

Explanatory Memorandum to The Mutilations (Permitted Procedures) (Wales) (Amendment) Regulations 2010

This Explanatory Memorandum has been prepared by the Office of the Chief Veterinary Officer and is laid before the National Assembly in conjunction with the above subordinate legislation in accordance with Standing Order 24.1.

Minister's Declaration

In my view, this Explanatory Memorandum gives a fair and reasonable view of the expected impact of The Mutilations (Permitted Procedures) (Wales) (Amendment) Regulations 2010. I am satisfied that the benefits outweigh any costs.

NAME OF MINISTER – Elin Jones

DATE – 05/10/2010

1. Description

The Mutilations (Permitted Procedures) (Wales) (Amendment) Regulations 2010 amend the Mutilations (Permitted Procedures) (Wales) Regulations 2007 to continue to allow beak trimming of laying hens after 31 December 2010. The method of routine beak trimming for laying hens will be restricted to the use of infra-red technology only on birds that are less than 10 days old, in order to prevent feather pecking and cannibalism. In addition changes have been made to ensure that routine and emergency beak trimming of laying hens is carried out by a qualified person. The amending Regulations also implement the provisions of EU Council Directive 2007/43/EC on meat chicken welfare, which prohibit all mutilations for conventionally reared meat chickens, but allows for beak trimming in certain circumstances. The amendment will ensure that when beak trimming of conventionally reared meat chickens is carried out it will be carried out by a qualified person on birds less than 10 days of age, under veterinary advice and for the purposes of preventing feather pecking and cannibalism only.

2. Matters of special interest to the Constitutional Affairs Committee

None.

3. Legislative background

These Regulations together with the 2007 Regulations implement paragraph 8 of the Annex to Council Directive 1999/74/EC laying down minimum standards for the protection of laying hens which allows Member States a derogation to allow beak trimming of chicks intended to become laying hens.

These Regulations together with the 2007 Regulations implement paragraph 12 of Annex 1 to Council Directive 2007/43/EC laying down minimum rules for the protection of chickens kept for meat production which prohibits Member States from carrying out any mutilations, but allows a derogation to allow beak trimming of conventionally reared meat chickens under certain conditions.

The 2007 Regulations specify the permitted procedures to which the offences in section 5(1) and (2) of the Animal Welfare Act 2006 do not apply if such procedures are carried out in accordance with the relevant requirements.

The enabling power to make the revised Regulations is contained in section 5(4) of the Animal Welfare Act 2006. That power is exercisable by the Welsh Ministers by virtue of paragraph 30 of Schedule 11 of the Government of Wales Act 2006

The Regulations will follow the affirmative procedure

4. Purpose & intended effect of the legislation

The UK currently makes use of a derogation in the laying hens directive 99/74/EC which, in order to prevent feather pecking and cannibalism, allows Member States to authorise beak trimming provided it is carried out by qualified staff on hens that are less than 10 days old and intended for laying. The Mutilations (Permitted Procedures) (Wales) Regulations 2007 implement this derogation but only allow beak trimming to be carried out until 31 December 2010, after which beak trimming of laying hens would be banned. The ban was put in place when the laying hens directive was implemented in the UK in 2002, allowing 8 years to develop a strategy to manage laying hens without beak trimming.

Beak trimming is carried out to prevent feather pecking and cannibalism, which is a common but unpredictable behaviour in commercial flocks of laying hens. The behaviour results in high mortality and morbidity in flocks affected and is a significant welfare problem in its own right.

The Beak Trimming Action Group was established in 2002 and was made up of representatives from industry, welfare groups, Defra, scientific and veterinary professions. The group was tasked with developing a strategy for bringing in the ban on beak trimming on the 31 December 2010 – looking at changes in management practices or selecting birds that are less prone to feather pecking. The aetiology of feather pecking and cannibalism is complex and has resulted in little progress in developing strategies to mitigate its onset or circumvent the welfare consequences of an outbreak, other than through routine or emergency beak trimming of laying hens. However, about 5 years ago a new infra-red technique was developed for pullets and is now used to beak trim birds commercially as an alternative to traditional hot blading. The procedure is carried out on day old chicks in a hatchery and involves focusing a high intensity infra-red beam at the tip of the beak, which penetrates the hard outer horn. 1-3 weeks later, the tissue behind the damaged area heals and the beak tip is lost.

The Farm Animal Welfare Council (FAWC), which advises the Government on farm animal welfare, produced an Opinion on beak trimming of laying hens in 2007 and again in 2009, following research by Glasgow University to study the long term consequences of the infra-red technique. On both occasions, FAWC recommended that until an alternative means of controlling injurious pecking in laying hens can be developed, then the proposed ban on beak trimming should not be introduced but should be deferred until it can be demonstrated reliably under commercial conditions that laying hens can be managed without beak trimming without a greater risk to their welfare than that caused by beak trimming itself. FAWC recommended that infra-red beak treatment should be the only method used routinely as the evidence indicated that it does not induce chronic pain.

Whilst the long term goal is to ban routine beak trimming, the Government accepted FAWC's advice to postpone the total ban on routine beak trimming as it is in the interests of laying hen welfare. It is clear that birds would suffer worse insults through feather pecking and cannibalism. The amending Regulations thus remove the ban on beak trimming and allow for routine beak trimming of day old chicks intended for laying to be done using infra-red technology only, with other methods (for example, the use of a hot blade) restricted to emergency use. The requirements for emergency beak trimming are also being strengthened to ensure that the person who carries out the procedure is qualified.

In addition to the provisions on laying hens, the amendment to these Regulations will implement the relevant provisions of EU Directive 2007/43/EC on the welfare of meat chickens, which prohibits all mutilations for conventionally reared meat chickens, but allows for beak trimming in certain circumstances. Meat chickens can be beak trimmed but only when other measures to prevent feather pecking and cannibalism have been exhausted. In such cases, the procedure must be carried out after consultation and on the advice of a veterinarian and be carried out by qualified staff on chickens that are less than 10 days of age. In practice, meat chickens are not beak trimmed because they do not exhibit feather pecking and cannibalism due to their young age.

5. Consultation

Details of the consultation undertaken are included in the RIA attached.

A six week consultation ran from the 8 August to 15 September 2010.

6. Regulatory Impact Assessment (RIA)

A Regulatory Impact Assessment has been conducted and is below.

Title: Lead department or agency: Welsh Assembly Government Other departments or agencies:	Impact Assessment (IA)
	IA No:
	Date: 01/01/2010
	Stage: Error! Unknown document property name.
	Source of intervention: Domestic
	Type of measure: Secondary legislation
	Contact for enquiries: 1Gareth Jones-Belli

Summary: Intervention and Options

What is the problem under consideration? Why is government intervention necessary?
 2Maximum of 8 lines

What are the policy objectives and the intended effects?
 3Maximum of 8 lines

What policy options have been considered? Please justify preferred option (further details in Evidence Base)
 4Maximum of 11 lines

When will the policy be reviewed to establish its impact and the extent to which the policy objectives have been achieved?	It will be reviewed 01/2010
Are there arrangements in place that will allow a systematic collection of monitoring information for future policy review?	Yes

SELECT SIGNATORY Sign-off For final proposal stage Impact Assessments:

I have read the Impact Assessment and I am satisfied that (a) it represents a fair and reasonable view of the expected costs, benefits and impact of the policy, and (b) the benefits justify the costs.

Signed by the responsible SELECT SIGNATORY:..... Date:.....

Summary: Analysis and Evidence Policy Option 1

Description: Allow routine beak trimming using infra-red technology only (this table refers to Option 3 relative to Option 1)

Price Base Year	PV Base Year	Time Period Years	Net Benefit (Present Value (PV)) (£m)		
			Low: 3.4	High: 7.1	Best Estimate: 5.3

COSTS (£m)	Total Transition (Constant Price) Years	Average Annual (excl. Transition) (Constant Price)	Total Cost (Present Value)
Low	Optional	Optional	Optional
High	Optional	Optional	Optional
Best Estimate	0.014	0.054	0.264

Description and scale of key monetised costs by 'main affected groups'

The costs are compared to a ban on routine beak trimming of laying hens using any method coming into force. Egg producers – a) cost of beak trimming procedure (annual £51,000); b) cost of training staff who carry out emergency beak trimming (transition £14,000); annual £3,000).

There are no costs associated with the proposed amendments on beak trimming of meat chicken as this procedure is not carried out in Wales.

Other key non-monetised costs by 'main affected groups'

6Maximum of 5 lines

BENEFITS (£m)	Total Transition (Constant Price) Years	Average Annual (excl. Transition) (Constant Price)	Total Benefit (Present Value)
Low	Optional	0.79	3.7
High	Optional	1.58	7.4
Best Estimate		1.19	5.5

Description and scale of key monetised benefits by 'main affected groups'

The benefits are compared to a ban on routine beak trimming of laying hens using any method coming into force. Egg producers – a) increased egg production (annual £0.39m - £1.18m); decreased labour costs (annual £0.4m).

7There are no benefits associated with the proposed amendments on beak trimming of meat chicken as this procedure is not carried out in Wales.

Other key non-monetised benefits by 'main affected groups'

8Maximum of 5 lines

Key assumptions/sensitivities/risks

9Maximum of 8 lines

Discount rate (%)

Impact on admin burden (AB) (£m):		Impact on policy cost savings (£m):		In scope
New AB:	AB savings:	Net:	Policy cost savings:	Yes

Enforcement, Implementation and Wider Impacts

What is the geographic coverage of the policy/option?							
From what date will the policy be implemented?						01/01/2010	
Which organisation(s) will enforce the policy?							
What is the annual change in enforcement cost (£m)?							
Does enforcement comply with Hampton principles?						Yes	
Does implementation go beyond minimum EU requirements?						No	
What is the CO ₂ equivalent change in greenhouse gas emissions? (Million tonnes CO ₂ equivalent)						Traded:	Non-traded:
Does the proposal have an impact on competition?						Yes	
What proportion (%) of Total PV costs/benefits is directly attributable to primary legislation, if applicable?						Costs:	Benefits:
Annual cost (£m) per organisation (excl. Transition) (Constant Price)			Micro	< 20	Small	Medium	Large
Are any of these organisations exempt?			No	No	No	No	No

Specific Impact Tests: Checklist

Set out in the table below where information on any SITs undertaken as part of the analysis of the policy options can be found in the evidence base. For guidance on how to complete each test, double-click on the link for the guidance provided by the relevant department.

Please note this checklist is not intended to list each and every statutory consideration that departments should take into account when deciding which policy option to follow. It is the responsibility of departments to make sure that their duties are complied with.

Does your policy option/proposal have an impact on...?	Impact	Page ref within IA
Statutory equality duties¹ Statutory Equality Duties Impact Test guidance	No	
Economic impacts		
Competition Competition Assessment Impact Test guidance	Yes	
Small firms Small Firms Impact Test guidance	Yes	
Environmental impacts		
Greenhouse gas assessment Greenhouse Gas Assessment Impact Test guidance	No	
Wider environmental issues Wider Environmental Issues Impact Test guidance	No	
Social impacts		
Health and well-being Health and Well-being Impact Test guidance	No	
Human rights Human Rights Impact Test guidance	No	
Justice system Justice Impact Test guidance	No	
Rural proofing Rural Proofing Impact Test guidance	No	
Sustainable development Sustainable Development Impact Test guidance	No	

¹ Race, disability and gender Impact assessments are statutory requirements for relevant policies. Equality statutory requirements will be expanded 2011, once the Equality Bill comes into force. Statutory equality duties part of the Equality Bill apply to GB only. The Toolkit provides advice on statutory equality duties for public authorities with a remit in Northern Ireland.

Evidence Base (for summary sheets) – Notes

Use this space to set out the relevant references, evidence, analysis and detailed narrative from which you have generated your policy options or proposal. Please fill in **References** section.

References

Include the links to relevant legislation and publications, such as public impact assessment of earlier stages (e.g. Consultation, Final, Enactment).

No.	Legislation or publication
10	The Mutilations (Permitted Procedures) (Wales) Regulations 2007 (S.I. 2007/1029).
11	Council Directive 1999/74/EC of 19 July 1999 laying down minimum standards for the protection of laying hens.
12	Farm Animal Welfare Council (2007), Opinion on Beak Trimming of Laying hens.
13	Research study on the Chronic neurophysiological and anatomical changes associated with infra-red beak treatment (2009)
14	Farm Animal Welfare Council's further advice to Ministers on beak trimming of laying hens , 8 September 2009.
15	Defra's ' A guide to the practical management of feather pecking and cannibalism in free range hens ' (2005).
16	Council Directive 2007/43/EC laying down minimum rules for the protection of chickens kept for meat production
17	

Evidence Base

Ensure that the information in this section provides clear evidence of the information provided in the summary pages of this form (recommended maximum of 30 pages). Complete the **Annual profile of monetised costs and benefits** (transition and recurring) below over the life of the preferred policy (use the spreadsheet attached if the period is longer than 10 years).

The spreadsheet also contains an emission changes table that you will need to fill in if your measure has an impact on greenhouse gas emissions.

Annual profile of monetised costs and benefits* - (£m) constant prices

	Y ₀	Y ₁	Y ₂	Y ₃	Y ₄	Y ₅	Y ₆	Y ₇	Y ₈	Y ₉
Transition costs			0.014							
Annual recurring cost			0.051	0.054	0.054	0.054	0.054			
Total annual costs			0.065	0.054	0.054	0.054	0.054			
Transition benefits										
Annual recurring benefits			1.19	1.19	1.19	1.19	1.19			
Total annual benefits			1.19	1.19	1.19	1.19	1.19			

* For non-monetised benefits please see summary pages and main evidence base section



Microsoft Office
Excel Worksheet

N.B. Y₀ = 2009 (which is taken as base year for NPV calculations)

Evidence Base (for summary sheets)

1. Summary

1.1 Background

1.1.1 All procedures that interfere with the sensitive tissues or bone structure of a protected animal are prohibited except for those listed in The Mutilations (Permitted Procedures) (Wales) Regulations 2007. Permitted procedures are allowed if they are considered necessary for the overall welfare or good management of the protected animal. Schedule 4 of these Regulations permits the beak trimming of all poultry under certain circumstances and within certain limitations. The amendments to The Mutilations (Permitted Procedures) (Wales) Regulations 2007 relate to conventionally reared meat chickens and laying hens. However, the focus of this final Impact Assessment is on laying hens as the amendment relating to conventionally reared meat chickens has no associated costs or benefits as industry do not routinely, or in an emergency, beak trim birds.

1.1.2 Feather pecking and cannibalism are serious welfare concerns for laying hens, but not for conventionally reared meat chickens, in all production systems. Feather pecking and cannibalism usually occurs sometime after the birds reach sexual maturity and as chickens reared for meat consumption do not reach this age before being slaughtered, this behaviour does not occur in these flocks. To prevent this behaviour in flocks of laying hens, chicks are routinely beak trimmed which leads to a reduction in the impact of feather pecking and cannibalism. Routine beak trimming of laying hens is currently only permitted until the 31st December 2010 after which this procedure will be banned. But, the complexity of predicting and preventing feather pecking and cannibalism in flocks of laying hens and the resultant welfare impact has led the Government to accept the advice of the independent advisory body, the Farm Animal Welfare Council (FAWC), and to allow routine beak trimming of hens after 2010.

1.2 Consultation

1.2.1 A 6 week consultation was carried out between August and September 2010 on a draft amendment to the Mutilations (Permitted Procedures) (Wales) Regulations 2007 to seek opinions on beak trimming of laying hens. A similar consultation was carried out between April and July 2009 on a draft amendment to The Mutilations (Permitted Procedures) (Wales) Regulations 2007 to prohibit all mutilations for conventionally reared meat chicken, but with a derogation to permit beak trimming in certain circumstances. A positive response was received in relation to laying hens and mixed response to the mutilation on broilers, the reason being that chicks for broiler production do not routinely require beak trimming for feather pecking or cannibalism.

1.2.2 There are no current layer hatcheries in Wales that would need to carry out the procedure. The Defra laying hen Impact Assessment² contained three options, which was used to develop our consultation paper and evidence base. Option 1, to allow a ban on the beak trimming of birds intended to become laying hens to come into force; Option 2, to maintain the current legislative situation which allows beak trimming of birds intended to become laying hens using a suitable instrument and Option 3, to allow beak trimming of birds intended to become laying hens but only using infra-red technology.

² <http://www.defra.gov.uk/corporate/consult/mutilations-regs/index.htm>

1.2.3 There was general agreement from the consultation process that Option 3 being the preferred Option and this is the approach that is being assessed in this final Impact Assessment. As a result of the majority of responses and a GB consistent policy, we have set a review date of 2015 to assess the policy of laying hen beak trimming. In addition, we have extended the training provisions already in place for routine beak trimming to emergency beak trimming. Emergency beak trimming may be carried out on birds that are older than 10 days, unlike routine beak trimming, to control an outbreak of feather pecking and cannibalism. The method used for this procedure must be suitable, as defined in these Regulations, but is not restricted to infra-red technology.

1.3 Preferred option

1.3.1 The preferred option in the consultation Impact Assessment was Option 3, to allow routine beak trimming using only infra-red technology as there is evidence that other methods may be more detrimental to the welfare of laying hens in the long-term. The machinery to undertake this procedure is made by one manufacturer, which has patented the equipment until the patent expires in 2015³. For this option to continue to be the preferred option, compared with allowing beak trimming by any appropriate method, the reduction in chronic pain of infra-red beak trimming must outweigh the costs of a monopoly being created. During the consultation, industry representatives requested that the policy on beak trimming not be reviewed for a minimum of 10 years, in part, to encourage other manufacturers to invest in bringing a competitive machine to market. However, industry agreed with the preferred option.

1.3.2 At the present time, we understand from industry that the manufacturer of the machine used to carry out infra-red beak trimming has the same pricing policy for all of their customers outside of the USA. In this international context, the proposed option will have a much smaller impact on the manufacturer's monopoly position. Nonetheless, it may be the case that the manufacturer reviews its pricing policy following this amendment to the legislation, which could lead to an increase in the price charged. However, the cost of beak trimming by either infra-red or hot blade methods is 3p per bird, which is a very small proportion of total production costs. So the existence of such monopoly power may not be seen as having a significant impact on pullet rearers, and in turn egg producers.

1.3.3 A study at the University of Glasgow⁴ was funded by Defra and industry to assess the nerve structure of laying hens that had undergone the infra-red beak trimming procedure. The authors of the study concluded that infra-red beak trimming does not cause changes in beak nerve structure indicative of chronic pain. This conclusion was based on assessment of nerve structure using both histopathology and neuro-physiology techniques. A second study, carried out in Australia by Glatz and Hinch⁵ used histopathology assessment methods and identified nerve structures that may indicate chronic pain in the beaks of laying hens that had undergone infra-red beak trimming. However, the use of both histopathology and neuro-physiology assessment techniques, as used in the University of Glasgow study, is a more robust way of identifying if the nerve structures that are indicative of chronic pain are both present *and* functional. Therefore on balance, current evidence indicates that infra-red beak trimming is unlikely to cause chronic pain. This is a benefit to the 85,000 birds that at present, i.e. under Option 2, would have been beak trimmed using the hot blade technique. Using infra-red technology therefore reduces the risk of causing chronic pain compared with the hot blade technique.

³ United States Patent no. 5,651,731 Method and apparatus for debeaking poultry, applied for on 23rd June 1995

⁴ McKeegan (2009) Defra final report: Chronic neurophysiological and anatomical changes associated with infra-red beak treatment http://randd.defra.gov.uk/Document.aspx?Document=AW1139_7989_FRP.pdf

⁵ Glatz and Hinch (2009) Effect of hot blade and infrared beak trimming on beak condition, production and mortality of laying hens. Proceedings of Poultry Welfare Symposium Cervia, Italy, 18-22 May 2009

1.3.4 On balance, the welfare benefit gained from allowing beak trimming using infra-red technology, rather than with hot blading, outweighs the potential monopoly that would be created through this amendment. This trade-off between reduced chronic pain and the possible monopoly position will be monitored once the policy is implemented. As stated earlier and in light of the current evidence and consultation responses, it was decided that Option 3 remains the preferred option.

1.3.5 The detailed breakdown of costs and benefits of the preferred Option are summarised in Table . During the consultation period, standards set by organic bodies were investigated. These bodies preclude the routine beak trimming of organic laying hens and therefore these holdings are not included in the cost and benefit calculations described in the final Impact Assessment.

1.3.6 **Table 1: Detailed costs and benefits of the preferred Option (Option 3)**

Costs and Benefits		Preferred Option – Infra-red only allowed	Location in final Impact Assessment (Paragraphs)
		Changes compared to allowing a ban on beak trimming to come into effect	
Costs			
Acute pain for birds (during beak trimming procedure)		Risk increased for 1.71m birds per annum	13.4.1
Chronic pain (from hot blading beak trimming procedure)		No change in risk (compared with a ban on beak trimming coming into place)	13.4.2
Cost of beak trimming chicks		£51,000 per annum	13.4.3
Monopoly in beak-trimming technology		Monopoly created	16.1
Training costs		£14,000 transition costs £3,000 per annum	13.4.4
Total Costs	Transition Costs	£14,000	
	Annual Costs	£54,000	
Benefits			
Injurious feather pecking of laying hens		Risk reduced for 340,000 – 1.37m birds per annum	13.5.1
Mortality of laying hens		Reduction in 0 – 340,000 bird deaths per annum	13.5.2

Egg production		Increase in £0.39m - £1.19m per annum	13.5.3
Labour costs		Decrease by £0.4m per annum	13.5.4
Total Benefits	Transition Benefits	n/a	
	Annual Benefits	£3.4m - £7.1m	

1.3.7 The cost and benefit calculations result in a present value net benefit best estimate (over 5 years) of £5.3m. This is in addition to the non-monetised benefits described in the table above.

1.4 Post Implementation Review plan

1.4.1 In response to the consultation, a review date of 2015 has been set which will allow industry to complete and report on study tours of other countries that have successfully banned beak trimming. It will also allow the Government to assess the outputs of currently on-going research. The findings of this research could provide useful experience of how to reduce the risk of an outbreak of feather pecking and cannibalism which may lead to a reduced need to beak trim birds. The issue of beak trimming fits into a wider context where the use of conventional cages to keep laying hens will be banned from 1st January 2012. As the risk to the welfare of laying hens from injurious pecking is likely to increase after the ban on conventional cages comes into force, a review in 2015 will allow producers time to increase their experience of managing flocks in alternative systems.

1.4.2 Between 2011 and 2015 the Beak Trimming Action Group will reconvene and will be tasked with producing an action and implementation plan to phase out or ban beak trimming of laying hens.

2. Introduction

- 2.1. All procedures that interfere with the sensitive tissues or bone structure of a protected animal are prohibited except for those listed in The Mutilations (Permitted Procedures) (Wales) Regulations 2007. Permitted procedures are allowed if they are considered necessary for the overall welfare or good management of the protected animal. Schedule 4 of these Regulations permits the beak trimming of all poultry under certain circumstances and within certain limitations. The amendments to The Mutilations (Permitted Procedures) (Wales) Regulations 2007 relate to conventionally reared meat chickens and laying hens. However, the focus of this final Impact Assessment is on laying hens as the amendment relating to conventionally reared meat chickens has no associated costs or benefits as industry do not routinely, or in an emergency, beak trim birds. The amendment relating to conventionally reared meat chickens is intended to transpose the requirement in the EU Council Directive 2007/43/EC laying down minimum rules for the protection of chickens kept for meat production, which bans all mutilations but permits beak trimming in certain circumstances. The amendment ensures that if beak trimming of these birds were to be carried out, it should be done by a trained person, be restricted to birds that are less than 10 days of age, be after consultation and on the advice of a veterinarian and only be carried out to prevent feather pecking and cannibalism.
- 2.2. Feather pecking and cannibalism are serious welfare concerns for laying hens, but not for conventionally reared meat chickens, in all production systems. Feather pecking and cannibalism usually occurs sometime after the birds reach sexual maturity and as chickens reared for meat consumption do not reach this age before being slaughtered, this behaviour does not occur in these flocks. To reduce the impact of this behaviour in flocks of laying hens, birds are currently routinely beak trimmed. The tip of the beak of chicks is removed which leads to a reduction in the impact of feather pecking and cannibalism. Adult birds with untreated beaks can cause significant damage to other hens which can lead to high mortality and morbidity rates from infection of wounds with possible septicaemia (infection of the blood), salpingitis (inflammation of part of the female reproductive system) and peritonitis (inflammation of the membrane lining the walls of the abdominal and pelvic cavities).
- 2.3. The Government has a long term goal of reducing the number of permitted mutilations of animals and beak trimming of laying hens is currently only permitted until the 31st December 2010. But, the complexity of predicting and preventing feather pecking and cannibalism in flocks of laying hens and the resultant welfare impact has led the Government to accept the advice of the independent advisory body, the Farm Animal Welfare Council (FAWC), and to allow routine beak trimming of hens after 2010. However, the Government will place more stringent controls on the methods adopted to ensure that the highest standards of welfare are maintained for chicks and laying hens.

3. Definitions

Protected animal means a vertebrate that is normally domesticated in the British Isles, either permanently or temporarily under a person's control, or is not living in a wild state.

Conventionally reared meat chicken means an animal of the species *Gallus gallus* that is kept for meat production, other than one that is on a holding with fewer than 500 such animals; breeding stocks, or is marketed under the terms "Extensive indoor (barn

reared)", "Free range", "Traditional free range", "Free range – total freedom" or is organically reared.

Laying hen means hens of the species *Gallus gallus* which have reached laying maturity and are kept for production of eggs not intended for hatching.

Mutilation means a procedure which involves interference with the sensitive tissues or bone structure of the animal, otherwise than for the purpose of medical treatment.

Feather pecking and cannibalism means the non-aggressive behaviour of a bird that can lead to feather loss and injury.

Beak trimming means the removal of the tip of a bird's beak.

Infra-red beak trimming technology means focusing a high intensity infra-red beam at the tip of the beak, which penetrates the hard outer horn, damaging a clearly demarcated zone of the underlying dermis and sub-dermal tissues.

Hot blade beak trimming technology means the use of a sharp instrument which mechanically removes the tip of a chick's beak and cauterises the wound to prevent haemorrhage.

4. The Objective

- 4.1 The objective of the amendment to the Mutilations (Permitted Procedures) (Wales) Regulations 2007 is to maintain the welfare of conventionally reared meat chickens and laying hens. In particular this amendment will ensure the welfare of laying hens is maintained beyond 31st December 2010 by allowing routine beak trimming to continue under specified conditions. This is in line with the Government's commitment to high standards of animal welfare.

5. Application and Scope

- 5.1 The amendment applies to conventionally reared meat chickens and birds intended to become laying hens, which are housed on establishments with more than 350 birds, in Wales. Beak trimming of all other poultry, including layer hen breeders and broiler breeders, will continue to be permitted using any suitable instrument. **This final Impact Assessment focuses on the amendment to the beak trimming of laying hens as there are no costs or benefits associated with the amendment to the provisions for conventionally reared meat chickens.**

6. Rationale for government intervention

- 6.1. Wales currently makes use of a derogation in the laying hens directive 1999/74/EC which, in order to prevent feather pecking and cannibalism, allows Member States to authorise beak trimming provided it is carried out by qualified staff on birds that are less than 10 days old and intended for laying. The Mutilations (Permitted Procedures) (Wales) Regulations 2007 implements this derogation (Regulation 3 and Schedule 4.5).
- 6.2. There is a high risk of worsening animal welfare through increased injurious feather pecking and cannibalism if the ban on routine beak trimming of laying hens is allowed to come into force on the 1st January 2011.

- 6.3. To minimise this risk, the Government has decided that routine beak trimming of laying hens is allowed beyond 2010. However, only infra-red technology will be permitted to be used to carry out this procedure. This allows the benefits of beak trimming to continue whilst the long term consequences of the procedure are minimised (see sections 13.4 and 13.5 for cost and benefits).
- 6.4. The Devolved Administrations have been consulted and it is expected they will be making similar amendments to their legislation.

7. The industry structure

- 7.1. There are approximately 343 holdings housing more than 350 laying hens in Wales and, and the number of hens in Wales in 2010 in laying hen units was 1,761,589 and it is predicted to increase with a surge in applications for enriched cage units to be built in Wales.
- 7.2. The industry is split into a number of sectors based on housing. The majority of laying hens are housed in either cages or free range; however some laying hens are housed in other systems including barn and organic.
- 7.3. Table shows the structure of the laying hen industry by housing type.

Table 2: Structure of the laying hen industry

Housing system	Number of laying hens	Proportion of laying hens	Number of holdings
Laying Flock, of which:	1,761,589	-	-
Caged	485,230	3.39%	13
Free range ^(a)	1,172,282	83.67%	287
Barn	51,315	4.08%	14
Organic	52,762	8.45%	29

Source: Egg Marketing Inspectorate/Animal Health Poultry Register :

8. The nature of the problem

- 8.1. Beak trimming is a technique to remove the tip of a bird's beak which prevents overt damage when birds peck at each other. When birds are not beak trimmed the risk of injurious feather pecking and cannibalism increases in flocks of birds, which can cause severe welfare problems, high mortality rates and financial costs for egg producers.
- 8.2. Injurious feather pecking and cannibalism outbreaks are unpredictable. This means that whilst some flocks will not be affected, once the behaviour begins, the associated welfare and financial costs can be very high.

- 8.3. A key conclusion from an EU funded project which brought together the results of many different studies (LayWel⁶) concluded that feather pecking is still a very predominant welfare problem in non cage systems. In surveys covering 340 commercial flocks the number of flocks suffering from feather pecking is between 40% and almost 80%. The prevalence of cannibalism is lower but there were still up to 20% of flocks affected in one survey and up to 40% in another.
- 8.4. A series of studies found that the mortality rates of non beak trimmed birds were significantly higher than mortality rates of beak trimmed birds. The findings of these studies are set out in Table 1 in Appendix 1.
- 8.5. Non beak trimmed hens may need to undergo emergency beak trimming later on in life, to reduce the impact of an outbreak of injurious feather pecking and cannibalism during the production cycle. A recent study by Sandilands⁷ (2009) found that 23% of untrimmed birds housed in enriched cages had to be beak trimmed later in the production cycle. Experimental studies have found that emergency beak trimming later on in life, rather than as chicks, can result in the formation of neuromas in the beak which are indicative of chronic pain. This has a significant welfare cost for laying hens.
- 8.6. Wales's and the UK's laying hen industry would incur a significant impact to manage flocks at a lower risk of injurious pecking. At this stage, and after consultations with industry representatives, it is not clear which mitigation techniques would be viable for Wales and UK laying hen flocks. The following strategies referred to in sections 8.7 to 8.11 are theoretically possible.
- 8.7. Reducing stocking density may reduce the incidence of injurious feather pecking and cannibalism. However, this strategy is unlikely to be economically viable. As a result, in the event of a ban on beak trimming, egg producers are not likely to reduce their stocking density in an attempt to mitigate the effects of a potential increase in mortality.
- 8.8. Switching to white strains of hens could be beneficial in the event of a ban on beak trimming, as these lines of hens may be less prone to feather pecking and cannibalism. From a database of 35 flocks of various breeds kept in enriched cages in Sweden (LayWel), no effect of breed on gentle or severe feather pecking was identified. Although, an earlier small scale study found that mortality rates of non beak trimmed hens were lower for white strains of hens compared to brown strains of hens.⁸ Furthermore Sandilands (2009) found that white untrimmed birds housed in enriched cages had better feather coverage compared with brown untrimmed strains. Increased feather cover may increase feeding efficiency, hence reducing feed costs and improving profitability.
- 8.9. There is mixed evidence on the relative productivity of white and brown strains. Singh⁹ et al (2009) found improved productivity in one white strain when compared with other strains including brown hens. Sandilands (2009) found that brown hens in enriched cages produced heavier eggs, with a thicker shell. White hens were more fearful, however, mortality was slightly higher in brown birds compared with white birds.
- 8.10. White birds may be an option to help the Government to deliver its long term goal of reducing the number of mutilations. However, white hens produce white eggs which are

⁶ <http://www.laywel.eu/web/pdf/deliverables%2031-33%20health.pdf>

⁷ Sandilands (2009) Defra final report: [A study to compare the health and welfare of laying hens in different types of enriched cage](#)

⁸ Abrahamsson and Tauson, 1995: De Kalb White non beak trimmed hens had a mortality rate of 2.2%, and 0.2% of hens had wounds; whereas Lohmann Brown hens had 14% and 9% respectively.

⁹ Singh et al (2009) Production performance and egg quality of four strains of laying hens kept in conventional cages and floor pens. Poultry Science 88(7): 1346 – 1351

more prone to showing marks and as the washing of eggs is prohibited in the EU, this is a significant constraint to adopting new strains of birds.

- 8.11. An EFSA report¹⁰ on the welfare aspects of laying hens (2005) suggests that using group selection methodology to prevent against injurious pecking strains is not commercially viable and conflicts with other commercially viable traits. But, ultimately it is a possible method to reduce the incidence of cannibalism.
- 8.12. In consultation with industry and for the purposes of quantifying the costs and benefits of the policy options in this final Impact Assessment, we have assumed that the strategies described above to reduce the risk and severity of an outbreak of feather pecking and cannibalism are currently not practicable for the egg industry. Therefore we have assumed that if a ban on routine beak trimming came into force on 1st January 2011 (Option 1) there would need to be an increase in labour devoted to inspecting flocks of laying hens to identify an outbreak of feather packing and cannibalism and to take appropriate action.

9. Wider context of beak trimming

- 9.1. The vast majority of the EU utilise the derogation in EU Council Directive 2007/43/EC to allow beak trimming. However, three EU countries do not beak trim: Sweden, Finland and Austria. The Netherlands plan to ban beak trimming from 2012. In addition, Norway and Switzerland do not beak trim laying hens.
- 9.2. The issue of beak trimming fits into a wider context where the use of conventional cages to keep laying hens will be banned from 1st January 2012. Therefore the risk to the welfare of laying hens from injurious pecking is likely to increase after the ban on conventional cages comes into force, as injurious pecking is greatest in systems of management which do not house birds in cages.
- 9.3. Scientific evidence has provided us with information on the welfare costs of beak trimming by both hot blade and infra-red techniques. On balance, the potential welfare consequences of not beak trimming outweigh the welfare consequences of allowing beak trimming. However, it is important to minimise the welfare costs associated with beak trimming and therefore a small number of studies have been carried out to assess the welfare impact of the procedure.
- 9.4. FAWC recently reviewed the most up to date evidence, including results of research by Glasgow University¹¹ which examined the neuro-physiological effects of infra-red beak treatment and concluded that infra-red technology posed the least welfare consequences of the techniques available. The evidence suggests that acute pain is probable in all techniques but that the risk of chronic adverse consequences for nerve function in beaks trimmed using infra-red technology is lower compared with when the hot blade technique is used. Observations of infra-red beak trimming by FAWC showed other advantages over manual hot trimming methods. These included the absence of an open wound with potential reduction in secondary bacterial infection, whilst achieving precise and consistent removal of the tip of the beak.

¹⁰ The EFSA Journal (2005) 197, 1-23; The welfare aspects of various systems of keeping laying hens

10. Current Industry position on Beak Trimming

- 10.1. As the costs and benefits of this final Impact Assessment are calculated on an annual basis, growing pullets have been excluded from the estimates of the total number of birds beak trimmed each year. This is because it has been assumed that the growing pullet stock replenishes the laying flock, so excluding them from estimates of the annual number of beak trimmed birds avoids double counting these birds in two consecutive years (once as a growing pullets, and then as part of the laying flock).
- 10.2. The current situation is that all hens housed in caged, free range and barn systems are routinely beak trimmed at present i.e. all laying hens except for those marketed as organic which are not beak trimmed. Most birds (95%) are obtained from the 4 main pullet hatcheries in the UK, which all currently use infra-red technology to beak trim chicks. Infra-red systems produce a high intensity heat that penetrates through the corneum layer down to the corneum growing basal tissue to burn the tip of the beak and to stop germ layer growth. The end of the beak is shed approximately 2 weeks post treatment. This represents approximately 1.62m hens each year which are currently beak trimmed using infra-red technology
- 10.3. The remaining 5% of hens housed in caged, free range and barn systems are beak trimmed using a hot blade; this is around 85,000 birds per year. The 'hot blading' technique uses a heated blade which simultaneously cuts and cauterises the beak tip.
- 10.4. Approximately 8.5% of laying hens in Wales are currently reared to organic standards. This equates to 52,000 birds. The organic standards set by the certification bodies in England & Wales preclude the routine beak trimming of organic laying hens. However, some bodies do permit emergency beak trimming of birds to control an outbreak of feather pecking and/or cannibalism based on veterinary advice. The organic sector has therefore been excluded from the calculations in this impact assessment.
- 10.5. Of the 1.71m birds reared in caged, free range or barn systems, approximately 95% (1.62m) are assumed to be routinely beak trimmed each year using infra-red technology, with the remaining 5% (approximately 85,000) assumed to be routinely beak trimmed using hot blading technology. .
- 10.6. Most birds will not be trimmed again but in an emergency, birds can be beak trimmed after 10 days of age to mitigate welfare problems caused by feather pecking and cannibalism. The method used to carry out emergency beak trimming must be suitable, as defined in The Mutilations (Permitted Procedures) (Wales) 2007, and the method adopted by the laying hen industry is 'hot blading'.

11. Description of options considered at consultation

- 11.1. We considered three policy options during a public consultation:
 - **Option 1:** Do nothing (which would mean a ban on all methods of routine beak trimming from 1st January 2011)
 - **Option 2:** Allow routine beak trimming using any method as long as it is carried out with a suitable instrument and any subsequent haemorrhage is cauterised (i.e. the current situation)
 - **Option 3:** Allow routine beak trimming using only infra-red technology.
- 11.2. The preferred option in the consultation Impact Assessment was Option 3, to allow beak trimming using only infra-red technology as there is evidence that other methods may be more detrimental to the welfare of laying hens in the long-term. Current evidence has indicated that infra-red beak trimming does not cause changes in beak nerve structure indicative of chronic pain.

- 11.3. **Option 1 is set as the baseline. Unusually, the ‘do nothing’ option is not the same as the current situation. At the moment routine beak trimming is permitted; however, without Government intervention, a ban will come into force by 2011.**

12. Outcome of consultation

A 6 week consultation between August and September 2010 was run to seek opinions on the an amendment to the Mutilations Regulations. In total 6 responses were received, all respondents answered some or all of the questions posed in the consultation paper. 83% of responses were received from industry representatives.

- 12.1. As a result of the consultation our preferred option remains Option 3 with the addition of a review date of 2015, inclusion of a training provision for those that carry out emergency beak trimming. These changes, along with the removal of organic laying hens from the majority of calculations and changes in the figures used for flock sizes are reflected in the costs and benefits of the preferred Option (Option 3) throughout the final Impact Assessment.
- 12.2. In addition to the consultation on the amendment to The Mutilations (Permitted Procedures) (Wales) 2007 relating to the beak trimming of laying hens, a consultation was carried out, amongst other issues, on the amendment of The Mutilations (Permitted Procedures) (Wales) 2007 to amend the mutilations provisions for conventionally reared meat chickens, including beak trimming. The changes are minimal and transpose the EU Council Directive 2007/43/EC. The amendment will ensure that if beak trimming of conventionally reared meat chickens is carried out, it should be done by a trained person, be restricted to birds that are less than 10 days of age, be after consultation and on the advice of a veterinarian and only be carried out to prevent feather pecking and cannibalism. The consultation closed on the 22 July 2009. No costs or benefits were identified in the consultation documents, including the Impact Assessment, as this procedure is not carried out on meat chickens, as they do not reach sexual maturity and therefore do not exhibit feather pecking or cannibalism behaviours

13. Detailed costs and benefits of the preferred Option: infra-red beak trimming only

- 13.1. The preferred option is to allow beak trimming using only infra-red technology. The costs and benefits of this option are calculated below. These have been estimated in comparison to a ban on beak trimming coming into effect. Unusually, the ‘do nothing’ option is not the same as the current situation. At the moment routine beak trimming is permitted; however, without Government intervention, a ban will come into force by 2011.
- 13.2. The costs and benefits of Option 3 are set out below. The quantifiable costs and benefits (i.e. beak trimming costs, training costs, cost savings and increases in egg production) for Option 2 are identical to those for Option 3. The difference between the two options (and the reason for Option 3 being the preferred option) is due to the evidence on possible chronic pain from the beak trimming procedure.
- 13.3. FAWC identified in their consultation response that some costs and benefits were not included in the consultation Impact Assessment, but stated that there would be little net effect. FAWC stated that additional costs could include installation of infrastructure, for example a hydraulic air supply, telephone connection and electrical power supply which would not be covered by lease agreements. FAWC suggested that these additional costs though would be offset by a potential reduction in secondary bacterial infections and

greater consistency of application resulting in reduced mortality and morbidity. As FAWC stated in their consultation response, it is not currently possible to quantify these benefits and it is likely that the net financial impact of the change in technology would be negligible. Due to the limited net impact we have not added these in the following sections.

13.4. Costs of the preferred Option

13.4.1. Potential acute pain during the beak trimming procedure

All laying hens that are beak trimmed, may experience some short term acute pain during the beak trimming procedure. It has been assumed that beak trimming using infra-red and hot blading cause the same levels of possible short term acute pain during the beak trimming procedure.

13.4.2. Possible chronic pain from the beak trimming procedure

Under the preferred option, all laying hens that are beak trimmed will be trimmed using infra-red technology. The potential pain that these birds may experience is acute and seems, on current evidence, not to develop into chronic pain. The results of the Glasgow study investigating whether laying hens that had undergone beak trimming using infra-red technology caused chronic pain concluded that the technique does not cause changes in beak nerve structure indicative of chronic pain¹¹. This conclusion was based on assessment of nerve structure using both histopathology and neuro-physiology techniques. In a separate study and using only histopathology assessment methods, Glatz and Hinch¹² identified nerve structures that may indicate chronic pain in the beaks of laying hens that had undergone infra-red beak trimming. The use of both histopathology and neuro-physiology assessment techniques is a more robust way of identifying if the nerve structures that are indicative of chronic pain are both present *and* functional. Therefore on balance, current evidence indicates that infra-red beak trimming is unlikely to cause chronic pain.

As hot blading will not be permitted under the preferred option, for birds switching from being beak trimmed by hot blade to infra-red technology, there will be a reduced risk of these laying hens developing chronic pain.

13.4.3. Cost of beak trimming procedure

13.4.3.1. The cost of beak trimming birds is 3p per bird. This cost is passed on to pullet rearers through an increase in the price of birds from hatcheries, compared to non-beak trimmed birds. We assume that this cost is further passed on to egg producers through an increase in the price of beak trimmed hens.

13.4.3.2. There are approximately 1.71m hens housed in caged, free range and barn systems in Wales. Assuming that each hen is beak trimmed once per annum, this translates to an annual cost of approximately £51,000.

13.4.3.3. The costs of beak trimming using infra-red technology or hot-blading technology are the same, which means that there will be no additional cost for producers that are currently using hot blading technology to switch to using infra-red technology. There is no cost to the hatchery to buy infra-red beak trimmers as they are leased from the manufacturers and the cost is ultimately passed onto the egg producer at a cost of 3p per bird. As stated earlier, we acknowledge that additional infrastructure costs may be

¹¹ McKeegan (2009) Defra final report: Chronic neurophysiological and anatomical changes associated with infra-red beak treatment http://randd.defra.gov.uk/Document.aspx?Document=AW1139_7989_FRP.pdf

¹² Glatz and Hinch (2009) Effect of hot blade and infrared beak trimming on beak condition, production and mortality of laying hens. Proceedings of Poultry Welfare Symposium Cervia, Italy, 18-22 May 2009

payable. These costs may be passed onto producers but they should be offset by improvements in morbidity and mortality .

13.4.3.4. The preferred option will not restrict manufacturers of hot blade equipment from supplying such equipment to laying hen producers for use on farm in an emergency in an identical way to Option 1, the ban on beak trimming coming into force. There is a risk of costs associated with strengthening the infra-red equipment manufacturer's monopoly.

13.4.4. Cost of training staff who carry out emergency beak trimming

13.4.4.1. In light of the Consultation responses, it was decided that producers will still be able to carry out emergency beak trimming on their flocks if required. This amendment to the Mutilations (Permitted Procedures) (Wales) 2007 Regulations has introduced a requirement that staff who carry out this procedure are appropriately trained.

13.4.4.2. For the holdings that undertake emergency beak trimming themselves, we expect that 50% of staff will need additional training. We anticipate that this training will be done in-house by a more experienced member of staff, so the cost of this training will be the staff time for stockmen being trained and those doing the training. We estimate that it will cost £60 per person being trained, assuming 3 hours per training session, average trainee wage of £7 per hour and average trainer wage of £13 per hour. Assuming on average 2 stockmen per holdings and that 75% of holdings undertake emergency beak trimming themselves (rather than contracting out), the training cost in the transitional period is estimated to be approximately £14,000.

13.4.4.3. On an ongoing basis, the costs to industry are dependent on the number of new stockmen expected to join the industry, estimated to be almost 50 per year (based on 10% annual staff turnover). The annual costs reflect the costs training these staff, £60 per stockmen as before. So, the annual cost of training will be approximately £3,000 per annum.

Government costs

13.4.4.4. There will be no change to government costs if beak trimming is allowed to continue. This is because there will be no changes to enforcement costs, as hatcheries, pullet rearers and egg producers are already checked regularly by competent authorities.

13.5. **Benefits of the preferred Option**

13.5.1. Decreased injurious feather pecking of laying hens

13.5.1.1. Allowing routine beak trimming will decrease the incidence of injurious feather pecking amongst laying hens compared to a ban on beak trimming. This is because beak trimming reduces feather pecking behaviour causing injuries to laying hens.

13.5.1.2. It has been assumed that injurious feather pecking affects between 40% and 80% of non beak trimmed hens, and that beak trimming hens decreases the incidence of injurious feather pecking to between 0% and 20%. This reduces the number of hens affected by injurious feather pecking by between 20 percentage points (from 40% in non beak trimmed hens to 20% in beak trimmed hens) and 80 percentage points (from 80% in non beak trimmed hens to 0% in beak trimmed hens).

- 13.5.1.3. On this basis, between 340,000 and 1.37m fewer hens will be affected by the injurious feather pecking per annum compared with a scenario whereby a ban on beak trimming was introduced.
- 13.5.2. Decreased mortality of laying hens
- 13.5.2.1. Allowing routine beak trimming will decrease the mortality rates of laying hens, compared to a ban on beak trimming (Option 1), due to a decreased incidence of cannibalism. This has both welfare and financial benefits, through a decrease in mortality and an increase in egg production.
- 13.5.2.2. Given the known variation in mortality rates due to cannibalism, a range has been estimated to calculate the scale of the potential decreased hen mortality. It has been assumed that non-beak trimmed hens have a mortality rate, due to cannibalism, of between 0% and 20%. 0% is likely to be an underestimate, but reflects the possible use of emergency beak trimming should an outbreak occur, mitigation efforts made by egg producers to reduce mortality, and the uncertainty about how frequently outbreaks of cannibalism occur. In contrast, 20% has been set a maximum, as whilst very high mortality rates may occur in individual flocks, it is unlikely that all flocks will experience outbreaks of cannibalism.
- 13.5.2.3. It has further been assumed that beak trimmed hens have a mortality rate, due to cannibalism, of between 0% and 2%. However, as a lower bound on the difference between the mortality rates of beak trimmed and non beak trimmed hens, it has been assumed that beak trimming does not affect the mortality rates of laying hens. So, as a minimum, beak trimmed hens and non beak trimmed hens will have the same mortality rates.
- 13.5.2.4. If beak trimmed hens and non beak trimmed hens have the same mortality rate, allowing beak trimming will not change the mortality rates of laying hens, this represents a 0 percentage point decrease. However, if non beak trimmed hens have a mortality rate due to cannibalism of 20% whilst beak trimmed hens experience a rate of 0%, allowing beak trimming will decrease mortality rates due to cannibalism of laying hens by 20 percentage points, from 20% to 0%. This means that allowing beak trimming is expected to decrease cannibalism related mortality rates in laying hens by between 0 percentage points and 20 percentage points.
- 13.5.2.5. On this basis, the total decrease in hen deaths is estimated to be between 0 and 340,000 per annum in Wales.
- 13.5.3. Increased egg production
- 13.5.3.1. Fewer hens deaths during the laying period will increase egg production. For the purposes of the calculation, the midpoint reduction in mortality rates, of 10 percentage points, has been assumed.
- 13.5.3.2. The size of increase in egg production will depend upon when an outbreak of injurious feather pecking and cannibalism would have occurred during the laying period. This is difficult to assess, and is likely to vary across flocks. As a result, it has been estimated that the outbreak would have occurred with between 25% and 75% of the laying period remaining. When beak trimming is allowed, there would be higher egg production in the remaining period, as there are more hens compared to the scenario under a ban on beak trimming (Option 1).

13.5.3.3. The increased revenue for egg producers from the additional egg production is offset against the increased feed costs that result from keeping more hens. It has been assumed that all other production costs will remain constant, as they are fixed costs which are planned at the beginning of the laying cycle.

13.5.3.4. An estimate of the benefit in Wales has been calculated based on assumptions contained in the Defra IA. The total benefit for the egg industry in Wales is between £0.39m and £1.19m

13.5.4. Decreased labour costs

13.5.4.1. Allowing routine beak trimming is anticipated to decrease labour costs for egg producers compared with a ban on beak trimming. This is because the length of flock inspections is expected to decrease, by around 0.5 hours per day. Assuming an egg producers' staff time is worth £7 an hour, this translates to an average annual benefit of £1,280 per egg producer. The total industry benefit is therefore approximately £0.4m.

Table 3: Summary of monetary costs and benefits per annum

Costs and Benefits	Preferred Option – Infra-red only allowed	Location in final Impact Assessment (Paragraphs)
	Changes compared to allowing a ban on beak trimming to come into effect	
Costs		
Cost of beak trimming chicks	£160	£51,000
Training costs	£60	£14,000 transition costs £3,000 per annum
	Total Transition Costs	£14,000
	Total Annual Costs	£54,000
Benefits		
Egg production	£1,250 - £3,750	£0.39m - £1.18m
Labour costs	£1,280	£0.4m
	Total Transition Benefits	0
	Total Annual Benefits	£0.79m – 1.58m

13.5.5 The Net Present Value (NPV) of the preferred option over a 5-year period is between £3.4m and £7.1m, with a central estimate of £5.3m. This is in addition to the non-monetary benefits identified above.

14. Risks and assumptions

- 14.1. There is a risk that the industry do not comply with the amendment to the Mutilations (Permitted Procedures) (Wales) Regulations 2007 and continue to beak trim the 5% of birds currently trimmed per year using a hot blade. This would reduce the expected benefits to the welfare of laying hens as they will experience a greater risk of chronic pain compared with those that are beak trimmed using infra-red technology. This has been mitigated by the discussions that the British Egg Industry Council has had with those rearers who currently routinely carry out this procedure using a hot blade.
- 14.2. There is a risk that industry are not aware that staff who perform emergency beak trimming must be qualified to carry out this procedure. This has been mitigated by the discussions that the British Egg Industry Council has had with the industry.
- 14.3. There is a risk that more than a third of the beak is removed during routine or emergency beak trimming of birds intended to become laying hens or laying hens. This could reduce the welfare of birds that are beak trimmed. This risk is mitigated through risk based and random inspections of hatcheries, rearing units and laying hen units.
- 14.4. There is a risk to the welfare of laying hens from injurious pecking as it is likely to increase after the ban on conventional cages comes into force in 2012. The preferred option will mitigate this risk compared with the do nothing option.
- 14.5. Meat chickens are not beak trimmed either routinely or in an emergency in Wales at the present time and we have assumed this situation will continue.

15. Administrative burden and policy savings calculations

- 15.1. There are no additional administrative burdens to industry.
- 15.2. Policy savings to businesses need to be calculated from changes to the current industry practice of beak trimming using both hot-blading and infra-red technology. Note that this is different to the baseline, of a ban on beak trimming coming into place, used to calculate the costs and benefits of the preferred option. Compared to current industry practice, the preferred option does not introduce any policy savings and instead imposes a small additional cost from the requirements to have staff trained to carry out emergency beak trimming.

16. Wider impacts

16.1. Competition assessment

In assessing the competition aspects of these proposed options, four key questions need to be addressed:

- i) Whether the proposals directly limit the number or range of suppliers?
- ii) Whether they indirectly limit the number or range of suppliers?
- iii) Whether they limit the ability of suppliers to compete?
- iv) Whether they limit suppliers' incentives to compete vigorously?

16.1.1. Monopoly in beak trimming technology

Under current practice, of the birds that are beak trimmed routinely, about 95% of birds are beak-trimmed using infra-red technology and 5% are trimmed using hot-blading technology. Option 3 allows beak trimming by infra-red technology only. The machinery to undertake this procedure is made by one manufacturer, which has patented the equipment until the

patent expires in 2015.¹³ This will therefore increase the manufacturer's already strong monopoly position in the UK. At the present time, we understand from industry that this manufacturer has the same pricing policy for all of their customers outside of the USA. In this international context, the proposed option will have a much smaller impact on the manufacturer's monopoly position. Nonetheless, it may be the case that the manufacturer reviews its pricing policy following this amendment to the legislation, which could lead to an increase in the price charged.

However, the cost of beak trimming by either method is 3p per bird, which is a very small proportion of total production costs. So the existence of such monopoly power may not be seen as having a significant impact on pullet rearers, and in turn egg producers.

16.1.2. Directly limits the number or range of suppliers

Restricting the permitted technology used to beak trim laying hens to infra-red technology only, will directly limit the range of suppliers of beak trimming technology, as alternative beak trimming technologies are no longer permitted. However, under this option, producers will still be permitted to use hot blade equipment on farm in an emergency in an identical way to Option 1.

16.1.3. Indirectly limits the number or range of suppliers

As the manufacturer has patented the equipment rather than the infra-red technology, it might be possible for other manufacturers to develop different equipment that also uses infra-red technology. Therefore, this option will not directly limit manufacturers from developing alternative infra-red equipment. However, this cost is likely to be significantly higher than the costs to the current manufacturer, so Option 3 may indirectly limit the number of suppliers of infra-red beak trimming technology.

16.1.4. Limits the ability of suppliers to compete; or limits suppliers' incentives to compete vigorously

Restricting the permitted technology used to beak trim laying hens to infra-red technology only, may limit the ability of suppliers of beak trimming technology to compete. This is because it is likely to limit the scope for innovation by suppliers to introduce alternative beak trimming technology that meet the required animal welfare standards to the English beak trimming market.

16.1.5. Competition assessment of egg producers

It is not felt that this proposed amendment will reduce the number or range of suppliers of layer flocks nor limit the ability of these suppliers to compete with each other for any of the options proposed. Compliance with the amendment to the statutory instrument will not limit firms' 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 layer sector is dominated by a small number of large suppliers. However, it is not thought that the amendment would affect the ability of other firms to compete with them – all farms would have to comply with the legislation.

16.2. Small Firms Impact Test

Almost all egg producers would be classified as a small firm, as they employ fewer than 20 full-time equivalent employees. Under the preferred Option there is a net benefit to egg producers, as described above. Establishments with less than 350 laying hens are excluded from the provision of the Regulations.

16.3. Sustainable Development

¹³ [United States Patent no. 5,651,731 Method and apparatus for debeaking poultry, applied for on 23rd June 1995](#)

The proposed amendment is in accordance with the shared UK principles of sustainable development.

16.4. Carbon Impact Assessment

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

16.5. Other Environmental Issues

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

16.6. Health Impact Assessment

The proposed amendment will not directly impact on health or well being and will not result in health inequalities.

16.7. Race/Disability/Gender

A screening of the proposal against a checklist of questions as part of the Equality Impact Assessment has revealed that there is no impact on equality issues.

16.8. Human Rights

The amendment is consistent with the Human Rights Act 1998.

16.9. Rural Proofing

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

16.10. Justice system

The draft Regulations do not create any new criminal sanctions or civil penalties.

Appendix 1

Table 1: Mortality results of studies of beak trimmed and non beak trimmed birds

Author	Description	Mortality rate of non beak trimmed birds	Mortality rate of beak trimmed birds
ADAS, 2004 UK ¹⁴	Hyline brown hens housed in caged systems	9.9%	1.9%
Hadorn et al., 2000 Switzerland ¹⁵	ISA brown hens housed in aviary systems	12.3% (Cannibalism related mortality – 7.4%)	2.2% (Cannibalism related mortality – 0.3%)
Guémené et al., 2004 France ¹⁶	ISA brown hens housed in caged conditions	36% - 52%	3% - 7%

¹⁴ http://www.efsa.europa.eu/en/scdocs/doc/lh_scirep_final1,0.pdf

¹⁵ Hadorn et al. (2000) Effect of beak trimming on brown growing pullets and laying hens, Agrarforschung

¹⁶ Guémené et al. (2004)

Annexes

Annex 1 should be used to set out the Post Implementation Review Plan as detailed below.

Annex 1: Post Implementation Review (PIR) Plan

A PIR should be undertaken, usually three to five years after implementation of the policy, but exceptionally a longer period may be more appropriate. A PIR should examine the extent to which the implemented regulations have achieved their objectives, assess their costs and benefits and identify whether they are having any unintended consequences. Please set out the PIR Plan as detailed below. If there is no plan to do a PIR please provide reasons below.

Basis of the review: [The basis of the review could be statutory (forming part of the legislation), it could be to review existing policy or there could be a political commitment to review];

Review objective: [Is it intended as a proportionate check that regulation is operating as expected to tackle the problem of concern?; or as a wider exploration of the policy approach taken?; or as a link from policy objective to outcome?]

Review approach and rationale: [e.g. describe here the review approach (in-depth evaluation, scope review of monitoring data, scan of stakeholder views, etc.) and the rationale that made choosing such an approach]

Baseline: [The current (baseline) position against which the change introduced by the legislation can be measured]

Success criteria: [Criteria showing achievement of the policy objectives as set out in the final impact assessment; criteria for modifying or replacing the policy if it does not achieve its objectives]

Monitoring information arrangements: [Provide further details of the planned/existing arrangements in place that will allow a systematic collection systematic collection of monitoring information for future policy review]

The competitive implications of restricting beak trimming to the use of infra-red technology only will also be monitored and reviewed between 2011 and 2015 and will feed into the post implementation review.

Reasons for not planning a PIR: [If there is no plan to do a PIR please provide reasons here]