (which Defra may need to consider) these costs would be passed to industry.

8.6.4 These costs could however be partially controlled through a risk based auditing system to check operator sampling. In practice this would mean that visits would concentrate on holdings of a substantial size or where there are potential *Salmonella* problems.

8.7 Option 4: For responsibilities for the management and auditing of the NCP to be shared by government and industry (Preferred option).

8.7.1 Under option 4 Government would retain full responsibility for the monitoring and controls required by the NCP. However management for the auditing and possibly the collection of official control samples would be shared jointly by the Competent Authority and industry. In practice it would be possible for companies with consistently good records and bio-security standards to conduct their own audits of the operator sampling and avoid the need for regular inspections. These producers would be required to provide evidence that they are in compliance with the NCPs requirements by voluntarily sharing records with Animal Health. Producers could, for instance, forward the results of laboratory testing to Animal Health offices to confirm compliance with the operator sampling or request that their laboratories share the testing results with government. This would be facilitated by The Zoonoses Order 1989 under which laboratories are compelled to report positive samples to the CA. This option would recognise the success of industry in controlling *Salmonella* and lead to a possible cost saving to both government and industry.

8.7.2 This option would involve government working with individual farms, whereas Option 4 would require government to work with an industry control programme. If properly implemented it could combine the rigour of Option 3. It would take a light touch approach to the implementation of legislation to a sector where *Salmonella* monitoring and controls have been on a voluntary basis, and demonstrate trust in those producers which consistently work to high standards. It could also ensure that compliance with the NCP was driven by commercial incentives: verifiable adoption of the NCP requirements would mean a greater chance of avoidance of the costs associated with a farm visit from government. It would provide greater scope for individual producers to apply for the sampling derogation of all flocks on their holdings.

8.7.3 For government it would have the advantage of allowing Animal Health officials to manage their resources more flexibly and to concentrate them on those areas where there was greatest need. Such an approach would be consistent with the principle that food business operators should take responsibility for the safety of their products, which underlies much of the legislation.

8.7.4 Under this arrangement however on-farm inspections would continue to be necessary. These could take the form of auditing “spot checks” to verify that the sampling was taking place. Controls on *Salmonella* positive farms would also be necessary. In this circumstance sampling and testing work conducted to investigate a holding where the presence of *Salmonella* is detected (as in Annex to Regulations 584/2008 and 213/2009) would be overseen by the CA as a standard procedure.

8.7.5 This option would however be dependent on industry continuing to meet the reduction target and would be contingent on an adequate information flow on sampling and transparent processes. Such an approach could not be implemented until producers had been given time to accustom themselves to the new testing requirements. After this stage it would only be possible to authorise specific companies to manage the NCP with more independence from the CA. This is not an option that government would wish to require of industry. The onus would be on turkey producers to put forward their own case for greater independence.

8.8 Option 5: For turkey companies to establish their own company control programme as part of the NCP.

8.8.1 Article 5 of Regulation (EC) 2160/2003 provides scope for producers and their representative bodies to put forward their own control programmes for approval to become part of the NCP. The Official Feed and Food Controls Regulation (Regulation (EC) No. 882/2004) provides scope for the delegation of specific tasks related to official controls to Independent Control Bodies. The intention behind article 5 is that producers adopt controls as part of their internal systems (for instance by expanding the codes of practice). Under this option company operating schemes would be updated to include the sampling and controls in the NCP. It should avoid the need for producers affiliated to farm assurance schemes to follow multiple control programmes. It would change the relationship between the CA and a producer, allowing for more independence and delegation. For this option to be adopted we would need to ensure that there was a reliable exchange of information between the CA and the auditors of the industry control programme. This would include reliable data on the audits of operator samples, and regularly updated lists of holdings covered by the control programme.

8.8.2 If this option was implemented it would mean that although Defra/AH would be the CA for the NCP, the Independent Control Body as the control programme's auditors would be responsible for the day to day management of the sampling programme. This would most likely be proposed or established by industry under a Farm Assurance Scheme, possibly after an interim period for the new sampling requirements to become established. There could be a number of control programmes specific to producers. These might be farmers covered by Quality British Turkey, or possibly organic farmers certified by appropriately accredited organic inspection bodies.

8.8.3 These bodies would be covered by protocols with the CA to enable proper monitoring and auditing and, their respective roles could be expanded as experience of the NCP grew.

8.8.4 The role of the CA would be to ensure that the industry control programme was managing the monitoring and controls of a holding to an acceptable standard. This would be contingent on external appraisal by Defra (or Animal Health), possibly through a programme of on the spot auditing at turkey farms and other relevant stages of production. It would also mean that the control programme would be prepared to take part in audits by the CA and the Food Veterinary Office. These interventions by the CA would be less frequent than under Option 4.

8.8.5 If properly managed by industry this option could offer the rigour of Option 3 with the flexibility of Option 4, and would give a sense of ownership of the NCP to industry. However, this option needs to be considered with caution as the validity and impartiality of official controls outside of direct CA control can be opened to challenge by a Food Veterinary Office visit and competitors.

9. Benefits and costs

Benefits

9.1 *Salmonella* is an important zoonotic pathogen that can lead to disease in human beings. Human salmonellosis cases, although often mild, can sometimes be serious and possibly even fatal. Human salmonellosis cases are usually characterised by fever, abdominal pain, nausea and sometimes vomiting. Symptoms are often mild and most infections only last a few days. However, sometimes the infection can be more serious and even fatal. The disease can also give rise to long-term or chronic conditions such as reactive arthritis.

9.2 The disease can therefore impose a significant economic cost, including the cost of medical treatment, possible fatalities, lost work days, and the pain and suffering of affected persons. A potential benefit of the proposed policy would therefore be to reduce the incidence of human salmonellosis in the UK.

9.3 Reduction in disease incidence is not expected to occur as a result of actions undertaken within the UK, as the UK National Control Plan is likely to keep *Salmonella enteritidis* and *S. typhimurium* prevalence in turkey flocks in the UK at the existing low level instead of reducing it further. The introduction of improved harmonised testing should help stimulate a reduction in other *Salmonella* serovars that may be present in replacement birds supplied to the independent and seasonal sectors. However, since this is EU legislation, similar control plans will be implemented in other EU countries, some of which have a significantly higher *Salmonella* prevalence. Benefits to the UK can therefore be expected as a result of reduced risk of *Salmonella* infection from consumption of meat imported from these countries. There will also be a similar benefit for UK citizens who consume meat while visiting these countries.

9.4 It is difficult to monetize the potential benefit, as there are large areas of uncertainty, e.g.
(i) the reduction in *Salmonella* prevalence in turkey flocks that will be achieved in other EU countries as a result of the control plans implemented in these countries;
(ii) the impact of the above on the incidence of human salmonellosis cases in the UK; and
(iii) the cost of the avoided cases, which would depend upon the degree of severity.

The following sections therefore present a more general discussion of the potential (non-monetized) benefit of the policy.

Human salmonellosis in the UK

9.5 A total of 13,213 laboratory-confirmed cases of salmonellosis were reported in the UK in 2007. Under-reporting of infectious intestinal disease is common, and it is expected that there are three unreported cases for each confirmed case[1].

9.6 The economic cost of salmonellosis is significant. Cost estimates in the literature imply that per case cost of cases in which the patient visits a GP is about £736 in current prices. This includes medical costs as well as direct costs to cases and

[1] Defra (2008) Zoonoses report: United Kingdom 2007

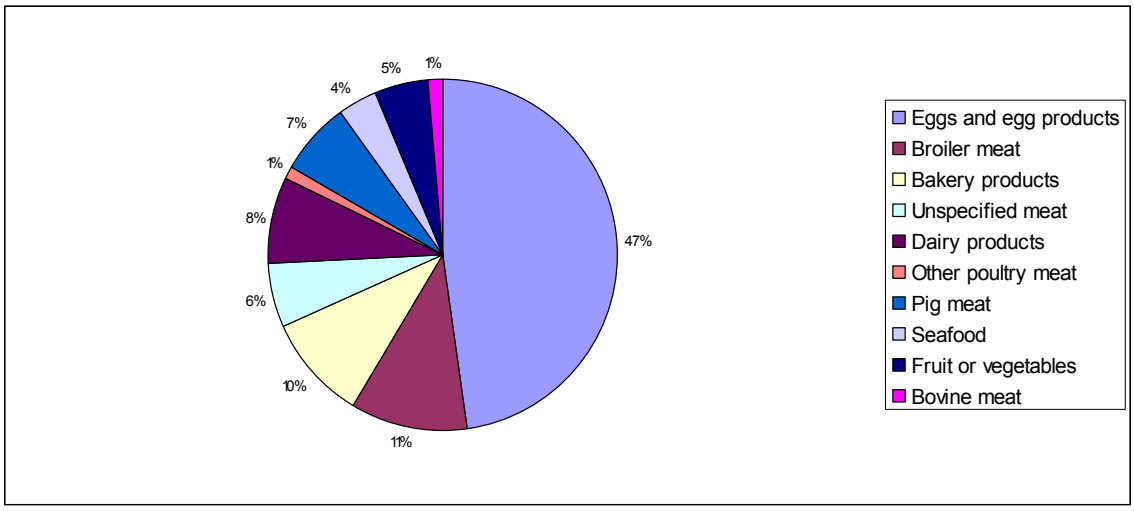
carers, including time off work. The per case cost of cases in which the patient does not visit a GP is estimated to be about £53 in current prices[2].

Sources of infection

9.7 It is not possible to estimate how many of the salmonellosis cases in the UK arise due to consumption of turkeys imported from the EU. Infection can result from consumption of a wide variety of contaminated foods, including but not limited to poultry. It can also be the result of direct contact with a wide range of animal species and contact with faecally contaminated environments.

9.8 Within the EU as a whole, figure 1 shows that turkeys (contained within the other poultry meat category) are not a major source of *Salmonella* infection.

Figure 1. Main known sources of infection in salmonellosis cases in the EU in 2005



(Source: Adapted from EFSA, 2006)[3]

Salmonella prevalence in the UK and EU

9.9 An EU-wide baseline survey of commercial turkey flocks conducted in 2006-07 found that, overall, 1.7% of turkey flocks in the EU tested positive for *S. enteriditis* and/or *S. typhimurium*, the two serovars currently targeted by EU legislation[4]. The range in values for positive testing in EU Member States for *S. enteriditis* and/or *S. typhimurium* was 0 (80% of Member States) to 8.3% (Italy)[5].

9.10 A total of 3,406 salmonellosis outbreaks occurred in the EU in 2005, accounting for nearly 64% of all food-borne outbreaks. A total of 25,760 people were affected, of

[2] based on Roberts, J A (2000) Economic aspects of food-borne outbreaks and their control. British Medical Bulletin 56(1): 133-41.
[3] European Food Safety Authority (EFSA) (2006) The Community summary report on trends and sources of zoonoses, zoonotic agents, antimicrobial resistance and food borne outbreaks in the European Union in 2005. The EFSA Journal 94: 2-288.
[4] Other Salmonella serotypes with public health significance, possibly all serotypes, may be considered only after a transitional three-year period.
[5] European Food Safety Authority (EFSA) (2008) Report of the task force on zoonoses data collection on the analysis of the baseline survey on the prevalence of Salmonella in turkey flocks, Part A. The EFSA Journal 134: 1-91.

whom 14% were hospitalised and 16 people died. Germany, Slovakia, Austria, Spain and Poland accounted for the majority of outbreaks (EFSA, 2006).

Imports from EU countries with high Salmonella prevalence

9.11 As noted in the previous section, the EU country with the highest *S. enteriditis* and/or *S. typhimurium* prevalence was Italy. Turkey imports from Italy to the UK, and the share of the total supply of turkey to the UK domestic market, are shown in the following table. Italy accounts for about 11% of total turkey imports from the EU, and contributes about 2% of the total supply of chicken to the UK domestic market in the UK. This might indicate that the potential benefit of the policy is likely to be low, on the other hand, since *Salmonella* prevalence in turkeys raised domestically is low, it is possible that these imports may exert a disproportionate influence on the incidence of human salmonellosis in the UK.

Table 1. Imports, exports and domestic production of turkey meat in the UK in 2008 (tonnes)

Category	Quantity
Turkey imports from Italy	2,407
Turkey imports from all EU	21,894
Turkey imports from non-EU	1,580
Total turkey imports to the UK (1)[6]	23,474
Total UK exports of turkey (2)	38,810
Domestic turkey production in the UK (3)[7]	135,440
Total supply of turkey to domestic market (3+1-2)	120,103
Share of Italy in total supply	11%

Other benefits

9.12 The presence of voluntary industry initiated assurance schemes that impose requirements for *Salmonella* testing is an important contributory factor to the low *Salmonella* prevalence in the UK. About 85% of fattening turkey production in the UK is subject to such assurance schemes. While these schemes aim to reassure consumers, they also raise the costs of production as participating holdings are required to undertake *Salmonella* testing based on litter, faecal or bootswab testing prior to slaughter. By requiring other EU countries to undertake testing, the policy will have the effect of imposing similar costs on other EU producers, thus potentially improving the competitiveness of turkey production in the UK. The success of the control programme in breeding flocks means that the day old poults placed on farm should be free of SE and ST. Whichever of the options from 2 to 4 that can be successfully implemented they should enable the fattening sector to be part of an integrated approach to food safety through adequate and harmonised monitoring across the EU. It should also be noted that improved farm hygiene and biosecurity to reduce *Salmonella* can be beneficial for other disease control purposes and demonstrably consistent with EU standards. A harmonised monitoring programme

[6] Source of all trade data is www.uktradeinfo.com
[7] Source: Poultry and Poultry Meat Statistics 2008 https://statistics.defra.gov.uk/esg/statnot/ppntc.pdf

across the EU will facilitate international trade by the countries where *Salmonella* is uncommon.

Conclusion

9.13 *Salmonella* is an important zoonotic pathogen that is a major cause of food-borne outbreaks. Although we would expect the proposed policy to be more likely to hold *Salmonella* prevalence in the UK at existing levels rather than reduce it further, potential benefits could arise from lowering the rate of *Salmonella* prevalence in EU countries that supply to the UK. Italy accounts for about 11% of the total supply of turkey to the UK domestic market. It is not possible to monetize the potential benefit due to lack of knowledge about the role of imports from EU countries with high *Salmonella* prevalence on human salmonellosis outbreaks in the UK.

9.14 Although the NCP is likely to lead to greater costs for producers these are relatively low compared to the economic benefits. By agreeing to meet the same criteria of the Member States – even though the prevalence of *Salmonella* is low – we agree to bear the same costs in return for the benefits to industry and consumers of standards and methods which are equal across the EU for the production of turkeys.

10. Costs

10.1 Although the costs applicable to each policy option differ, they share some of the same costs. These shared costs include the costs relating to sampling, various administrative costs relating to the new regulation and the applicable costs in the case of a positive test for *Salmonella*.

Shared costs – Sampling

10.2. The routine costs of sampling are based on the costs applicable to the operator and costs applicable to the Competent Authority (which will be recovered through fee introduction). These costs vary depending upon the differing requirements for Fattening Flocks and Breeding Flocks (rearing and adults), as per Annex 2. The description of the various costs below broadly follows the structure of the requirements within Annex 2.

FBO Sampling

Fattening flocks

10.3 On average, holdings have 2 crops per year and 4 flocks at any one time. The requirement for operators to take samples 3 weeks prior to slaughter in holdings with greater than 500 birds, unless they can demonstrate that they supply locally, therefore translates to a requirement to take 8 sets of samples on average per year. The costs of the different sampling methods per flock are described below in table 2, and are based on farm staff time at £11 per hour plus materials and postage:

Table 2. Fattening flocks FBO sampling		
Test	Cost	Proportion of overall tests
Type 1: 2 pairs of boot swabs - pooled to one sample	£6	80%
Type 2: 1 pair boot and 1 dust sample ("may pool")	£5	10%
Type 3: Hand drag swabs if <100 turkeys	£5	10%

10.4 Assuming that the current numbers of holdings that are required to collect samples remain constant (679) and that the sampling method chosen is approximately in the ratio as described above, approximately 4346 tests of type 1 (80%*£5432), 543 of type 2 and 543 of type 3 would need to be done. The cost of testing these samples to labs is assumed to be £10 per test.

10.5 Hence the cost of sampling to industry would be £32k per annum (4346*£6 + 543*£5 + 543*£5); testing would cost the industry be £54k per annum (5432*£10).

10.6 It should however be noted that 85 percent of turkey production is under assurance schemes. If we assume that all of the large producing (>10,000 birds) holdings are part of assurance schemes and hence are already carrying out similar testing procedures, only those holding between 500 and 10,000 birds will need to carry out additional testing. It is assumed that 50% of these holdings will apply for the small quantity derogation, meaning they will no longer be required to carry out FBO sampling. For the purposes of cost calculation therefore it is assumed that 37% of all 679 holdings (50% of the 497 holdings with between 500 and 10,000 birds) with greater than 500 birds will be required to carry out FBO testing above what is already performed.

10.7 The estimated per annum costs of FBO sampling for Fattening flocks to industry are therefore £31k (£86k*37%), based on the cost of administering the tests and the cost of testing the samples.

Breeding Flocks – rearing

10.8 On average holdings with Breeding flocks of rearing age are assumed to have 4 flocks at a given time and 2 crops per year. Given that each flock needs to be sampled 3 times at different stages of crop life (see Annex 2), each holding will need to take 24 samples per year for testing.

10.9 The costs of each different sampling method are described below and as before are based primarily on farmer's time:

Table 3. Breeding flocks - rearing FBO sampling		
Tests	Cost	Proportion of overall tests
Type 1: Liners from 5 baskets covering 1m² and dead on arrival poults	£6	5%
Type 2: 2 pairs of boot swabs - pooled to one sample	£6	90%
Type 3: 1 pair boot and 1 dust sample ("may pool")	£5	5%

10.10 Assuming that all holdings involved with greater than 250 turkey's at any one time are required to carry out testing (97), and that each holding will be required to carry out 24 tests per annum, this translates to a total of 2,328 tests per year for the industry. It is assumed for the purposes of the cost calculation below that the types of tests taken are taken in the proportions described above.

10.11 Hence the cost of sampling to industry would be £14k per annum (116*£6 + 2095*£6 + 116*£5); testing would cost the industry be £23k per annum (2328*£10).

10.12 Approximately 90 percent of breeder holdings are already required to carry out testing much like that required by the NCP. In these cases the sampling requirements under the NCP are not applicable costs.

10.13 Together with the costs of having samples tested at approved labs at £10 per test, this translates to a cost for industry of £3.7k per annum (£37k*10%).

Breeding flocks – adults

10.14 Each holding is assumed to have 3 flocks at any one time and 2 crops per year. The requirement of testing every 3rd week during the laying period (of March to July) and 3 weeks before slaughter translates to each flock requiring on average around 8 tests. Overall therefore each holding will on average be required to undertake 48 tests. Given that 109 holdings are assumed to have to perform these tests during the year, this means 5,323 tests would be undertaken.

10.15 Note that testing during the laying period can be done at the hatchery or holding, carried out by the CA or FBO respectively. It has been assumed for the purposes of the cost calculations that these testing responsibilities will be shared equally by the CA and FBO. Hence 2,616 test will be undertaken by the industry and CA at the holdings and hatchery respectively.

10.16 In common with the other types of flocks, the cost of sample tests at approved labs is estimated to be £10 per test. However for tests performed by the CA, testing of samples will be carried out by a VLA lab, with the associated testing cost of £15.30 per test. The costs for sample testing are would therefore be £26k per annum for FBOs and £40k for the CA. (26k = £10*2616; 40k = £15.3*2616)

10.17 The costs of each different sampling method are described below and as before are based primarily on farm staff time (for FBO sampling) or CA time (for hatchery sampling). The costs for hatchery sampling can be broken down into average time costs for an Animal Health Officer at £56 per hour (2 hours travelling and 2hrs on the visit), time costs for an Administrative Officer at £46 per hour (0.5hr) and consumables, invoicing and management costs (£61):

Table 4. Breeding flocks - adults FBO sampling

Tests	Cost	Proportion of overall tests
Type 1: Pooled faeces (300)	£12	0%
Type 2: 5 pairs boot swabs	£10	50%
Type 3: 1 pair boot swabs, dust samples taken with 900cm² swabs	£5	50%

Table 5. Breeding flocks - hatchery CA sampling		
Tests	Cost	Proportion of overall tests
Type 1: Liners from 5 baskets covering 1m²	£10	33%
Type 2: 900cm² swabs or fluff from 5 places	£6	33%
Type 3: 10g broken eggshells from 25 hatchers	£5	33%

10.18 For industry, assuming a split as described above between each testing option, this translates to a cost of £20k per year for sampling (1308*£10 + 1308*£5).

10.19 Given the small number of hatcheries in the UK (3), it is assumed that samples from multiple holdings could be tested on one visit. As the limited laying period is assumed to be from March to end July, it is estimated that each hatchery will need to be visited on one occasion during the laying period each week. This translates to 25 visits to each hatchery per annum.

10.20 Given the costs per visit as described above, equating to £309 per visit, this means that the costs from CA sampling at the hatchery to the Government will be £23k per annum (3*25*£309).

10.21 In addition to these costs to the CA from hatchery sampling however, there are costs applicable to FBOs from accompanying the CA whilst visiting the hatchery. Assuming that each visit on average takes approximately 2 hours and that farm staff time is worth £14 per hour (plus 30% for overheads as this is an administrative burden), this translates to an average cost per visit of £27 (£13.7*2) to the FBO.

10.22 As before, approximately 90 percent of breeder holdings are assumed to be already required to carry out testing much like that required by the NCP. In these cases the sampling requirements under the NCP are not applicable costs.

10.23 Therefore the overall costs to industry from sampling and testing are equal to £7k (£48k*10% plus £2k) and to the CA £63k.

Table 6. Summary of costs from sampling requirements				
		To industry	To the CA	Total per annum
Fattening flocks	Sample gathering	£ 11,530	£ -	£ 11,530
	Sample testing	£ 19,880	£ -	£ 19,880
Breeding flocks - rearing	Sample gathering	£ 1,385	£ -	£ 1,385
	Sample testing	£ 2,328	£ -	£ 2,328
Breeding flocks - adults	Sample gathering	£ 1,962	£ 23,193	£ 25,155
	Sample testing	£ 2,616	£ 40,025	£ 42,641

	Accompanying CA for sampling	£ 2,049		£ 2,049
	Total	**£ 41,751**	**£ 63,218**	**£ 104,969**

Competent Authority sampling

10.24 The Fees Regulations will be amended to include turkey costings and it is likely that government will maintain the same charging regime as with other NCPs.

10.25 The various requirements are set out in Annex 2. Sampling at a holding is assumed to take approximately 2 hours of an Animal Health Officers time (£56 per hour), as well as an average of 2 hours travel. Each visit is also assumed to take approximately 0.5 hours of an AO's time (£46 per hour) plus consumables, management and invoicing costs (£61). The costs relating to each type of sample are assumed to be equal (i.e. that each type of sample takes an equal amount of CA time to perform). Each sample visit is therefore estimated to cost £309 to the CA.

10.26 In each testing visit it is assumed that the type of test taken is random and that samples need to be tested at a cost of £15.30 per test at VLA labs.

Fattening flocks

10.27 There are 4 aspects to the sampling requirements for the CA for Fattening flocks.

a) If all flocks are tested at 10% of holdings with at least 500 fattening turkeys, this translates to 18 visits per annum under official NCP rules and 50 visits per annum under the National Survey.
b) Evidence suggests that up to 4 holdings that are expected to test positive for *Salmonella enteritidis* or *Salmonella typhimurium* in a given year. This means that 4 visits will be carried out per year for this reason.
c) Likewise the requirement to test those holdings previously testing positive, given the above, means that an extra 4 visits will be carried out per year.
d) It is assumed that the Competent Authority will additionally wish to carry out 10 additional visits per year.

10.28 Each fattening turkey holding is expected to have 4 flocks at any one time and that all flocks will be tested. This means that on average 86 visits will be carried out per year and therefore that 344 samples will be taken.

10.29 Overall the costs to the CA are therefore estimated to be £27k per annum from visits (86*309) and £5.3k for sample testing by the VLA (£15.3*344). £6.7k of this figure will however be recovered by the CA from the industry, relating to costs of visits where the FBO has tested positive or where the CA considers it necessary. These costs are discussed further in the section "Shared Costs – Cost of a positive test for Salmonella" below.

10.30 In addition to these costs to the CA, there are costs applicable to FBOs from accompanying the CA whilst visiting the holdings during the 10% of visits carried out per year at random. Assuming that each visit on average takes approximately 2

hours and that farmers time is worth £14 per hour (including 30% for overheads), this translates to an average cost per visit of £27.

Table 7. Fattening flocks CA sampling					
		CA costs	CA costs	FBO costs	
	Number of visits	Sample gathering	Sample testing (£15.30 per test)	Accompanying CA	Total costs
Requirement of all flocks being tested on 10% applicable holdings	68	£ 20,997	£ 4,155	£ 1,855	£ 27,008

10.31 Therefore the overall costs of CA sampling the industry is £1.9k: this is an administrative burden to the industry. The costs to the CA are estimated to be £25k.

Breeding Flocks – rearing

10.32 There are no requirements for the CA to carry out sampling for rearing Breeding flocks as part of the NCP.

Breeding Flocks – adults

10.33 There are 3 aspects to the sampling requirements for the CA for laying flocks.

a) If all flocks are tested at 10% of holdings with at least 250 breeding turkeys between the ages of 30 and 45 weeks, this translates to 11 of visits per annum.
b) Evidence suggests that 2 holdings may be expected to test positive for *Salmonella enteritidis* or *Salmonella typhimurium*. in a given year. This means that 2 visits will be carried out per year for this reason.
c) Likewise the requirement to test those holdings previously testing positive, given the above, means that 2 additional visits will be carried out per year.

10.34 Each breeding turkey holding is expected to have 3 flocks at any one time and that all flocks will be tested. This means that on average 15 visits will be carried out per year and therefore 45 samples will be taken.

10.35 Overall the costs to the CA are therefore assumed to be £4.6k per annum from visits (15*£309) and £700 for sample testing by the VLA (45*£15.3). £1.8k of this figure will however be recovered by the CA from the industry, relating to costs of visits where the FBO has tested positive or where the CA considers it necessary. These costs are discussed further in the section “Shared Costs – Cost of a positive test for Salmonella” below.

10.36 In addition to these costs to the CA, there are additional costs applicable to FBOs from accompanying the CA in their sampling. Assuming that each visit on average takes approximately 2 hours and that farmers time is £14, this translates to an average cost per visit of £28.

Table 8. Breeding flocks official sampling					
		CA Costs		FBO costs	
Visits due to	Number of visits	Sample gathering	Sample testing (£15.30 per test)	Accompanying CA	Total costs
Requirement of all flocks being tested on 10% applicable holdings	11	£ 3,402	£ 505	£ 301	£4,207

10.37 Therefore the overall costs of CA sampling to the CA are £3.7k and to industry is £300.

Shared costs - Administrative costs

10.38 There are two main types of administrative costs that are shared by each of the options, all falling on the industry. In these cases the costs refer to the farm manager time of fulfilling these obligations, plus 30% overheads.

a) Costs of record keeping

- A requirement of the legislation is that holdings keep a record of the testing results. This is assumed to take 6 hours at a holding per year on average.

b) Costs of reading the legislation

- It is assumed that familiarisation will take 2 hours per annum.

10.39 Note that not all holdings will encounter additional costs from record keeping. For those holdings currently part of assurance schemes (overall 596 holdings) there is no cost assumed from record keeping.

Table 9. Additional Administrative Costs			
	Number of holdings	Per holding affected	Industry total
Record keeping (not part of assurance scheme)	270	£ 82	£ 22,126
Familiarisation with the legislation	866	£ 27	£ 23,664
Total for holdings outside of assurance scheme		£ 109	£ 45,790

10.40 Taken together these costs equate to an additional administrative burden on the industry of £46k per annum (£109 per holding fully implementing the legislation and not part of an assurance scheme).

Shared costs - Costs of a positive test for Salmonella

10.41 As mentioned above, the costs of follow up visits from the CA to re-sample FBO flocks in the case of a positive test will be recovered from FBOs. In addition, the costs of testing samples will also be recovered.

10.42 For fattening holdings, it is assumed that a maximum of 8 such visits will occur per annum, based on the need to re-test positive samples this year and the previous year. Given a cost per visit for the CA of £309 per visit (based on sample visit costs above) and sample testing costs of £61 (4*£15.30), the costs to the fattening industry is estimated to be £3.5k per annum (8*£309 + 8*£61).

10.43 Likewise, for holdings with adult breeding flocks, it is assumed that a maximum of 4 such visits will occur per annum, based on the need to re-test positive samples this year and the previous year. Given a cost per visit for the CA of £309 per visit (based on sample visit costs above) and sample testing costs of £46 (3*£15.30), the costs to the breeding industry is estimated to be £1.7k per annum (4*£309 + 4*£46).

10.44 In addition to follow up visits from the CA to re-test FBO samples, there are further costs related to positive tests including clean up and disinfection. Assuming that a maximum of 4 fattening holdings and 2 Breeding holdings will test positive for *Salmonella enteritidis* or *Salmonella typhimurium* in a year as above and that the costs of clean up are £550, the additional costs to industry are estimated to be £3.3k.

10.45 However, if we assume that only one of the positive tests at Fattening holdings and only one of the positive tests at Breeding holdings / hatcheries occurs in farms not part of an assurance scheme, the costs of clean up are significantly less. For those farms that are part of assurance schemes, we can assume that the majority of the clean up and disinfection procedures are already completed following a positive test. The cost to members is assumed to be £50.

10.46 The overall costs therefore of positive tests per annum to the industry are therefore expected to be £6.4k (£3.5k + £1.7k + £50*4 + £550*2).

Table 10. Costs of positive FBO tests for Salmonella		
	Fattening holdings	Adult/Laying Breeding holdings
Number of positive tests per annum	4	2
Recovered costs to the CA from sample visit	£ 309	£ 309
Recovered costs to CA from VLA testing	£ 61	£ 46
CA charges sum	£ 2,964	£ 1,421
Cost of positive tests (assurance)	£ 50	£ 50
Cost of positive tests (non-assurance)	£ 1,650	£ 50
Cost of positive charges sum	£ 1,700	£ 100
Total	£ 4,664	£ 1,521

11. Cost and benefits of management options

11.1 There are three main aspects to the management of the NCP for (not clear what this mean) which the options discussed vary:

- Auditing the FBO sampling
- Checking other aspects of holdings management including checking records
- Developing and maintaining an overall management system

11.2 Option 2 – Implement the NCP on a voluntary basis only

11.2.1 The costs of the management of the NCP programme run under a voluntary industry scheme would fall primarily on those firms willing to participate on a voluntary basis. It is assumed however that these auditing checks on sampling and other aspects of the management on individual holdings for these firms will already be carried out as part of their normal processes.

11.2.2 It is therefore assumed that there would be no costs to either the industry or Government from this option.

11.2.3 Without the benefit of a coherent management system however, it is unlikely that the UK would be able to ensure that the controls and testing requirements of the legislation would be carried out effectively; official sampling could not be managed effectively. Without such assurance, the benefits of the NCP as previously stated may not fully be realised.

11.3 Option 3 – For management of the NCP to be under the direct control of Government

11.3.1 Auditing the sampling procedures and other farm management aspects of all applicable holdings would be costly to the Government. AH have estimated that annual visits of this nature would take approximately 4 hours (including 2 hours travel time). There would also be administration costs based on approximately 0.5 hours of an AO's time plus £61 per visit for other costs. As a number of holdings will be visited for sampling purposes, the size of these costs will be curtailed somewhat. AH have indicated that for these holdings there would be no additional time costs for auditing. As 82 holdings are expected to be sampled, there are expected to be an additional 806 specific audit visits that would have to be made under this option. Therefore for all 888 holdings and hatcheries (including potential visits to both the laying and rearing parts of those holdings with both types of flocks), overall Government costs will be £249k per annum (£309*806). If these costs were recovered from industry, this would cost each holding £281 on average.

11.3.2 In common with CA sampling costs previously discussed, additional audit inspections by the CA would also incur a cost to industry in terms of farm manager time to facilitate the inspection. Based on 2 hours for an audit visit at £14 per hour

(farm manager time plus 30% overheads), the cost to industry is expected to be £22k per annum (£27*806).

11.3.3 In addition to auditing of holdings and hatcheries, the Government would have to introduce a management system in order to properly manage the enforcement of the Directive. Based on estimates provided by AH, start up costs, including staff training, policy work and IT development costs would be negligible, as these costs have already been paid for as part of the NCP. The ongoing costs, including administration costs, are estimated to be £58k per annum, based on 1.5 hour of AO time per holding audited (£46*1.5*806).

11.3.4 Overall therefore the costs to Government would be £317k on an annual basis. The costs to industry would be £22k per annum.

11.4 Option 4 – For responsibilities of the management and auditing of the NCP to be shared by Government and industry

11.4.1 Under this option the Government would retain fully responsibility for the monitoring and controls of the NCP, but would have the flexibility to grant companies with consistently good practice and levels of biosecurity a level of independence.

11.4.2 In practice this would mean that some auditing of holdings could be done by companies themselves, after an initial period. For the purposes of cost calculation it has been assumed that those holdings granted limited independence would effectively avoid the yearly audit as described under option 2. They would however be required to submit evidence to Government, for example sharing the results of test results with Government. It has been assumed that such a level of information sharing would cost the holding approximately one hour of a farm manager's time (at £14 per hour including 30% overheads) per annum.

11.4.3 The level of independence that the CA might be willing to grant (i.e. the number of holdings granted independence) is difficult to assess. For the purpose of cost calculation, it has been assumed that 20% of holdings would be permitted to carry out their own process audits.

11.4.4 Therefore the cost of auditing to Government would effectively decline by 20%, although it should be acknowledged that this saving would only be implemented in the 2nd year of the programme.

11.4.5 Likewise the cost to industry overall for 20% of holdings not having to accompany inspectors will result in a reduction in admin burden for this reason by the same percentage in the 2nd year. Although this will be offset to an extent by the requirement to share information, savings will be greater should the Government wish to implement cost recovery by the introduction of fees.

11.4.6 In terms of the costs of setting up and managing a management system, these costs will be the same for Government as considered in option 2.

11.4.7 Overall therefore the costs to Government would be the same as Option 3 in year 1 (£317k) and £267k on an annual basis thereafter (80%*£249k + £67k). The costs to

industry would be the same as Option 3 in year 1 (£22k) and £20k per annum thereafter (£22k*.8 + £14*20%*888).

11.5 Option 5 – For turkey companies to establish their own company control programme as part of the NCP

11.5.1 Option 5 potentially devolves a large proportion of the responsibility for management to the NCP to industry, represented by an Independent Control Body (ICB) set up to service the industry. Aside from option 1, this option is the most cost effective for Government.

11.5.2 Once established, an ICB could carry out audits of members in much the same way that Government would carry out audits, either in terms of annual inspection visits to all holdings (as with option 2) or with visits to some holdings and information sharing requirements to others (as with option 3). The role for the CA would be to monitor the ICB to ensure enforcement was carried out to an acceptable standard, which for the purposes of cost calculations would mean spot checks. As official sampling is already carried out on a random basis, it is envisaged that these checks could be carried out at the same time, with no additional time requirements.

11.5.3 Random sampling is however not performed on holdings with breeding flocks for rearing. It has been assumed that 10% of these holdings would be spot checked also and that the cost per visit is the same for both industry and the CA as sampling visits at adult breeding flock holdings. Given 10 additional visits therefore, the additional costs to the industry are estimated to be £270 per annum (£27*10) and to the CA £3k per annum (10*£309).

11.5.4 The cost of establishing an ICB is difficult to assess, but all costs would be passed on the members of the scheme through membership fees. As large proportions of fattener and breeder holdings are already members of assurance schemes, it is likely that such an ICB could be developed through these schemes. For the purposes of cost calculations it is assumed that many of the management systems are already in place that would have otherwise have had to have been set up by the Government. There will however, have to be some change based on the additional requirements of managing the audits and sample records and hence it is assumed that the costs to the industry will be approximately half that of those that would have fallen on the Government. For the industry, assuming 95% of fattening holdings and breeding holdings would join the ICB, this will therefore be £164k per annum. This is based on £129k costs for auditing (including time to accompany ICB auditors) and £35k for ICB management.
[£129k = £270 + 806*0.95*0.5*(£249k + £22k)]
(£35k = 0.5*806*0.95*£84)

11.5.5 The Government would still have a role in the monitoring of those holdings that are not members of the ICB (approximately 44 holdings). Each of these holdings will be audited on an annual basis as under option 2 and a management system will also need to be developed. Given the reduced numbers of holdings that such a system would involve the costs management are greatly reduced. Based on AH estimates, it is assumed that such a system and auditing would cost the Government £19k per annum, including £3k for additional spot checking as above (0.05*£249k + £3k). As before, there is also a cost relating to the accompaniment of the CA for those

holdings not part of the ICB during audit visits. This cost is estimated to be £1.2k per annum.

11.5.6 Overall therefore the costs of Option 5 would be £167k per annum to industry and £19k per annum to the Government.

12. Issues of equity and fairness

12.1 The NCP does not introduce any questions of equity or fairness.

13. Declaration and publication

13.1 I have read the Regulatory Impact Assessment and I am satisfied that the benefits justify the costs.

Signed by the Responsible Minister ……

Date ……

Contact

Any queries about this RIA should be addressed to:

John Tait
Animal Health and Welfare Division (Rm358)
Animal Disease Preparedness and Control branch
Scottish Government
Rural Directorate
Pentland House, Robbs Loan, Edinburgh, EH14 1TY

Specific Impact Tests: Checklist

Ensure that the results of any tests that impact on the cost-benefit analysis are contained within the main evidence base; other results may be annexed.

Type of testing undertaken	***Results in Evidence Base?***	***Results annexed?***
Competition Assessment	No	Yes
Small Firms Impact Test	No	Yes
Legal Aid	No	Yes
Sustainable Development	No	Yes
Carbon Assessment	No	Yes
Other Environment	No	Yes
Health Impact Assessment	No	Yes
Race Equality	No	Yes
Disability Equality	No	Yes
Gender Equality	No	Yes
Human Rights	No	Yes
Rural Proofing	No	Yes

Annex 1 - Outcome of Impact Tests not referred to in the Evidence Base

Competition assessment

All eligible turkey producers in the UK will be subject to the requirements of the NCP. It is not felt that these requirements will reduce the number or range of suppliers of breeding and fattening turkeys nor limit the ability to choose the price, range, quality and location of their products. The measures will not impose additional costs on new entrants compared to incumbent firms. The industry is not characterised by rapid technological change.

All EU Member States will need to implement the legislation so there will be a more level playing field for EU competition.

Small Firms Impact Test

The NCP will not apply to turkey fattening flocks with up to 500 birds and all hatcheries with a capacity for up to 1,000 eggs. Flocks between 500 and 10,000 which are able to demonstrate that they supply locally will be subject to official control sampling under domestic arrangements. Prevalence results of these flocks will be reviewed at the end of the first year of implementation to assess whether these flocks need further monitoring to control prevalence levels.

This will help to reduce the burden on small business, and, if prevalence amongst these flocks is not within the target after the first year provides them with an additional year to ensure that they put in practice measures to reduce their *Salmonella* levels.

Legal Aid

The draft Regulations create new civil penalties for producers who fail to comply with the monitoring and controls required by the National Control Programme for turkey flocks. The penalties are monetary. A producer who refused to pay a penalty would risk prosecution. A producer who faced prosecution in this circumstance would not be eligible for legal aid.

Sustainable Development

The Regulations are in accordance with the shared UK principles of sustainable development.

Carbon Impact Assessment

The NCP will have no significant effect on carbon emissions, as in the main the nature and scale of conventional turkey production and marketing is likely to remain the same.

Other Environmental Issues

As the nature of conventional turkey production and marketing is likely to remain the same, the NCP has no implications in relation to climate change, waste management, landscapes, water and floods, habitat and wildlife or noise pollution.

Health Impact Assessment

The NCP may have an impact on health by increased monitoring of *Salmonella* levels within the Turkey industry, thus potentially leading to a reduction in cases of *Salmonella*.

Race /Disability/Gender

The NCP does not introduce any questions of equity or fairness.

Human Rights

The NCP is consistent with the Human Rights Act 1998.

Rural Proofing

Although the majority of producers and many suppliers are based in rural areas the NCP will not have a negative effect on the rural community.

Annex 2 – Sampling of fattening and breeding flocks

Reg. 584/2008	Fattening flocks	Breeding flocks – rearing	Breeding flocks - adults
Target		None	1% by 2012
FBO sampling	3 weeks before slaughter (Results valid for 6 weeks)	Day old + 4 weeks of age + 2 weeks before moving to laying unit	Every 3rd week during laying period in holdings >50 **(hatchery or holding)** + 3 weeks before slaughter
Competent Authority sampling	Once a year all flocks on 10 % holdings with at least 500 fattening turkeys + All flocks on the holding when one flock tested positive for *S. enteritidis* or *S. typhimurium* in samples taken by FBO, unless the meat of the turkeys in the flocks is destined for industrial heat treatment or another treatment to eliminate *Salmonella* + All flocks on the holding when one flock tested + for *S. enteritidis* or *S. typhimurium* during the previous round of samples taken by the FBO + When the Competent Authority considers it necessary	None	Once a year all flocks on 10% holdings with at least 250 adult breeding turkeys between 30 and 45 weeks of age including: • all holdings with elite, great grandparent and grandparent breeding stock; **(hatchery or holding)** + All holdings where *S. enteritidis* or *S. typhimurium* was detected during the previous 12 months + All flocks on holdings in case of trace-back of *S. enteritidis* or *S. typhimurium* from samples taken at hatchery by FBO/official controls
Sample (For breeding flocks hatchery under rearing / holding under adults)	• 2 pairs boot swabs – pooled to 1 sample OR • 1 pair boot and 1 dust sample (“may” pool) OR • hand drag swabs if <100 turkeys	• visibly soiled liners from 5 baskets covering 1 m2 • 900cm2 swabs or fluff from 5 places • 10g. broken eggshells from 25 hatchers	• Pooled faeces / naturally mixed droppings if caged OR • 5 pairs boot swabs OR • 1 pair boot swabs and dust samples and 900cm2 swabs
Dispatch	Official samples to VLA labs FBO samples to approved labs	Official samples to VLA labs FBO samples to approved labs	Official samples to VLA labs FBO samples to approved labs

Annex 3 – Breakdown of summary costs

Shared costs

BO sampling		Fattening holdings	Breeders - rearing	Breeders - laying*	Sum
Industry	Sampling	£11,530	£ 1,385	£ 1,962	£14,878
	Sample testing	£19,880	£ 2,328	£ 2,616	£24,824
	Accompanying CA	N/A	N/A	£ 2,049	£2,049
	Sum - to Industry	£ 31,410	£3,713	£6,627	£41,751
Government	Sampling	N/A	N/A	£ 23,193	£23,193
	Sample testing	N/A	N/A	£ 40,025	£40,025
	Sum - to Government	N/A	N/A	£ 63,218	£63,218
Total		£31,410	£3,713	£69,845	£104,969

Official sampling		Fattening holdings	Breeders - rearing	Breeders - laying*	Sum
Industry	Accompanying CA	£ 1,855	N/A	£ 301	£ 2,156
Government	Sampling	£ 20,997	N/A	£ 3,402	£ 24,399
	Sample testing	£ 4,155	N/A	£ 168	£ 4,324
	Sum - to Government	£ 25,153	N/A	£ 3,570	£ 28,723
Total		£ 27,008	£ -	£ 3,871	£ 30,879

Cost of positive tests		Fattening holdings	Breeders - rearing	Breeders - laying*	Sum
Industry	Cleanup costs	£ 867	N/A	£ 433	£ 1,300
	CA charges	£ 3,839	N/A	£ 1,280	£ 5,118
	Sum	£ 4,706	£ -	£ 1,713	£ 6,418

Additional administrative burden		Fattening holdings	Breeders - rearing	Breeders - laying*	Sum
Industry	Record keeping	£ 20,372	£ 709	£ 1,045	£ 22,126
	Familiarisation with legislation	£ 18,554	£ 2,364	£ 2,746	£ 23,664
	Sum	£ 38,926	£ 3,073	£ 3,791	£ 45,790

Option specific costs

Option 3

Audit of applicable premises		Fattening holdings	Breeders - rearing	Breeders - laying*	Sum
Industry	Accompanying CA	£ 16,699	£ 2,651	£ 2,678	£ 22,027
Government	Audit AHO time costs	£ 137,473	£ 21,821	£ 22,046	£ 181,340
	AO time and consumables costs	£ 51,504	£ 8,175	£ 8,259	£ 67,938
	Sum - to Government	£	£	£	£

		188,977	29,996	30,306	249,278
Management costs					
Government	AO time and consumables costs	£ 51,125	£ 8,115	£ 8,199	£ 67,438
Total		£ 256,800	£ 40,762	£ 41,182	£ 338,744

Option 4

Audit of applicable premises		**Fattening holdings**	**Breeders - rearing**	**Breeders - laying***	**Sum**
Industry	Accompanying CA	£ 13,359	£ 2,120	£ 2,142	£ 17,622
	Information sharing	£ 1,855	£ 265	£ 306	£ 2,427
	Sum - to Industry	£ 15,215	£ 2,386	£ 2,448	£ 20,049
Government	Audit AHO time costs	£ 109,978	£ 17,457	£ 17,637	£ 145,072
	AO time and consumables costs	£ 41,203	£ 6,540	£ 6,608	£ 54,350
	Sum - to Government	£ 151,181	£ 23,997	£ 24,244	£ 199,423
Management costs					
Government	AO time and consumables costs	£ 51,125	£ 8,115	£ 8,199	£ 67,438
Total		£ 217,520	£ 34,498	£ 34,892	£ 286,910

Option 5

Audit of applicable premises		**Fattening holdings**	**Breeders - rearing**	**Breeders - laying***	**Sum**
Industry	Accompanying CA - non members of ICA	£ 928	£ 133	£ 153	£ 1,213
	Accompanying CA - members ICA (spot check)	£ -	£ 265	£ -	£ 265
	Own audit	£ 97,696	£ 15,507	£ 15,667	£ 128,870
	Sum - to Industry	£ 98,624	£ 15,905	£ 15,820	£ 130,349
Government	Audit AHO costs - non ICA	£ 6,874	£ 1,091	£ 1,102	£ 9,067
	AO time and consumables costs - non-ICA	£ 2,575	£ 409	£ 413	£ 3,397
	Audit AHO costs - ICA members (spot check)	£ -	£ 2,182	£ -	£ 2,182
	AO time and consumables costs - ICA members (spot check)	£ -	£ 818	£ -	£ 818
	Sum - to Government	£ 9,449	£ 4,499	£ 1,515	£ 15,464
Management costs					
Industry	ICB management	£ 26,982	£ 3,855	£ 4,451	£ 35,288
Government	AO time and consumables costs	£ 2,840	£ 406	£ 468	£ 3,715
Total		£ 137,895	£ 24,665	£ 22,255	£ 184,814