

Research Report on CCTV Monitoring in Slaughterhouses

Ian D. Rotherham, Joe Worden, & Paul Cormack
Cormack Economics, HEC Associates, & Sheffield Hallam University

Executive Summary

The welfare of animals at the time of their slaughter remains a matter of considerable public concern. Confidence in the government's handling of the sector will not have been enhanced by a series of slaughterhouse undercover investigations that produced disturbing footage of ill treatment of animals at the time they were being stunned and then killed. Against this background, the effective implementation of legal welfare standards and the monitoring and inspection of processes are essential.

A sign of this issue's growing significance are the 112,285 people who, in 2015, signed a petition on the Government's No.10 website calling for mandatory CCTV in slaughterhouses with independent monitoring.

Furthermore, at the latest count, at least 145 current MPs support the campaign for mandatory CCTV in slaughterhouses (142 signed the latest EDM, and another three who do not sign EDMs have had their photograph taken with Animal Aid's campaign banner). With earlier support from MPs prior to their elevation to the front benches, the figure would rise to over 160.

Of the 317 approved premises across Great Britain, the FSA completed 306 supposedly unannounced animal welfare inspections in February and March 2015. These were 256 in England, 24 in Scotland, and 26 in Wales. Unannounced inspections were not possible for five remote island plants in Scotland. Six businesses in England were not operational at the time of the inspection programme. These were audits done by the FSA but were announced via the national media a month before inspections being undertaken.

Also pertinent is the recent report that CCTV in public spaces for example, is a major and effective deterrent to anti-social behaviour and particularly to violence.

The research for this report included a targeted stakeholder survey, expert consultation, a review of policy and practice literature, a review of economic issues, and a review of technical issues.

The clear conclusion is that the current system of welfare monitoring is failing and that compulsory use of CCTV with independent monitoring is the only robust solution.

Furthermore, the review concludes that this process as proposed is cost-effective and feasible. A small scale pilot scheme can be undertaken to test feasibility.

The report presents a series of recommendations to carry these policies forwards.

Preamble & Context – The Stow Reports and other initiatives

A discussion of animal welfare issues and surveillance in slaughterhouses is usefully set in the context of recent developments in regulation and related funding.

- In 2015, there were around 260 slaughterhouses in England plus game handling establishments and these 'handled' almost a billion animals a year.
- EU legislation requires meat official controls in all plants to protect human and animal health, and animal welfare.
- FSA also delivers official controls for shellfish, wine and dairy but these are uncharged i.e. the taxpayer pays for them.
- Under EU regulations, the FSA is required to charge for the cost of delivering certain official meat controls. Businesses currently cannot be charged less than the EU-set minimum, which is a charge per animal set in euros.
- The charging system from 2001-2009 meant plants paid either the species rate or the cost of the Official Veterinarians (OVs) and Meat Hygiene Inspectors (MHIs). These were set below the level of full costs, whichever was less. This system was introduced to protect industry from the sharp increase in costs from 1997 onwards, caused by increases in vet supervision levels and increases in charge rates.
- In 2007, the FSA decided to move towards a time-based charging system – intended as an important step to incentivise FBOs to be more efficient in their use of FSA staff. It also proposed an increase in charges to move towards industry paying the full cost of delivery. The aim was to reduce the subsidy by £10m by 2014/15 to allow the FSA to use its funds elsewhere.
- Although UK government Ministers agreed that if a business's throughput and all other factors remained

unchanged, they would not pay any more than under the previous system, time-based charging was introduced in 2009. However, the change did not lead to real efficiencies, as many FBOs were already paying the EU minima, and so there was no incentive to become more efficient.

- In 2009, the FSA Board agreed three principles:
 1. It is not a function of the FSA to subsidise industry. If a subsidy continues, it should come from elsewhere
 2. Providing the best protection to consumers should not be based on the ability of industry to pay
 3. The FSA should consult with government and industry regarding full cost recovery of meat controls
- During 2010-11, there was extensive stakeholder engagement. The Board then decided to initiate full cost recovery over a three-year period from April 2012. The £3.2m of subsidies to low-throughput plants (less than 5,000 livestock units) would continue. In May 2012, the government's Reducing Regulation Committee decided that this plan could not go ahead.
- From 2012 onwards, the EU was moving towards a risk-based programme for controls, and this meant a reduction in costs. Parts of the industry argued that the move to full-cost recovery should wait. EC Regulation 882/2004 was also to be reviewed and this would re-consider reforming the charging mechanism.

Stow 1

- In this context, whilst these issues were being resolved, the FSA set up a collaboration headed by Chairperson Bill Stow, Director & General Head of Policy, Defra. This was to review the discount system, with a later plan to widen the remit and identify ways to reduce costs, and assess control body options (i.e. other models for delivering official controls). Both the British Meat Processors' Association (BMPA) and the Association of Independent Meat Suppliers (AIMS) submitted models.
- There was to be a commissioned 12-month external review to examine the scope for further efficiencies. (Business agreements had helped, but in 2011/12, there was still £2.6m of unused FSA time still charged for, and paid for 50/50 by FBOs and taxpayer.)
- The report of September 2012 by Andrew Rhodes (then Director of Operations of FSA) stated, 'It has always been difficult to engage consumers in the questions around meat hygiene charging. The sums involved, while significant in the context of the businesses, are minor in their contribution to the price of meat.'
- The Steering Group for Meat Charging was set up, with 15 representatives from across production

and processing sectors, the Chair and FSA Board Member (Jeff Haliwell). In July 2014, the Steering Group presented a proposal on discount changes, which the FSA accepted and launched a 12-week consultation. (This did not apply in Scotland, which, from April 2015, delivered its own controls.)

- A new system was proposed with levels of discounts being applied based on FSA staff time, and a supplementary discount for plants using PIAs (privately paid poultry inspectors). This would start in 2016 and all discounts to cutting plants would stop.
- It also suggested that another group, (Stow 2), be established to review the wider issues of full cost recovery and alternate delivery models. The FSA agreed but wanted to await the impact of the first phase (Stow 1).
- In 2013-14, the cost of official controls was just over £57m, with industry paying £32m and discounts given totalling £25m.
- A consultation was undertaken and a proposal for setting out a preferred option of discount banding was issued. Ultimately, the consultation was completed (though not all industry stakeholders were supportive), and it is currently going through the governmental regulatory process.

Stow 2

- In September 2015, the Board was asked to note the outcome of the consultation. It supported the development of a 'sustainable funding model' through Stow 2, i.e. 'full cost recovery'.
- In particular, the collaborative approach was praised and this would continue into Stow 2. Nevertheless, there were concerns that if sections of the industry failed to support Stow 1 it might falter at the regulatory stage. The Board would then need to re-consider whether to invest in Stow 2.
- By March 2016, the Steering Group had met three times and concluded it would develop a second phase once Stow 1 was successfully concluded. The process was expected to be lengthy and an interim report is due in January 2017.
- A key point to be noted is the aspiration of the review that, 'any Sustainable Funding Model should be funded by industry and meat consumers rather than government and taxpayers'. This policy statement is important for the economic model proposals for slaughterhouse surveillance.

PART 1: Introduction & Background

Animal welfare and associated issues in the slaughter process are hugely important and of concern to the public and to professionals. The effective monitoring and reporting of the mistreatment of animals at the slaughterhouse are problematic and require action to resolve long-standing difficulties. Following initial investigations between 2009

and 2011, which showed unacceptable and illegal practices inside British slaughterhouses, Animal Aid called for the mandatory installation of CCTV. They were encouraged when major supermarket retailers and one wholesaler agreed to deal only with abattoirs with independently monitored CCTV surveillance although the standard of this varies considerably. This take-up followed the controversy generated after Animal Aid's investigations and was a welcome step. Furthermore, the RSPCA and other groups subsequently joined with Animal Aid in stressing the need for independent monitoring of CCTV footage.

These were progressive and welcome moves. However, Animal Aid's later investigations at two slaughterhouses, which did have CCTV installed, showed workers burning pigs with cigarettes, and punching, kicking and beating animals around the face. This highlighted the need for CCTV film to be monitored effectively and independently. Only in this way can any breaches be detected and acted upon.

To begin the effective resolution of these issues, it is proposed that a CCTV Monitoring Group should be established. This group would include a team with one full-time project manager (responsible for a number of supporting paid monitors). They would be overseen by a committee of independent scientists, a veterinarian and representatives from appropriate stakeholder organisations. The costs are made up of the estimated employment cost for the team leader [cost element 1] and the expenses associated with employment of the workforce [cost element 2], plus any accommodation, recruitment, training and equipment, and the necessary IT / data logging support, and the committee expenses [cost element 3]. Establishing this group and the associated process will also help to grow confidence in higher welfare claims within the meat industry.

The proposed structure

An initial scoping exercise estimated overall costs of establishing an effective CCTV monitoring programme for all slaughterhouses in England to be between **£150,000 and £370,000 annually** [cost element 1 + cost element 2] (depending on scale of operation etc). This does not include [cost element 3] since this is currently intangible.

These costs can easily be borne jointly by all retailers joining the scheme and / or by the slaughter industry. For a modest investment in the independence of CCTV monitoring, the potential welfare benefits are significant.

There are modest additional start-up costs for both elements.

The case for mandatory CCTV in slaughterhouses - Animal Aid's investigations and findings:

Between 2009 and 2014, Animal Aid filmed secretly inside ten randomly chosen UK slaughterhouses. With evidence of cruelty and law breaking found in nine, problems are serious and widespread. Films revealed animals kicked, slapped, stamped on, and picked up by fleeces and ears and thrown into solid structures. Film recorded animals improperly stunned, regaining consciousness, or suffering painful electrocution instead of stunning. Animals were filmed deliberately and illegally beaten and punched, and pigs burned with cigarettes.

Neither the on-site vets nor the slaughterhouse operators (who have ultimate responsibility for animal welfare) detected any of these illegal acts. In this context, Animal Aid is campaigning for mandatory, independently monitored CCTV.

Why a voluntary scheme will not work

There are around 260 slaughterhouses in England (the exact figure varying over time).

Since welfare at slaughter is a devolved issue, any decision taken at Westminster on mandatory installation of CCTV would apply only to slaughterhouses in England.

Historically, some slaughterhouses chose to install CCTV but the cameras were by-and-large used to prevent meat theft, rather than to protect animals and the footage was monitored internally.

In 2010, following the first stages of Animal Aid's investigation inside English slaughterhouses, supermarkets began to see the value of insisting that their slaughterhouse suppliers had CCTV installed. Animal Aid urged all the leading supermarkets to deal only with slaughterhouses that had CCTV installed. The campaign went on to press home these arguments with a series of adverts in national newspapers with their messages directed at supermarket bosses. Between November 2010 and June 2011, every major supermarket insisted that the slaughterhouses that supply them install CCTV. Additionally, all those slaughterhouses that kill animals as part of the Freedom Food accreditation scheme (now called RSPCA Assured), also installed CCTV. However, it is clear that voluntary compliance does not achieve effective cessation of all malpractice.

The cost of installing the cameras

The Defra Minister George Eustice has already confirmed this as being low. For example, there are many variables when it comes to pricing CCTV equipment and installation but the costs have reduced considerably in recent years. It is suggested that a fully installed four-camera system with remote viewing and night vision would cost in the region of £700 to £900. This, Animal Aid believes, would be adequate for smaller slaughterhouses. An eight-camera system would

be around £2,500 per slaughterhouse. These are one-off costs and about 50 per cent of slaughterhouses have already installed them. That covers the majority of animals.

Independent monitoring is essential

Animal Aid's investigations of slaughterhouses with CCTV (see above) confirm the need for independent and effective monitoring of surveillance outputs.

Support from stakeholders for mandatory CCTV with independent monitoring

Our review of the opinions of key stakeholders confirms support for such independent and compulsory surveillance and monitoring.

This report presents the following conclusions that emerged from the review:

Most respondents believe that current slaughterhouse monitoring systems are not adequate and that independently monitored CCTV surveillance would enhance animal welfare. This monitoring should be compulsory and backed by appropriate legislation. Funding of the installation and monitoring of footage could be by the slaughterhouse operators, or jointly by operators and government. However, the conclusion of this study is that industry should pay for the service. Either a government agency such as the FSA, an independent body (i.e. competent and credible but not tied to the industry or the establishment) such as the RSPCA, or a combination of the two should carry out monitoring.

Perceived barriers to the implementation included a lack of will by UK government and slaughterhouse operators, and cost, particularly for small businesses. The RSPCA has considerable experience in this matter as the installation and monitoring of CCTV is a prerequisite for accreditation for their RSPCA Assured scheme. They also highlight issues around monitoring protocols and training of monitoring staff.

Perceived benefits are improved monitoring and enforcement, leading to a reduction in malpractice and an improvement in animal welfare. Other benefits identified included retrospective sanctions for bad practice and improved staff training and compliance through use of footage to highlight both good and bad practice. CCTV can also be used to demonstrate high standards of good practice and animal welfare enhancing a business's reputation. One academic respondent points out however that there is currently no 'scientific' evidence proving that CCTV does improve animal welfare. However, the Animal Aid research clearly shows abuse and their monitoring of the footage led to licence revocations and prosecutions, and indicates that independently monitored footage can both detect abuses, and create evidence for effective remedial action.

Perceived downsides of CCTV were cost and monitoring issues, especially in smaller abattoirs. The RSPCA also pointed out that unless implemented properly, installation could lead to a false sense of security, and actually mask bad practice in some areas. The majority of respondents saw no downsides to effective monitoring.

A report published by the Farm Animal Welfare Committee (FAWC) in February 2015, recommended CCTV installation and monitoring in all slaughterhouses but fell short of calling for legislative enforcement. Policy statements from the RSPCA and the British Veterinary Association (BVA) endorse the recommendations of the FAWC report and additionally, call for mandatory implementation. A recent communication from the then Environment Secretary Liz Truss stated that the UK government is exploring ways to encourage the use of CCTV in those slaughterhouses where it is not currently used, but it has no plans to enforce it through legislation, as it is deemed unnecessary.

This report now considers:

- How independent monitoring could be carried out, and what the best configuration is likely to be
- An economic analysis that provides hard figures for how much an effective independent monitoring scheme is expected to cost
- A proposal for how this cost could be met

PART 2: How independent monitoring might be undertaken

There are various possible schemes for monitoring (run, for example, by the RSPCA, FSA, FAWC etc), and these each differ in terms of emphasis and potential efficacy or issues. Any scheme needs to be transparent, effective, and for credibility, to be independent from interference by both government and industry. Having considered the options and the stakeholder issues, the scheme outlined below is recommended.

Proposed monitoring Committee & staff

It is suggested that a monitoring Committee, responsible for overseeing the scheme would be established. The formulating body that initiates this committee (whether governmental, academic, animal welfare or other), would first select a Chair and members of the committee. These would then be involved in the appointment of employees for the actual monitoring of the footage. The Committee members would be appropriate individuals from stakeholder organisations including government and industry, but it would not be under the control of either UK government or the industry.

This committee would be supported by a dedicated lead officer with a team of several employees tasked with

the day-to-day monitoring of the footage. Reporting of breaches would be to this Committee and to the FSA. The number of employees will vary depending on decisions about the frequency and quantity of monitoring required.

It is anticipated that an independent animal welfare expert would chair this Committee. The members of the Committee would include a range of stakeholders, such as representatives from industry and animal protection groups. The Committee would meet two or three times a year (by telephone or in person) to discuss trends, emerging issues, and problems or staff-related matters. They would produce an annual report with a similar purpose, and which would summarise breaches uncovered during the year (with slaughterhouse details anonymised), and would produce audited annual accounts. They would be supported and serviced by the lead officer.

There will be initial issues to consider of which body or organisation takes legal and employment responsibility for this operation and whether this is an existing stakeholder or is newly established for this task.

The outcome of this initial consideration affects matters like accommodation and employment liabilities, insurance, administration, and associated costs. Hence the overall budget for project establishment and for annual maintenance is presented as a range with upper and lower bands.

Finally, there are also issues of employee welfare raised during the course of this research. Involvement in, or exposure to, some of the bad practice and even to routine slaughter, as reported by Animal Aid and the RSPCA, may have long-term psychological impacts on employees. By ensuring high standards and transparency within the industry, this adverse human impact may be reduced. However, this is an area which merits further research.

Access to CCTV footage

Once the scheme is operational, it is anticipated that footage from the CCTV cameras of each slaughterhouse would be automatically uploaded to a secure digital location such as The Cloud. However, recent discussions with technical experts suggest that the technology, available bandwidth, and storage for the considerable amount of data being processed, cannot yet be fully supported. Nevertheless, the technical specialists suggest that data from each slaughterhouse network of cameras can be streamed to a) the office of the on-site vet, and b) accessed from a remote central monitoring office.

The paid monitoring team and Committee members would be able to access this footage via a secure process and protocol. The automation of this process of footage being streamed to the office of the on-site veterinarian and to a central location would make it extremely difficult for the footage to be lost or corrupted by the slaughterhouse. It is

important too, that there is an enforceable requirement for footage to be handed over to the authorities if requested. There may be technical issues to resolve before direct streaming to a central point becomes feasible. Accessibility to fast broadband in rural areas may be a problem although government policy is for this to be upgraded.

The system could be anonymised so that each slaughterhouse was numbered rather than named. The employees who monitor the footage would then simply use the slaughterhouse's reference number to report any breaches to the FSA, who would know the establishment's identity.

This step and protocol will help to reassure industry about the security of the process and prevent bias caused by employees knowing that they were reviewing footage from a slaughterhouse with a poor track record.

However, along with the FSA, the Chair and Committee will know the identity of the individual slaughterhouses. This will be necessary so that the Committee can liaise effectively with the FSA on specific cases and when appropriate, monitor the progress and outcomes of specific cases.

Location for monitoring operations, equipment & staff

Employees of the monitoring committee or the parent formulating body will access the footage whilst based at a dedicated office. This office space could be purchased, unless provided by a partner 'host' organisation.

In this context, there may be stakeholders already with office space and capacity that could be used for this purpose, and for meetings of the Committee. There will still be cost implications of such an arrangement.

Procedure for monitoring

The role of the Committee employees would be to review the footage and help detect any legal breaches or other causes of concern.

When the employees detect a problem, they will log the incident according to an agreed protocol, and both the Committee and FSA will be alerted automatically.

Quantity of footage & number of employees

Clearly, the number of people employed to monitor the footage will depend on how many hours are reviewed from each slaughterhouse, and how often each establishment has its footage reviewed.

The latest figures from the FSA show that there are about 260 slaughterhouses in England¹.

It is estimated that each employee could review four hours of footage per day, leaving the rest of the time for note taking, liaising with the FSA, taking breaks etc. Over a five-day week, each employee should therefore be able to review around 20 hours of footage. Over a 45-week year, (if each employee were to take six weeks' holiday and one week's sick leave)², each individual would be able to review around 900 hours of footage.

In order to apply resources most effectively to monitoring the full cohort of establishments, each slaughterhouse would be subject to bi-monthly monitoring. The specific figure of 262 slaughterhouses, for example, would be split into two groups of 131 (group A and group B), and each cohort examined every two months. In any one month, footage would be reviewed from either group 'A' slaughterhouses or group 'B', and this would be reversed in the following month. Based on the above figures a sliding scale of the number of staff needed is presented in the table below.

Hours of footage to be monitored per slaughterhouse per year	Total hours of footage to be monitored per year	Number of employees needed
6	1,572	1.7
12	3,144	3.5
18	4,716	5.2
24	6,288	7.0
30	7,860	8.7
36	9,432	10.5

Providing for whistle-blowing

A key part of the proposal is the provision of a secure and anonymous mechanism to allow reporting by in-facility whistle-blowers, and for this to follow a strict protocol of investigation and verification. In this respect, there needs to be a system in place for following up complaints from whistle-blowers about particular slaughterhouses or individual slaughtermen. We see three potential options for this:

1. An additional staff member could be employed who would deal only with whistle-blowing. They would be part-time, as the number of hours needed to deal with such complaints is likely to be significantly lower than for routine monitoring. In the event of there being no whistle-blowing complaints, the part-time staff member could assist with the routine monitoring of footage.

2. The committee could use the services of a consultant, as and when it became necessary to deal with whistle-blowing complaints. This would allow the system to be demand-led, rather than setting aside a budget that may turn out to be

unnecessary. However, using the services of a consultant may turn out to be more expensive than employing a part-time member of staff, given that consultants typically earn a higher salary per hour than permanent employees.

3. Dealing with whistle-blowing could be left to the FSA, which currently addresses such complaints and already has structures in place for doing so. They could access the footage that was uploaded to the secure system to review relevant sections.

We propose that the most appropriate way forwards on this, is that whistle-blowing incidents are logged and recorded according to an agreed protocol. If the reports pass an agreed initial degree of scrutiny, then the incidents are passed directly to the FSA to investigate and relevant footage is made available for the FSA to inspect. However, in order to protect the anonymity of anyone in the industry reporting an incident, the FSA investigation should proceed as a routine and random inspection. They will report to the Committee so that the outcome can be recorded.

The whistle-blowing system will require a dedicated email, a dedicated telephone line, and a small budget to promote its availability.

PART 3: How much independent monitoring would cost

An outline cost for the scheme as described

Employee salaries would obviously depend to some extent on their level of experience and expertise within the field of animal welfare (prior to specialist training for the role). We propose that this should not exceed £27,000 pa, which is the maximum that an Executive Officer in the FSA (outside of London) would earn.³ The table below indicates the cost of employee salaries per year, based on the £27,000 pa maximum (excluding employment costs) for the team and £35,000, for the team leader. Other staff such as the administrative worker would be paid less than this.

Estimated employment costs			
Hours of footage to be monitored per slaughterhouse per year	Total hours of footage to be monitored per year	Number of employees needed	Maximum total cost of employees' salaries per year (£)
6	1,572	1.7	45,900
12	3,144	3.5	94,500
18	4,716	5.2	140,400
24	6,288	7	189,000
30	7,860	8.7	234,900
36	9,432	10.5	283,500

Team Leader/Supervisor - fulltime	35,000
Admin support worker - part time	10,000
Cost of an additional part-time staff member employed to deal with whistle-blowing (working two days per week, with a maximum pro rata salary of £27,000) costing £10,800 per year + 20% = c. £13,000.	
Employment overhead for the above to be added @ 20%	
Total costs:	
Lower band £111,000 + 20% = £133,200 + £13,000 = c. £146,200	
Upper band £295,000 + 20% = £354,000 + £13,000 = c. £367,000	

If the FSA were left to deal with whistle-blowing as it does at the moment, then that additional cost would not apply.

The Committee's positions would probably be voluntary but this cannot be assumed. Clearly, expenses such as travel, food and accommodation would be reimbursed and there may be a requirement to pay an honorarium for at least some members. With only one actual meeting per year, and the rest conducted via phone or Skype, it is hoped that such expenses would be negligible.

There will be a cost for producing an annual report and accounts.

Additional project costs [cost element 3]

It is anticipated that there will be a number of additional costs, such as:

- Training for Committee or organisational employees – on IT matters and on slaughterhouse issues and monitoring;
- Legal advice for the Committee;
- PC or high power laptop plus software and fast broadband for all of the staff;
- The cost of purchase and installation of appropriate technology (hardware and software) needed to stream the footage for surveillance;
- The cost for setting up various monitoring facilities (e.g. live streaming link, file transfers etc.);
- IT support;
- Office / meeting rooms to be rented – costs variable dependent on location;
- Any travel / accommodation costs for visits to slaughterhouses if required;
- Initial start-up costs for job description, advertising, and recruitment process – plus any necessary legal checks;
- Expenses associated with the Committee and its servicing.

The precise figures for the costs of the system ultimately

depend on the choices made. Once a decision has been taken then a full and comprehensive costing can be produced. The important message here is that cost is not a barrier to achieving an effective system.

Clearly, a precise figure for the costs of the project cannot be produced until a preferred option and appropriate levels of surveillance have been chosen. The figures presented here suggest a ballpark level for the options with a lower band for a modest team of two people, with supporting surveillance of perhaps c. £150,000 pa plus on-costs (employment overheads) and support expenses, to an upper band of around c. £370,000 pa plus on-costs (employment overheads) and support expenses for a more substantial team.

PART 4: How the cost of independent monitoring can be met

The research has considered the economics of raising the necessary funds for the monitoring work.

The study also considered the capability of the industry to bear such necessary costs. This concluded that:

Despite the lack of recent information on some of the businesses, and limited information throughout the period discussed for others, it is nevertheless possible to come to some general conclusions about the industry, which are presented in the summary section of this report. We also consider the ability of the industry to bear such costs. There is a big difference between the large companies that are highly geared, growth oriented, complex, diverse and increasingly multi-national, as opposed to the smaller companies that are focussed on their main activity and are more stable. Nevertheless, it can be seen that net margins have been squeezed, particularly in the more highly geared companies, and the Return on Capital Employed (ROCE) has been in decline.

Interpretation of this situation is undertaken in the summary section, which attempts to bring together information about financial data, discussion of the competitive situation in the wider food industry and econometric evidence about economies of scale and competitiveness. Until there is an estimate of the likely cost of regulation, it is not possible to say what the financial problems facing abattoirs might be, but it is possible that some businesses already in difficulty will find it hard. However, the context is that the wider industry is buoyant and growing although particular individual businesses may be struggling. Furthermore, the actual cost of the scheme is small in comparison with a) the sector annual turnover and b) the benefits, which accrue as a result of effective surveillance and monitoring.

The findings are summarised here:

A report from the Meat Trades Journal stated that the sector is doing well financially with a total turnover of the primary sector during 2014 increased by £3.5m or 0.4% to give annual figures of around £875m.

This research suggests that the additional sums to be raised are very modest in relation to the overall economic performance of the sector. Furthermore, the added costs to the industry are small in comparison to other process-related fees and taxes. **It seems that the most effective and fairest way to raise the necessary revenue is through the levy per carcass.**

1. Overall, any price increases to the consumer associated with improved animal welfare monitoring as proposed would be very modest. This is especially the case in comparison to other possible tariffs such as might relate to greenhouse gas emissions and suggested taxation. Of course, it is further noted that encouraging consumers towards vegetarian foods reduces both their costs and associated greenhouse gas emissions.
2. The approach taken in this report is that discussion of the problem of animal suffering during slaughter cannot be considered on its own. Instead, it must be discussed within the wider context of the whole meat industry supply chain and with regard to policies needed to remedy other problems in the industry, such as animal suffering in rearing and transport, global warming, over-use of antibiotics and dietary concerns.
3. Because economists tend to regard taxation, or the creation of markets, as the preferred solution to all problems, these policies, together with the difficulties they face, have also been considered alongside regulation and labelling approaches. The development of a market in animal suffering, similar to carbon trading, is not considered practical because of the costs of credible information gathering, and because of ethical questions about who should pay for the reduction of suffering.
4. The regulation of slaughter by introducing CCTV coverage is a useful addition to the regulatory regime, but does not cover all problems of the slaughter process. Technical aspects of the machinery used in slaughter also need inspection since poorly designed or badly maintained equipment (such as the V-restrainers that carry sheep to the point of slaughter) have led to extreme suffering for animals. Similarly, the set-up and working of the CCTV system itself will require inspection. The inclusion of sound recording is helpful as vocalisation is an indicator of ineffective stunning and furthermore, it picks up what is being said and the manner in which it is spoken. Whether publicly available or viewed by a professional body the streaming will need to be anonymous to protect the rights of workers. Furthermore, in order to remove possibility of bias by those monitoring, footage would

be from a numbered source not a named business. However, whistle-blowing would have to be combined with sampled CCTV checking so that businesses could not identify the source of the information leading to spot checks. Changes to the institutional arrangements of current veterinary regulation to increase its effectiveness are needed, but are not without costs.

5. The cost of regulation is unlikely to be met by government in the current fiscal climate and will either have to be met by 1) a levy on the industry or by 2) a specific tax on the industry.

In the case of a levy, it is recommended that the retail sector contribute as well as the slaughter industry itself, because of the way in which margins in the industry have been squeezed in recent years. In principle, taxation (Option 2) would be preferred to a levy, as it does not place domestic producers at a disadvantage in international trade. Should a VAT rate be associated with meeting the requirements of global warming policy, then the monitoring costs could be absorbed within any such tax increase. This may be preferred to an excise duty on meat as it is easier to calculate and would not disadvantage British producers.

However, this suggestion of a meat tax is not our preferred option since it would increase the cost of food for less affluent consumers. Whilst a taxation solution would mean domestic producers are not disadvantaged against imported products, food taxes may be unpopular and politically difficult.

On balance, we advocate the introduction of a levy per carcass (Option 1). Nevertheless, a charge such as an excise duty on imported meats in order to balance the competition issues is likely to be problematic in terms of EU legislation for as long as it remains applicable but see below for a suggested way forwards.

6. Despite resistance from the retail sector, labelling about animal welfare could be made compulsory. Although an integrated labelling scheme covering rearing, transport and slaughter could be most useful, in practice, disputes amongst key stakeholders over issues such as, for example, stunning at slaughter, suggest this is unlikely to work.

The cost of such a scheme could be financed by price differentials. However, since welfare regulation would still be required to meet minimum standards (law), and since the information collected would be similar for labelling and more general regulation, sharing of the costs between labelling and regulation is possible at least in principle.

In view of the above, we suggest that a labelling scheme that steps back from a holistic, integrated

approach, but which simply focuses on the issue of effective monitoring could work. Indeed, if marked as 'British, independently monitored CCTV processed meat', or something similar, this would inform consumers but not get mired down in the wider issues. Furthermore, the quality badge would provide a competitive advantage to British producers and an incentive for others to improve standards.

7. Our overall recommendation for financing the necessary regulation is that a levy on each carcass processed be imposed. The cost per unit would be minimal. Proposed as above this will not disadvantage domestic producers against imports, and rather than 'exporting' animal abuse abroad, it will provide an incentive for others to improve. It is suggested that these issues can be successfully overcome though they require further investigation and active cooperation from major food retailers.

PART 5: Conclusion and recommendations

A summary of the key findings and recommendations from Parts 1-4 is presented below. Government policy and the FSA Board (2009) statement highlight three agreed principles: 1) Government via the FSA should not subsidise industry. 2) The best protection should be provided to consumers but not be based on the ability of industry to pay. 3) The FSA should consult with government and industry regarding full cost recovery of meat controls and associated issues. Furthermore, 'any Sustainable Funding Model should be funded by industry and meat consumers rather than government and taxpayers'. This policy statement is important for the economic model proposals for slaughterhouse surveillance.

Firstly, it is clear that a system of compulsory CCTV monitoring is necessary if animal welfare issues are to be effectively addressed in the slaughter process.

Secondly, any effective system of CCTV surveillance requires independent review and monitoring.

Thirdly, the funding of such a necessary system should be borne by the industry and not by the government, and we suggest a levy per carcass.

Fourthly, such a system must not disadvantage domestic consumption over imported meat products.

Fifthly, the costs involved in establishing and servicing an effective CCTV surveillance and monitoring system in the slaughter process are not prohibitively expensive.

Sixthly, we suggest that a pilot scheme be set up to test the proposals, the systems and to engage actively with key stakeholders. This can be small-scale to test feasibility and

to iron-out any issues before a wider rollout.

Endnotes

Sources and acknowledgments:

Full references available on request from Animal Aid

1. <https://www.food.gov.uk/sites/default/files/fsa150605.pdf>
2. The statutory entitlement for holiday is 5.6 weeks per year: <https://www.gov.uk/holiday-entitlement-rights/entitlement>
3. <https://www.food.gov.uk/sites/default/files/multimedia/pdfs/salaryranges.pdf>
4. BusinessWatch, are thanked for their information on the technical aspects of CCTV installation.