

Summary: Intervention & Options

Department /Agency: Defra	Title: Impact Assessment of the Transmissible Spongiform Encephalopathies (England) Regulations 2008	
Stage: OPTIONS	Version: 1A	Date: May 2008
Related Publications:		

Available to view or download at:

<http://www.>

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

A consultation exercise is currently underway on the Government's proposals for the Transmissible Spongiform Encephalopathies Regulations 2008. In addition, following a recent proposal by the European Commission, the Government now proposes amendments to the Compulsory Scrapie Flocks Scheme (CSFS) which will provide scrapie controls in the UK that are flexible, meet the degree of risk involved, and place UK sheep and goat farmers on the same footing as their competitors in Member States.

What are the policy objectives and the intended effects?

To maintain protection for human and animal health while reducing scrapie controls and administrative costs, and improving market conditions for sheep and goat producers and for exporters, by amending domestic legislation in accordance with changes in EU legislation while seeking to minimise or reduce any burdens to these sections of the livestock and feedstuff industries.

What policy options have been considered? Please justify any preferred option.

- Continue current approach- using existing regulations (Do nothing).
- Apply the amended EU controls- change the existing regulations

(This is the preferred option as it would enable application and enforcement of the more flexible and cost effective EU controls.)

When will the policy be reviewed to establish the actual costs and benefits and the achievement of the desired effects? January 2010

Ministerial Sign-off For consultation stage Impact Assessments:

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

Signed by the responsible Minister:

.....Date:

Summary: Analysis & Evidence

Policy Option:	Description:
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COSTS	ANNUAL COSTS	Description and scale of key monetised costs by 'main affected groups' Average Annual cost to government : -£385,000 (a cost saving) Average Annual cost to farmers : -£5000 (a cost saving)			
	One-off (Transition)		Yrs		
	£ 0		8		
	Average Annual Cost (excluding one-off)				
	£ -390,000	Total Cost (PV)	£ -2.8m (cost saving)		
Other key non-monetised costs by 'main affected groups' None					

BENEFITS	ANNUAL BENEFITS	Description and scale of key monetised benefits by 'main affected groups': These changes to the TSE regulations will not impact on the benefits of the overall regulations in terms of disease control. The benefits are the same as those under the baseline option. The benefits of these changes are in terms of reduced costs as explained in the costs section above which then translate into an overall NPV benefit (see below).			
	One-off		Yrs		
	£ 0		8		
	Average Annual Benefit (excluding one-off)				
	£ 0	Total Benefit (PV)	£ 0		
Other key non-monetised benefits by 'main affected groups' The benefits are the same as those under the baseline option.					

Key Assumptions/Sensitivities/Risks There will be no costs to the public from reduced controls and no revised risk to human or animal health. The assumption of the number of flocks subject to controls each year.

Price Base Year 08	Time Period Years 8	Net Benefit Range (NPV) £ 2.8m	NET BENEFIT (NPV Best estimate) £ 2.8m
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What is the geographic coverage of the policy/option?		England		
On what date will the policy be implemented?		1 September 2008		
Which organisation(s) will enforce the policy?		Animal Health/LAs		
What is the total annual cost of enforcement for these organisations?		£ No Increase		
Does enforcement comply with Hampton principles?		Yes		
Will implementation go beyond minimum EU requirements?		No		
What is the value of the proposed offsetting measure per year?		£ N/A		
What is the value of changes in greenhouse gas emissions?		£ N/A		
Will the proposal have a significant impact on competition?		No		
Annual cost (£-£) per organisation (excluding one-off)	Micro	Small	Medium	Large
	N/A	N/A	N/A	N/A
Are any of these organisations exempt?	No	No	N/A	N/A

Impact on Admin Burdens Baseline (2005 Prices)		(Increase - Decrease)	
Increase of	£ Nil	Decrease of	£ Nil
		Net Impact	£ Nil

Key: Annual costs and benefits: Constant Prices (Net) Present Value

Evidence Base (for summary sheets)

[Use this space (with a recommended maximum of 30 pages) to set out the evidence, analysis and detailed narrative from which you have generated your policy options or proposal. Ensure that the information is organised in such a way as to explain clearly the summary information on the preceding pages of this form.]

1. Introduction and legislative background

1.1 Transmissible Spongiform Encephalopathies (TSEs) are fatal brain diseases suffered by a variety of species, the most common of which are BSE (Bovine Spongiform Encephalopathy) in cattle, scrapie in sheep and goats, CWD (Chronic Wasting Disease) in deer and FSE (Feline Spongiform Encephalopathy) in cats. Exposure to BSE through the consumption of infected meat products is also thought to be the most likely cause of vCJD (variant Creutzfeldt-Jakob Disease) in humans. To date there have been 163 deaths from probable vCJD in the United Kingdom (UK) as at 3 March 2008.

1.2. Rules for the prevention, control and eradication of TSEs are regulated under EU law by Regulation (EC) No 999/2001 of the European Parliament and the Council, as amended from time to time (hereafter known as the Community TSE Regulations), and under domestic law by the Transmissible Spongiform Encephalopathies (No. 2) Regulations 2006 (hereafter known as the 2006 Regulations).

1.3. A consultation on the Government's proposals for the Transmissible Spongiform Encephalopathies (England) Regulations 2008 was launched on 3 April 2008. The deadline for comments is 26 June 2008.

1.4 The European Commission has now achieved a qualified majority for a proposal to reinstate hitherto suspended provisions with regard to the treatment of flocks with classical scrapie. These powers are expected to come into effect in August 2008.

1.5 This proposal, which would cause substantial changes to Schedule 3 of the 2006 Regulations, is the subject of a supplementary consultation, running alongside that launched on 3 April. A detailed consideration is given at Sections 2-7 below.

2. Schedule 3: Detailed Consideration

Background

2.1. Sheep and goat farmers are small businesses. In England in 2007, there were over 47,700 holdings with 15.436 million sheep. The value of lamb and mutton produced in 2007 was £700 million. By comparison the goat industry in England is small, in 2007 there were 6,371 holdings with just over 80,000 goats.

2.2. Scrapie, a Transmissible Spongiform Encephalopathy (TSE), is a fatal disease of sheep and goats. It is a notifiable disease and can be transmitted within and between flocks and/or herds.

2.3. There is a theoretical risk that Bovine Spongiform Encephalopathy (BSE) might have been transmitted to sheep and if so it might be masked by scrapie. So flocks affected by scrapie could represent a reservoir of infection and potential public health risk.

2.4. As a result EU controls were introduced in 2003. These require that sheep flocks with a confirmed case of scrapie are subject to either a whole flock cull or a genotype and selective cull, under which all the sheep in the flock are genotyped by taking a blood sample. Those sheep with genotypes that scientific research had shown to be more susceptible to infection by the form of scrapie now known as classical scrapie are culled. Strict controls then apply to movements on and off the farm. Depending on its genotype, which determines the resistance to scrapie, a sheep may be retained or sold for breeding, may be required to be sold for slaughter or must be collected by Defra contractors and killed and destroyed as Specified Risk Material

(SRM). Current scientific knowledge suggests that goats are uniformly susceptible to scrapie regardless of their genotype. Therefore, the only option allowed in the EU Regulation introduced in 2003 for goat herds with a confirmed case of scrapie is to cull the whole herd.

3. The Compulsory Scrapie Flocks Scheme

3.1. The EU controls are applied via the Compulsory Scrapie Flocks Scheme (CSFS) throughout Great Britain, and the TSE (No 2) Regulations 2006 provide enforcement powers in England (Similar legislation applies in Scotland and Wales).

3.2. There are currently (May 2008) 135 farms (263 flocks plus 3 goat herds) under the controls in Great Britain (GB) (of which 49 holdings (82 flocks plus 3 goat herds) are in England). In 2007 Defra spent around £1.3m in Great Britain as a whole in applying the controls, mainly for killing and destroying animals and compensating for them. The cost of applying the genotype and selective cull option to each flock is estimated at £55K, including compensating farmers for the animals with scrapie susceptible genotypes that have to be destroyed.

3.3. The scheme is administered by Animal Health with the Veterinary Laboratories Agency (VLA) undertaking TSE testing aspects. Local Authorities are responsible for monitoring movements from CSFS farms and for enforcement under the TSE regulations.

4. Changes in EU controls

4.1. The EU controls were introduced at a time when it was not possible to determine if a TSE was scrapie or BSE (theoretically scrapie could be masking BSE). However new diagnostic tests mean that this is now possible. The new diagnostic tests also confirmed the presence of a previously undetected form of scrapie, termed **atypical** scrapie to differentiate it from the form of scrapie known to have been in the national flock and herd for more than 200 years and now referred to as **classical** scrapie. Atypical scrapie has been found in sheep with genotypes that are resistant to classical scrapie as well as sheep with genotypes susceptible to classical scrapie. As a result, the EU Commission proposed a review and relaxation of the EU controls in relation to animals from flocks where BSE is excluded and to provide a suitable approach for dealing with atypical scrapie. Changes to the controls were agreed in April 2007. Amended EU Regulation 999/2001 applied from 17 July 2007. Certain provisions with regard to classical scrapie were suspended on 28 September 2007 by order of the Court of First Instance of the European Communities. On 30 April 2008 the European Commission achieved a qualified majority for a proposal to reinstate these provisions. The proposal should take effect in EU law in August 2008.

4.2. The changes to the classical scrapie controls involve:

1. A monitored flock/herd option allowing flocks and herds with classical scrapie to be monitored for a 2 year period, as an alternative to whole flock or herd cull or, in the case of sheep only, a genotype and selective cull. This option involves TSE testing of over 18 month of age fallen stock and animals over 18 months of age sent to slaughter in the UK for human consumption.

2. Allowing animals to go to slaughter, instead of having to be killed and destroyed with compensation paid, subject to TSE testing of those animals over 18 month of age.

3. Reducing the period of restrictions in flocks where genotype and selective cull action has been taken to 2 years (from 3 years).

5. Policy objective and effect

5.1. The UK's aim is to have scrapie controls that are flexible and reflect the degree of risk involved and we have been pressing for some time for changes to the EU controls to reflect this. The revised EU controls meet this objective to a large extent.

5.2. The effect of applying these controls is to help eradicate scrapie in affected flocks/herds in a way that is cost effective with regard to the risk of scrapie in a particular flock/herd.

6. Businesses affected/assumptions

6.1. The business sectors affected are sheep and goat farms with suspected cases of classical scrapie. The following table shows the number of flocks and holdings coming under CSFS controls since July 2004 in England:

Year	Flocks	Holdings
*July- Dec.2004	29	18
2005	75	44
2006	49	32

*Month CSFS launched

For a number of reasons, including a decrease in the surveillance at abattoir and of fallen stock required by EU Regulation but mostly as a result of the work of the National Scrapie Plan since its inception in 2001. There has been a reduction in the number of confirmed cases of classical since 2005. We estimate that the decrease in the number of cases of classical scrapie over the coming years will continue.

6.2. As a result, we have assumed that there will be around 10 farms (16 flocks) with new classical scrapie cases in year 1 in England, declining to 6 farms (10 flocks) a year by year 8.

6.3. There is roughly a 50/50 split between Breeding Flocks whose owners sell breeding animals to other farmers and Commercial Flocks whose owners sell lambs for human consumption. The Regulation allows animals of resistant genotype to be sold for breeding. However as the monitored flock option does not require flocks to be genotyped, animals from these flocks cannot be sold for breeding. Therefore, the genotype and cull option will be used for breeding flocks and the monitoring option used for commercial flocks. Accordingly, we have assumed that 8 flocks will be subject to the genotyped and cull option and 8 flocks subject to the monitoring option in the first year and the even split to continue for the period covered by the Impact Assessment.

6.4. Based on the average number of animals in CSFS flocks to date, we have assumed that an average size flock is 500 adult animals, plus up to 700 lambs depending on the time of year. From information provided by sheep industry groups, we know that annual replacement rates (regardless of whether the flock is producing lambs for slaughter or breeding animals for use or sale) are somewhere between 20 and 30%. Therefore we have based our calculations on an annual adult replacement rate per flock of 25%. Depending on the nature and geographic location of a flock, the average adult mortality rate can vary between 2 and 7% per year. However the most common mortality rate is around the 3% mark. Therefore, we have assumed an overall average adult mortality rate of 3% per year.

7. Options

7.1. The proposed options are:

7.2 Option 1

Apply current EU controls for sheep flocks with a confirmed case of classical scrapie

This would not meet the objective of applying flexible controls that are cost effective in dealing with scrapie. It would also be inconsistent with the latest EU regulation and would put our farmers with scrapie-affected flocks at a disadvantage compared with those in other EU Member States.

Costs: Economic

Costs to Government

The current EU controls require either whole flock cull or genotype and selective cull where classical scrapie is confirmed in a sheep flock.

1. Genotyping and selective cull of sheep flocks with classical scrapie

For the sheep flocks that are affected with classical scrapie, genotype and selective cull action can be applied. As explained at 6.1 & 6.2 above, we expect that there would be 16 flocks with a case of classical scrapie in the first year (2008), declining to 10 flocks by year eight. It costs an average of £55,000 per flock to apply genotype and selective cull action including compensation to farmers for animals with scrapie susceptible genotypes that have to be destroyed.

The average annual cost is estimated to be £715,000 (*Annex 1 Table 2*)

The estimated net present cost (over 8 years) to the Government is £5.2 million.

Costs to farmer:

Genotype and selective cull of sheep flocks with classical scrapie

16 flocks under Genotype and selective cull action

1. Farmer's time gathering animals, dealing with NSPAC paperwork -2 days, £260 per flock

2. Farmer's time sourcing replacement animals for approximately 50% of adult flock that either must be sold for slaughter or killed and destroyed as SRM after genotype and selective cull action. They will spend the time sourcing replacements. This is a labour intensive action of one working week on average: £650 per flock

Total cost of 1. + 2. in year 1 is £910 x 16 = £14,560

Average annual cost: £12,000 (*Annex 1 Table 1*)

The estimated net present cost (over 8 years) to Farmers is £85,000.

Total net present cost (over 8 years) of Option 1 are therefore estimated at £5.2m

Costs: environmental

Classical scrapie:

16 flocks with 500 adults (20 Rams and 480 ewes) and possibly 700 lambs per flock will be genotyped and susceptible animals culled and destroyed.

Assume 35% of adult flock would have been destroyed because of unsuitable genotypes under genotype and cull action = 7 Rams and 161 ewes per flock

Assume 50% of the 16 flocks which come under scrapie controls involve lambs that are taken and destroyed without genotyping.

(assume weights of 60-70kg for a ewe, 120kg for ram. and 30-40kg for a lamb and 8,631 animals killed and destroyed).

Rams (110 -130kg per animal)x 7 rams x 16 flocks =112 Rams

Weight incinerated = 12,320 -14,560kg

Ewes (60-85 kg per animal) 161 ewes x 16 flocks = 2,576 ewes

Weight incinerated = 154,560 – 218,960kg

Lambs (25-35kg per animal) 700 animals x 8 flocks = 5,600 lambs

Weight incinerated = 140,000 – 196,000kg

Total 8,288 sheep (maximum weight) = **306 – 429 tonnes**

The total weight of sheep that would be incinerated under Option 1 is therefore between **306 and 429 tonnes.**

Benefits: Government

This option will reduce sources of TSE infection from known scrapie-affected flocks and prevent transmission to other flocks thus reducing the level of scrapie infection in the national flock and saving the taxpayer the cost of dealing with flocks that may otherwise have become infected. This option reduces a theoretical risk to human and animal health from BSE masked as scrapie.

Benefits: Farmer

This option will eliminate scrapie on farms with known infection and reduce the risk of re-occurrence. This will reduce a theoretical risk to human and animal health from BSE masked as scrapie and therefore help to preserve consumer confidence in sheep meat.

7.3 Option 2

Apply amended EU controls to flocks with classical scrapie and change SI as soon as possible

This would meet the policy objective. It would enable us to apply the controls in a flexible and cost effective way, in line with EU legislation, and enable us to enforce them.

As explained in 6.3, there is a roughly equal split in the national flock between breeding and commercial flocks, under this option we assume that about half of the classical scrapie cases will be subject to genotype and selective cull and half subject to the monitored flock option. The split in the first year would therefore be:

Classical scrapie cases -Genotype and selective cull option	= 8 flocks
Classical scrapie cases -Monitored Flock option	= 8 flocks

Costs: Economic (in addition to the costs and benefits of Option 1)

Costs to Government

Classical Scrapie- Monitored Flocks

There will be an additional cost to Government in arranging and carrying out an additional 25 tests on average for each flock monitored instead of genotyped and selectively culled.

Assume additional costs per flock are as follows:

- Animal Health Central Operations : £30 per flock
- Meat Hygiene Service (MHS) sample removal : £700 per flock
- VLA TSE test : £1,250 per flock

Cost to government = £1,980 per flock,

average annual cost. £13,000 (Annex 1 Table 4)

The estimated net present cost (over 8 years) to the Government is £93,000.

Cost to farmers

It is not expected that farmers with detected or reported cases of classical scrapie in their flocks will incur any additional one-off costs arising from the new controls. At present owners of flocks with classical scrapie are required to submit a sample of annual culls slaughtered for the food chain for TSE testing (100 animals per average flock size). The EU Regulation now requires all

such animals to be TSE tested where the monitored flock option is applied to a classical scrapie flock.

Classical scrapie -Monitored flocks

An additional 25 animals per flock will require to be TSE tested.

- 2 hours farmers time gathering animals and completing NSPAC paper work in connection with the collection : £32.46 per flock,

average annual cost to farmer is £200 (*Annex 1 Table 3*)

The estimated net present cost (over 8 years) to farmers is £1,500

Total NPV of costs of Option 2 are therefore estimated at £94,500

Saved Costs to Government

Classical scrapie cases

As we will be monitoring approximately half the new cases rather than genotyping and selectively culling them, there will be benefits to the taxpayer from reduced expenditure on culling of animals and compensating for them. Genotype and selective cull costs approximately £55,000 per flock.

Total benefit in first year is $8 \times £55,000 = £440,000$

Average annual cost saving £358,000 (*Annex 1 Table 7*)

There will be benefits to the taxpayer from reduced expenditure in collecting fallen stock from flocks with classical cases of scrapie as a result of the reduction of the restriction period from three to two years.

- Cost saving per flock per year is £3,000

Total benefit in first year is $16 \times £3000 = £48,000$

Average annual cost saving £39,000 (*Annex 1 Table 8*)

There will be an animal health benefit in reducing the sources of TSE infection thus avoiding costly action to tackle cases that may otherwise have occurred if the new regulation had not been implemented.

The estimated net present cost **saving (over 8 years) to the Government is £2.9 million.**

Saved costs to farmers

Classical scrapie cases

Sheep and goat farms with confirmed cases of classical scrapie will benefit. There is a lot of paper work involved in CSFS. Farmers have to deal with legal notices, genotype and slaughter certificates, collection notices and correspondence with NSPAC and the owner should benefit by not having to spend two days in total on dealing with this administrative burden.

New Classical scrapie cases from August 2008

The farmers whose flocks enter the CSFS from August 2008 will also benefit from being subject to scrapie controls for 2 years instead of 3 years.

- Farmer's time gathering animals and dealing with NSPAC paper work : £260 per flock (2 days work),

Total benefit in Year 3 is $16 \times £259.68 = £4,160$

Average annual cost saving £1,700 (*Annex 1 Table 6*)

Classical scrapie –Monitored flocks

Those whose flocks are subject to the new monitored flock option will benefit from not having animals killed and destroyed so enabling them to retain them for breeding or send them to fattening or slaughter. They will save the time they would have had to spend sourcing replacements and selling off those replacements found to be of unsuitable genotype for up to 50% of their flock that was compulsorily culled and destroyed with compensation paid or required to be sold for slaughter. This is a labour intensive action of one working week on average. £649.20 per flock,

Total benefit in year 1 is $8 \times £649.20 = £5,194$

Average annual cost saving £4,200 (*Annex 1 Table 5*)

The estimated net present cost **saving (over 8 years) to the farmers is £43,000.**

Total NPV of cost **savings of Option 2 are therefore estimated at £2.9 million.**

Saved costs: Environmental

Reduced levels of culling will mean less transport of animals for destruction and reduction in the number of carcasses incinerated. However, we do not consider this to be a significant cost saving as total amount of sheep body weight saved that would be incinerated annually under current policy is between **306 and 429 tonnes**. (There should be no need to cull and destroy animals in the second year of restrictions in genotyped flocks as the remaining animals and progeny should be of the required genotype)

(During the outbreak of Foot-and-Mouth disease in 2001 almost 3.5 million sheep were incinerated)

Benefits (additional to Option 1)

Benefits to farmers and government are the same as under Option 1.

Conclusion

Annual costs and benefits

Cost Option 1 (baseline)	£5.2 million	Benefit Option 1 (baseline)	Protection of human and animal health
Additional Cost Option 2	-£2.8 million	Additional Benefit Option 2	None

Option 2 will achieve the same level of benefit as option 1 (eg it has the same level of protection of human and animal health) but at a lower cost to farmers and taxpayers.

8. Benefits to Government Departments

8.1 There will be no benefits to other Government departments in England. (Scottish Executive and Welsh Assembly Government Department for Sustainability and Rural Development will be making similar changes in Scotland and Wales)

9. Competition

9.1 There will not be any direct or indirect limits to the number or range of farms in the industry caused by the proposed change in legislation. The proposed new legislation will not change farms incentive or ability to compete with each other.

10. Administrative Burdens

10.1 Due to the small number of flocks affected in this supplementary IA any change in Administrative Burden is negligible. Administrative Burden was considered more fully in the main IA.

11. Enforcement

11.1 Enforcement will be risked based and proportionate in accordance with Hampton principles.

12. Race, Equality and Gender Impacts

13.1 There will be no additional race equality or gender impacts resulting from this option.

14. Small Firms Impact Test

14.1 A Small Firms Impact test will be carried out during the consultation period by consulting key representatives of the sheep industry who are small businesses to gauge their views on the impact of the measures. The impact is not expected to be significant as only a very small number of businesses will be affected by the controls.

Specific Impact Tests: Checklist

Use the table below to demonstrate how broadly you have considered the potential impacts of your policy options.

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	<i>Results in Evidence Base?</i>	<i>Results annexed?</i>
Competition Assessment	Yes	No
Small Firms Impact Test	No	No
Legal Aid	Yes/No	Yes
Sustainable Development	Yes/No	Yes
Carbon Assessment	Yes/No	Yes
Other Environment	Yes/No	Yes
Health Impact Assessment	Yes/No	Yes
Race Equality	Yes/No	Yes
Disability Equality	Yes/No	Yes
Gender Equality	Yes/No	Yes
Human Rights	Yes/No	Yes
Rural Proofing	Yes/No	Yes

Annexes

ANNEX 1: Schedule 3 calculations

Cost Calculations

NB Present Value = PV = Total cost / (1 + discount rate)^(no years -1)

OPTION 1

Table 1

Cost to farmer of classical scrapie flocks genotype and cull

Year	Number flocks	Cost per flock	Total cost (number flocks x cost per flock)	Discounting	PV
1	16	£910.00	£14,560	1	£14,560
2	16	£910.00	£14,560	1.035	£14,068
3	14	£910.00	£12,740	1.071225	£11,893
4	14	£910.00	£12,740	1.108717875	£11,491
5	12	£910.00	£10,920	1.147523001	£9,516
6	12	£910.00	£10,920	1.187686306	£9,194
7	10	£910.00	£9,100	1.229255326	£7,403
8	10	£910.00	£9,100	1.272279263	£7,153
TOTAL					£85,277
av annual					£11,830

TOTAL COSTS TO FARMERS (PV over 8 years) £85,277
Average total costs to farmers £11,830

Table 2

Cost to Government of genotyping and selective cull of sheep flocks with classical scrapie

Year	Number flocks	Cost per flock	Total cost (number flocks x cost per flock)	Discounting	PV
1	16	£55,000	£880,000	1	£880,000
2	16	£55,000	£880,000	1.035	£850,242
3	14	£55,000	£770,000	1.071225	£718,803
4	14	£55,000	£770,000	1.108717875	£694,496
5	12	£55,000	£660,000	1.147523001	£575,152
6	12	£55,000	£660,000	1.187686306	£555,702
7	10	£55,000	£550,000	1.229255326	£447,425
8	10	£55,000	£550,000	1.272279263	£432,295
TOTAL					£5,154,115
av annual					£715,000

TOTAL COSTS TO GOVT (PV over 8 years) £5,154,115
Average total costs to govt £715,000

TOTAL COSTS	£5,239,392
PV	
Average over 8 years	£726,830

OPTION 2

COSTS

Table 3

Cost to farmer of TSE testing additional 25 annual culls in classical scrapie monitored flocks (Classical genotyped flocks BAU)

Year	Number flocks	Cost per flock	Total cost (number flocks x cost per flock)	Discounting	PV
1	8	£32.46	£260	1	£260
2	8	£32.46	£260	1.035	£251
3	7	£32.46	£227	1.071225	£212
4	7	£32.46	£227	1.108717875	£205
5	6	£32.46	£195	1.147523001	£170
6	6	£32.46	£195	1.187686306	£164
7	5	£32.46	£162	1.229255326	£132
8	5	£32.46	£162	1.272279263	£127
TOTAL					£1,521
av annual					£211

TOTAL COSTS TO FARMERS (PV over 8 years)

£1,521

Average total costs to farmers

£211

Max cost to a farmer (for cost to typical business)

Table 4

Cost to Government of TSE testing additional 25 annual culls in classical scrapie monitored flocks

Year	Number flocks	Cost per flock	Total cost (number flocks x cost per flock)	Discounting	PV
1	8	£1,980	£15,840	1	£15,840
2	8	£1,980	£15,840	1.035	£15,304
3	7	£1,980	£13,860	1.071225	£12,938
4	7	£1,980	£13,860	1.108717875	£12,501
5	6	£1,980	£11,800	1.147523001	£10,283
6	6	£1,980	£11,800	1.187686306	£9,935
7	5	£1,980	£9,900	1.229255326	£8,054
8	5	£1,980	£9,900	1.272279263	£7,781
TOTAL					£92,637
av annual					£12,850

TOTAL COSTS TO GOVT (PV over 8 years)

£92,637

**Average total
costs to govt**

£12,850

**TOTAL
COSTS
PV**

£94,158

**Average over 8
years**

£13,061

COST SAVINGS

Table 5

Benefit of flocks monitored not having to source replacements for animals that would otherwise have been killed under genotype option

Year	Number flocks	Cost per flock	Total cost (number flocks x cost per flock)	Discounting	PV
1	8	-£649.20	-£5,194	1	-£5,194
2	8	-£649.20	-£5,194	1.035	-£5,018
3	7	-£649.20	-£4,544	1.071225	-£4,242
4	7	-£649.20	-£4,544	1.108717875	-£4,098
5	6	-£649.20	-£3,895	1.147523001	-£3,394
6	6	-£649.20	-£3,895	1.187686306	-£3,279
7	5	-£649.20	-£3,246	1.229255326	-£2,641
8	5	-£649.20	-£3,246	1.272279263	-£2,551
TOTAL					-£30,418
av annual					-£4,220

Table 6

Benefit from only having two years of restrictions in which farmer is required to gather animals and deal with CSFS paper work e.g. slaughter and genotype certificates. There would be minimal additional work in monitored flocks and it would be BAU for them as far as atypical cases are concerned but classical monitored flocks are included as they would otherwise have been genotyped and culled with the resultant CSFS work.

Year	Number flocks	Cost per flock	Total cost (number flocks x cost per flock)	Discounting	PV
1	8	-£259.68	-£2,077	1	-£2,077
2	8	-£259.68	-£2,077	1.035	-£2,007
3	7	-£259.68	-£1,818	1.071225	-£1,697
4	7	-£259.68	-£1,818	1.108717875	-£1,640
5	6	-£259.68	-£1,588	1.147523001	-£1,384
6	6	-£259.68	-£1,588	1.187686306	-£1,337
7	5	-£259.68	-£1,298	1.229255326	-£1,056
8	5	-£259.68	-£1,298	1.272279263	-£1,020
TOTAL					-£12,218
av annual					-£1,695

-£42,636

TOTAL COST SAVINGS TO FARMERS (PV over 8 years)

Average total cost savings to farmers

-£5,915

Table 7

Benefit to Government of reduced expenditure on culling of animals and compensating for them

Year	Number flocks	Cost per flock	Total cost (number flocks x cost per flock)	Discounting	PV
1	8	-£55,000	-£440,000	1	-£440,000
2	8	-£55,000	-£440,000	1.035	-£425,121
3	7	-£55,000	-£385,000	1.071225	-£359,402

4	7	-£55,000	-£385,000	1.108717875	-£347,248
5	6	-£55,000	-£330,000	1.147523001	-£287,576
6	6	-£55,000	-£330,000	1.187686306	-£277,851
7	5	-£55,000	-£275,000	1.229255326	-£223,713
8	5	-£55,000	-£275,000	1.272279263	-£216,148
TOTAL					-£2,577,058
av annual					-£357,500

Table 8

Benefit to Government in not collecting fallen stock in third year of restriction period as it is now reduced to two years.

Year	Number flocks (Classical Scrapie)	Cost per flock	Total cost (number flocks x cost per flock)	Discounting	PV
1	16	-£3,000	-£48,000	1	-£48,000
2	16	-£3,000	-£48,000	1.035	-£46,377
3	14	-£3,000	-£42,000	1.071225	-£39,207
4	14	-£3,000	-£42,000	1.108717875	-£37,882
5	12	-£3,000	-£36,000	1.147523001	-£31,372
6	12	-£3,000	-£36,000	1.187686306	-£30,311
7	10	-£3,000	-£30,000	1.229255326	-£24,405
8	10	-£3,000	-£30,000	1.272279263	-£23,580
TOTAL					-£281,134
av annual					-£39,000

TOTAL COST SAVINGS TO GOVT (PV over 8 years)

-£2,858,191

Average total cost saving to govt

-£396,500

Total net costs to farmers PV	-£41,115
Total net costs to govt PV	-£2,765,554
TOTAL	-£2,806,669
Annual net costs to farmers	-£5,704
Annual net costs to govt	-£383,650
TOTAL	-£389,354

Annex 2: Outcome of Impact Tests not referred to in the Evidence Base

Legal Aid

The proposed amendments to the Regulations do not create new criminal sanctions or civil penalties.

Sustainable Development

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

Carbon Impact Assessment

The proposed amendments to the Regulations will have no significant effect on carbon emissions, as the nature and scale of cattle, sheep and goat production and marketing is likely to remain the same. There may be individual winners and losers in terms of increased or reduced trade opportunities, and therefore some change to the carbon footprint of individual businesses, but the overall impact for the industry as a whole is unlikely to alter substantially.

Other Environmental Issues

As the nature and scale of cattle, sheep and goat production and marketing is likely to remain the same, the proposed amendments to the Regulations have no implications in relation to climate change, waste management, landscapes, water and floods, habitat and wildlife or noise pollution.

Health Impact Assessment

The proposed amendments to the Regulations will not directly impact on health or well being and will not result in health inequalities.

Race /Disability/Gender

There are no limitations on meeting the requirements of the proposed amendments to the Regulations on the grounds of race, disability or gender. The proposed amendments to the Regulations do not impose any restriction or involve any requirement which a person of a particular racial background, disability or gender would find difficult to comply with. Conditions apply equally to all individuals and businesses involved in the activities covered by the proposed amendments to the Regulations.

Human Rights

The proposed amendments to the Regulations are consistent with the Human Rights Act 1998.

Rural Proofing

The majority of producers and many suppliers are based in rural areas and the proposed amendments to the Regulations are designed to facilitate their activities.

Annex 3: Glossary

Acronym	Term	Definition
AH	Animal Health	Defra Agency (previously known as State Veterinary Service)
(none)	Atypical scrapie	Previously undetected form of scrapie which been found in sheep with genotypes that are resistant to classical scrapie as well as sheep with genotypes susceptible to classical scrapie.
BAU	Business as usual	The activity would be carried out by the farmer in the normal course of business regardless of this regulation
BSE	Bovine Spongiform Encephalopathy	TSE in cattle.
(none)	Classical scrapie	The form of scrapie known to have been in the national flock and herd for more than 200 years.
CSFS	Compulsory Scrapie Flocks Scheme	Compulsory slaughter scheme for flocks in which scrapie is diagnosed.
CWD	Chronic Wasting Disease	TSE in deer.
FSE	Feline Spongiform Encephalopathy	TSE in cats (domestic cats and zoo animals).
(none)	Genotyping	A test on the DNA of a sheep's blood sample to determine its genetic resistance – or susceptibility – to scrapie.
MHS	Meat Hygiene Service	The Government body responsible for the protection of public health and animal health and welfare in Great Britain, through proportionate enforcement of legislation in approved fresh meat premises.
NSP	National Scrapie Plan	A joint initiative of British agricultural departments, launched in 2001 with the principle objective of increasing the level of resistance to TSEs in the national flock.
(none)	Scrapie	TSE in sheep and goats.
(none)	Selective cull	Culling in a CSFS flock of the sheep which have scrapie-susceptible genotypes.
SRM	Specified Risk Material	The parts of an animal deemed to TSE-infective.
TSEs	Transmissible Spongiform Encephalopathies	Fatal brain diseases suffered by a variety of species, including cattle, sheep, goats, deer and cats.
vCJD	Variant Creutzfeldt-Jakob Disease	TSE-like disease in humans.
VLA	Veterinary Laboratories Agency, Weybridge	The EU and UK reference laboratory for testing for TSEs.