



## Badger Culling: TB Control Policy

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Following the findings of the UK Randomised Badger Culling Trial (RBCT) the previous Government decided in 2008 not to introduce a badger cull as part of bovine TB control measures. The trial concluded that a reactive cull of badgers resulted in significant increases in bovine TB and a proactive cull, while controlling TB in the cull area, contributed to an increase in TB in surrounding areas, and would not be cost effective. Full details are available in a Library Note SNSC 3751 on [Badger Culling: Policy to 2008](#).

After the election the Government indicated that a badger cull would be introduced as part of TB control measures. It announced a consultation in September 2010, which set out its proposals. These include introducing proactive culls over 150km<sup>2</sup> areas where farmers would be licensed to control badgers by shooting. Farmers bear the costs of any culls. The Government would bear the costs of licensing and monitoring a cull. The consultation also included proposals on TB monitoring in cattle and further biosecurity measures. In December 2011 the Government announced that it intended to go forward with a badger cull trial. The trial would be carried out in two pilot areas. Results from the trial would be considered before rolling out culling more widely

The two trial areas, in West Gloucestershire and West Somerset, were announced in January 2012. Licences were granted by Natural England for the two areas in autumn 2012. Following concerns from the NFU on the late start of the cull and the potentially increased costs to farmers, a cull was postponed until 2013. The culls started on 27 August 2013. The initial six week cull in both areas was extended after failing to meet the 70% culling targets. Despite this the targets were missed with 65% of badgers culled in Somerset and fewer than 40% in Gloucestershire.

The Welsh Assembly replaced proposals for a cull in 2011 with a five year vaccination programme following a review of the science.

Library Note SNSC 6387 covers details of [controlled shooting pilots](#) in England. Library Note SNSC 6447 covers [TB vaccination in Badgers and Cattle](#). Library Note SNSC 6081 covers [Bovine TB Statistics](#).

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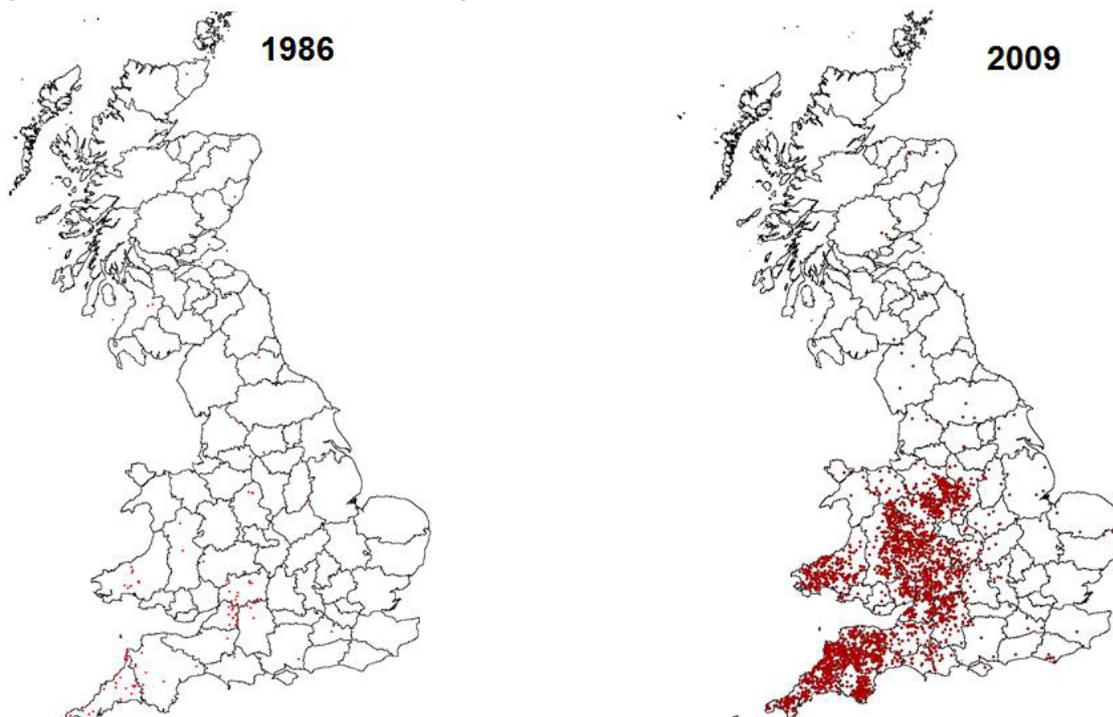
# 1 Background

There has been an increase in tuberculosis (TB) in cattle in the UK since the 1980s, particularly in the south west of England and Wales. Statistics on the levels of TB in cattle can be found in Library Note 6801 on [Bovine TB Statistics](#).

## 1.1 Spread of Bovine TB

The [Bovine TB Eradication Programme for England](#) contains figures illustrating the spread of TB in cattle from the mid 1980s to the present day, including the figure below. This shows the geographical distribution (point location) of herds sustaining new breakdowns of bovine TB in 1986 and 2009.

Figure 1: Location of herds sustaining new breakdowns of bovine TB, 1986 & 2009



## 1.2 Badger Densities

The last [national badger survey](#) was carried out between 1994 and 1997. This was the second national badger survey, following an earlier survey carried out between 1985 and 1988.

Between the two surveys, the number of badger social groups increased by 24%, to around 50,000. The number of badger setts increased by 43%, to approximately 248,000. Overall, the survey estimated that the number of badgers in Britain had increased by 77% between the two surveys, to between 300,000 and 400,000 badgers.

With regard to badger densities, the available summaries of the survey results only say that badger densities are highest in the south-west of England, with high densities present throughout southern counties, the west midlands and Wales.<sup>1</sup> A new national badger survey began this year and will be completed in 2013.<sup>2</sup>

<sup>1</sup> See for example [HC Deb 26 Jan 2004, c1W](#)

<sup>2</sup> See <http://randd.defra.gov.uk/Default.aspx?Menu=Menu&Module=More&Location=None&ProjectID=18014>

Badgers and their setts are protected under the [Protection of Badgers Act 1992](#). This Act consolidated all previous legislation which was aimed mainly at preventing cruelty as a result of badger baiting.

## 2 UK Randomised Badger Culling Trial

Badgers have been found to carry TB and transmit it to cattle. This was established through UK Randomised Badger Culling Trial (RBCT). The RBCT was commissioned by the previous Government to study the various options for culling badgers and the effectiveness of these at preventing the spread of the disease amongst cattle.

As a result of initial findings from the RBCT in 2003 the reactive culling aspect of the study, where badgers were culled in and around a farm where TB was present in cattle, was suspended. This was due to a 27% increase in bovine TB outbreaks in these areas of the trial compared to areas in which no culling took place. The trials advisory group concluded that reactive culling could not be used to control bovine TB.

A preliminary analysis of the RBCT published in December 2005 showed that proactive culling, where most badgers in a particular area were culled, reduced the incidence of bovine TB by 19% within the cull area, although increased it by 29% up to 2 km outside the cull area.

These apparently contradictory findings were explained in a follow up study which found that the culling of badgers disrupts their territorial behaviour. This resulted in badgers roaming further afield and different groups of badgers mixing in ways they would not normally do, resulting in an increased spread of the disease.

This final report of the Independent Scientific Group on Cattle TB concluded that there were limitations to using badger culling to control TB in cattle:

The overall benefits of proactive culling were modest (representing an estimated 14 breakdowns prevented after culling 1,000 km<sup>2</sup> for five years), and were realised only after coordinated and sustained effort. While many other approaches to culling can be considered, available data suggest that none is likely to generate benefits substantially greater than those recorded in the RBCT, and many are likely to cause detrimental effects. Given its high costs and low benefits we therefore conclude that badger culling is unlikely to contribute usefully to the control of cattle TB in Britain, and recommend that TB control efforts focus on measures other than badger culling<sup>3</sup>.

The Group also concluded that substantial reductions in cattle TB incidence could be achieved by improving cattle based controls, including:

the introduction of more thorough controls on cattle movement through zoning or herd attestation, strategic use of the IFN test in both routine and pre-movement testing, quarantine of purchased cattle, shorter testing intervals, careful attention to breakdowns in areas that are currently low risk, and whole herd slaughter for chronically affected herds.<sup>4</sup>

Further full details of the Trials, reactions to the results and the previous Government policy, can be found in Library Note SNSC 3751 [Badger Culling: Policy to 2008](#).

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<sup>3</sup> Defra, Final Report of the Independent Scientific Group on Cattle TB, [Bovine TB: The Scientific Evidence](#), June 2007

<sup>4</sup> *ibid*

### 3 Labour Government Decision on Culling

The previous Government decided in 2008 not to introduce a badger cull as part of bovine TB control measures in light of the findings of the RBCT, published in 2007.

Hillary Benn, the then Secretary of State for Environment, Food and Rural Affairs, made a statement to the House of Commons on 7 July 2008 in which he set out details of the Government's decision not to go ahead with a cull for the time being. This was because of the practicalities and cost of a cull and the scale and length of time required to implement it, with no guarantee of success and the potential for making the disease worse.<sup>5</sup>

He went on to highlight other measures that would be taken, including allocating funding of £20m to the development of an effective TB injectable vaccine for cattle and badgers, and an oral badger vaccine.<sup>6</sup>

The Minister went on to say that with no viable vaccine for badgers or cattle in the short to medium term – at least before 2015 – there needed to be a focus on disease control by both the Government and farmers. He also announced the setting up of a bovine TB partnership group to develop a plan for tackling TB in England.<sup>7</sup>

#### 3.1 Reactions

The NFU was strongly critical of the decision calling it an abdication of responsibility:

NFU president Peter Kendall has roundly denounced the Secretary of State's refusal to cull badgers as a part of a TB control programme, despite admitting that a cull 'might work' in his statement to the House of Commons today.

"This is a disgraceful abdication of responsibility by Secretary of State Hilary Benn," said Mr Kendall. "Despite his promise to base his decision on the facts, he has ignored the scientific evidence of the ISG report, the recommendation of the EFRA select committee and that of Professor Sir David King, in reaching his conclusion. It is a total non decision.

"To admit that a cull might work, and then push the already crippling burden of TB controls further onto the farming industry is just plain wrong. It is ridiculous to expect farmers to continue fighting TB with one hand tied behind their back."<sup>8</sup>

The RSPCA welcomed the move, calling it "the right decision based on compelling evidence", as did the Badger Trust which published the following press release.

"We are delighted that Hilary Benn has based his decision on sound science. The Government and the farming industry can now move forwards together in controlling the disease in a way which supports rather than harms the industry. Eradication is a long way off, but the science clearly shows that control is rapidly within our grasp, provided that the farming unions are prepared to work towards it."

However, the Badger Trust criticised Conservative spokesman James Paice for claiming that Mr Benn had "gone against the advice of the ISG [Independent Scientific

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<sup>5</sup> HC Deb 7 July 2008 [c1153](#)

<sup>6</sup> *ibid*

<sup>7</sup> *ibid*

<sup>8</sup> NFU Press Release, [Government refusal to cull badgers is a disgraceful abdication of responsibility](#), 7 July 2008

Group]" and for claiming that PCR - the Polymerase Chain Reaction - could be used to "target" diseased badgers.<sup>9</sup>

#### **4 Bovine TB Eradication Group for England**

The Bovine TB Eradication Group for England was set up in November 2008 and included members from the veterinary profession, farming industry and Defra officials. It reported back to the Government in October 2009. It proposed a series of measures with regards to TB control, some of which were put in place by the previous Government and are included in the new TB Eradication Programme. Details of these recommendations can be found on the Group's Defra [webpage](#).

With regards to badger culling, the group concluded the balance of scientific evidence was against a cull:

We concluded that the option of badger culling needs to remain open but we cannot, at this stage, make a clear case for change based on scientific evidence which has emerged since the Secretary of State's decision or exceptional circumstances. We will keep this position under close review since results emerging from the ongoing post-RBCT analysis led by Christl Donnelly and Helen Jenkins of Imperial College still show an overall benefit. We have also agreed that we need to make sure options are available so, if the position were to change, culling could be carried out in an effective and cost efficient way.<sup>10</sup>

The research referred to above was published in February 2010. It concluded that the benefits of the cull were not sustained once culling stopped and that culling was not an effective way of controlling TB in Britain:

Our findings show that the reductions in cattle TB incidence achieved by repeated badger culling were not sustained in the long term after culling ended and did not offset the financial costs of culling. These results, combined with evaluation of alternative culling methods, suggest that badger culling is unlikely to contribute effectively to the control of cattle TB in Britain.<sup>11</sup>

The current Government published a Bovine TB Eradication Plan for England in July 2011 in which it stated that the Group would "continue to play an important role".<sup>12</sup>

#### **5 Coalition Government Proposals**

The [Programme for Government](#) published in May 2010 set out the position as follows:

As part of a package of measures, we will introduce a carefully managed and science-led policy of badger control in areas with high and persistent levels of bovine tuberculosis.

The Government published a consultation on a proposed policy to control badgers September 2010. The Government proposed to allow farmers to cull badgers at their own expense, by shooting or cage trapping, in areas of at least 150km<sup>2</sup> and for the licensing scheme to be funded by the Government, although farmers would have to bear the cost of the actual cull:

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<sup>9</sup> Badger Trust Press Release, *Benn rules out badger culling*, 7 July 2008

<sup>10</sup> The Bovine TB Eradication Group, [Developing a Bovine TB Eradication Programme for England](#), October 2009

<sup>11</sup> *ibid*

<sup>12</sup> Defra, [Bovine TB Eradication Programme for England](#), July 2011

Culling must take place over a minimum area of 150km<sup>2</sup> so we can be confident it will have a net beneficial effect. This means that we would expect to receive licence applications from groups of farmers and landowners rather than individuals. Applicants will also need to demonstrate that they have considered taking further steps to minimise the potential detrimental effect at the edge of a culling area.

Licences will only permit culling by cage-trapping and shooting, and by shooting free-running badgers, carried out by trained, competent operators with appropriate firearms licences.<sup>13</sup>

The cost of the licensing and monitoring the effects of the policy would be paid for by the Government. The consultation also set out other measures being considered to improve the monitoring and control of TB in cattle:

We will continue to look over the next few months at: changes to TB terminology; strengthening controls on high risk unconfirmed breakdowns; extending the use of gamma interferon testing to all confirmed breakdown herds in the two year testing areas; providing better support for TB restricted farmers by enhancing their options for selling surplus stock.

In 2009/10 controlling bovine TB cost the taxpayer £63million in England. An additional £8.9million was spent on research.<sup>14</sup>

The full consultation, which closed on 8 December 2010, is available on the Defra [website](#).

A Veterinary Assessment of the risk factors associated with proactive badger culling was also published. This set out in detail what would be required to ensure a successful cull:

For badger culling to decrease the incidence of TB in cattle, a culling strategy must take into account factors that will mitigate perturbation. A culling strategy should be

- a. **Sustained** (at least annual), undertaken on a regular basis over a period of at least 4 years in order to achieve low local badger populations in high TB incidence areas;
- b. **Over a large area** (the evidence suggests a minimum area of 150 km<sup>2</sup>);
- c. Conducted where land access is **over 70% of the area**;
- d. **Effective and humane** and conducted by competent operators; and
- e. Where possible, conducted in areas with **boundaries or buffers** (such as motorways, conurbations, coast, and substantial rivers) around the culled area to mitigate any risks from the perturbation effect.

The licensed Badger BCG vaccine could also be used as a tool to mitigate the negative effects of perturbation. This is likely to be beneficial but not fully protective against the negative effects of perturbation. Immunity takes time to develop and so vaccination would need to precede culling. There is limited evidence about the impact of vaccination in field conditions.

If a different culling strategy to that conducted in the RBCT is used, the effect on TB incidence and the degree of the resulting perturbation is uncertain.

It is essential that any culling is carried out using methods that are both effective and humane.<sup>15</sup>

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<sup>13</sup> Defra, [Bovine Tuberculosis: the Government's approach to tackling the disease and consultation on a badger control policy](#), 15 September 2010

<sup>14</sup> *ibid*

## 5.1 Reactions to the Proposed Cull

The NFU strongly welcomed the Government decision to consult on culling and very much supported the proposal to cull:

The consultation on badger control, launched by Defra Minister of State Jim Paice today, is a major step forward in the battle to control the spread of bovine TB according to the NFU.

The organisation, which has long lobbied for action to combat the disease as it threatens the future of so many farming families in the beef and dairy sector and costs taxpayers upwards of £84million, said it looks forward to contributing to the consultation.

And

“Bovine TB is out of control. The NFU has always said that in order to effectively tackle the spread of bTB we need to address the disease in both cattle and wildlife but it’s important to be clear; this is not about eradicating badgers, this is about disease control.”<sup>16</sup>

The British Veterinary Association also welcomed the Government’s proposals:

The British Veterinary Association (BVA) and British Cattle Veterinary Association (BCVA) have long argued that bTB cannot be controlled without measures to control the disease in both cattle and wildlife.

In particular the BVA and BCVA have welcomed

- the recognition that the farming industry, veterinary profession and Government need to work in partnership
- the understanding that there is no single solution to tackling bTB and that we need to use ‘every tool in the toolbox’
- the commitment to a balanced package of measures linked to the understanding that we cannot succeed in eradicating bTB in cattle without addressing the reservoir of disease in wildlife
- the commitment to monitor the effectiveness, humaneness and impact of badger control measures.<sup>17</sup>

Hillary Benn, who made the decision under the Labour Government not to carry out a cull, was critical of the proposals:

I understand how desperate those affected are for something more to be done. But badger culling has already been tried. Based on these trials, the Independent Scientific Group concluded that ‘badger culling cannot meaningfully contribute to the future control of cattle TB.

As Secretary of State, I agreed with this scientific judgement. It would be neither practical nor publicly acceptable, and getting it wrong could actually make matters worse.

Shooting badgers may make Ministers feel that they are doing something, but it is not the way to beat this disease. Vaccination is, which is why cancelling five of the six vaccine demonstration projects was such a mistake.<sup>18</sup>

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<sup>15</sup> Defra, [Veterinary assessment of the risk factors associated with proactive badger culling](#), September 2010

<sup>16</sup> NFU, [Consultation on TB a ‘major step forward’](#), 15 September 2010

<sup>17</sup> BVA, [TB consultation receives strong support from vets](#), 15 September 2010

The Wildlife Trust which has campaigned strongly against using a cull as a measure for controlling TB echoed Hillary Benn's concern about the effectiveness of a cull:

The Wildlife Trusts acknowledge bTB is a significant problem that causes hardship for many in the farming community. There is no single solution to this disease but any approach must take account of ecological as well as veterinary science. It should be tackled on many fronts: vaccination of badgers, cattle controls and improved biosecurity on farms. The rationale for any cull of native species needs to be extremely clear and well proven.<sup>19</sup>

The Badger Trust, which temporarily halted a proposed cull by the the Welsh Assembly Government through the courts, expressed similar views.<sup>20</sup>

## **6 Detail of the Proposals**

### **6.1 Effectiveness of Free Shooting**

The Minister set out how he envisaged badgers being culled using free shooting in an interview with the Farmers Guardian following the publication of the consultation:

Farmers will cover the entire cost of badger removal. The big advantage with 'free shooting', which farmers will be able to do themselves as long as they possess the appropriate firearms licence, is that it will be affordable to all.

The alternative of employing a contractor to trap and shoot badgers, given the cost of the cages and manpower involved, would be financially out of reach for many.

Questions have been raised, however, about the potential animal welfare implications if badgers are wounded but not killed and also possible safety implications for humans of free shooting, which has not been trialled.

As a countryman my view is that free shooting would, in most cases, be by far the most effective option, Mr Paice told Farmers Guardian this week.

There may be security issues but I am not talking about people just ranging around the countryside with a rifle. If you put a high seat over a sett you could kill most of them fairly quickly.<sup>21</sup>

However, a report to Defra by The Game Conservancy Trust published in August 2006, *Shooting as a Potential Tool in Badger Population Control*, concluded that shooting over a sett should not be considered a first choice:

A major problem with shooting at or near the sett is that a wounded badger will almost certainly attempt to bolt underground, preventing a second shot (and preventing safe disposal of the carcass). This really means that the first shot must cause the badger to collapse on the spot, limiting the choice of target to the spine, neck or head (cranium).<sup>22</sup>

And

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<sup>18</sup> Farmers Guardian, [Badger cull the 'wrong decision' says Benn](#), 15 September 2010

<sup>19</sup> Wildlife Trust, [Concern over culling proposals](#), 15 September 2010

<sup>20</sup> The Badger Trust, [Badger Cull in England?](#) 15 September 2010

<sup>21</sup> Farmers Guardian, [Why I am proposing a badger cull](#), 17 September 2010

<sup>22</sup> Game Conservancy Trust, [Shooting as a potential tool in badger population control](#), August 2006

In view of the difficulties outlined above, shooting at the sett should probably be regarded as a viable ancillary approach, but one requiring considerable care, and certainly not a first choice.<sup>23</sup>

The Game Conservancy Trust was also of the view that due to the need for shooting to take place at night there may be difficulties for farmers in incorporating this in their daily routine:

Time. Badger shooting would be restricted almost entirely to the hours of darkness, and would therefore involve an anti-social work regime that is unlikely to fit well with farming or husbandry activities.

It seems likely that this profile fits professional operators rather than landowners and farmers with other demands on their time. Because of the finite number of badgers on any one land-parcel, such specialists would probably need to operate on a roving basis among many different land-parcels. A further consequence is that regional co-ordination would be essential to ensure appropriate incentives for operators to maintain effort where badger numbers had already been reduced.<sup>24</sup>

As a result of this report the RSPCA concluded that it would be difficult to shoot badgers humanely:

The animals' anatomy and behaviour make them harder targets to kill with a single shot than foxes or deer, a fact made clear to ministers in a report by the Game Conservancy Trust, says the RSPCA. It alleges that if the shooting campaign goes ahead, many badgers will be wounded, not killed.

Colin Booty, the RSPCA's deputy head of wildlife, said: "Shooting badgers might be very different from shooting foxes, say, because their anatomy is very different. The badger has a very thick skull, thick skin and a very thick layer of subcutaneous fat. It has a much more robust skeleton than the fox. Because of the short, squat body and the way its legs work, these legs often partly conceal the main killing zone. Free shooting carries a high risk of wounding."<sup>25</sup>

## 6.2 Regular Culling

A follow-up report to the RCBT, published in February 2010, warned of the need for any cull to be well planned and co-ordinated with the potential for small scale or irregular culls resulting in increases rather than decreases in bovine TB incidence.<sup>26</sup>

This view was supported by Dr Robbie McDonald, Head of Wildlife and Emerging Diseases Programme for the Food and Environment Research Agency, in an article published in September 2009, before the proposal for shooting badgers was put forward:

The disappearance/reduction of one group will cause badgers from another group to go and 'investigate' the vacated area, taking their diseases with them or picking up new infections in the process.

"Transmission of disease reduces where there's a stable social system," he says, explaining that disease peaks are usually seen the year after a period of upheaval and that it takes a long time to return to a stable situation again.

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<sup>23</sup> *ibid*

<sup>24</sup> *ibid*

<sup>25</sup> [Badger shooting is cruel, says RSPCA, \*The Independent\*, 29 October 2010](#)

<sup>26</sup> [Jenkins \*et al\*, \*The Duration of the Effects of Repeated Widespread Badger Culling on Cattle Tuberculosis Following the Cessation of Culling\*, PLoS ONE, 10 February 2010](#)

Therefore, the benefit of culling a population is outweighed by the detrimental affect on neighbouring populations. He says a huge number of badgers would have to be killed to make a difference and while it is cheap and easy to trap and exterminate animals in the early days of a cull it gets harder and more expensive as time goes on.<sup>27</sup>

### 6.3 Costs

Defra set out the estimated costs of various culling methods in its Annex to the consultation document setting out the scientific basis for culling:

The cost of conducting five annual culls over a 150 km<sup>2</sup> area, 75% of which was accessible for culling, is estimated as £2.14 million for cage-trapping (as undertaken in the RBCT) at £3,800/km<sup>2</sup>/year, or £1.35 million for snaring or gassing at roughly £2,400/km<sup>2</sup>/year. The predicted annual cost of a farmer-led culling operation is estimated to be around £562,500 at £1,000/km<sup>2</sup>/year.<sup>28</sup>

The RBCT follow-up report examined the cost and benefits of a cull carried out by farmers. It pointed out that the costs estimates from Defra did not include any capital costs to farmers or costs of training and co-ordinating efforts and concluded that costs of this culling method could exceed the long term financial benefits.<sup>29</sup>

A Written Answer in December 2010 set out an estimate of the cost to Government of licensing culling areas and monitoring compliance:

#### Badgers

Mr Bain: To ask the Secretary of State for Environment, Food and Rural Affairs what estimate she has made of the cost to the public purse of the licensing and monitoring systems that would be required for a cull of badgers undertaken by her Department.

Mr Paice: As stated in the consultation impact assessment, costs to be incurred by Government for licensing are estimated at £26,000 for a 150km<sup>2</sup> application area.

This is based on receiving a modest number of applications and includes assessing applications and monitoring compliance. It does not include costs for setting up the licensing system which are yet to be determined. Costs to be incurred by Government for monitoring are estimated at £200 per km<sup>2</sup> of participating land. This includes monitoring badger population numbers, humaneness of the methods used, epidemiological monitoring of the disease and monitoring protected sites. These costs will be refined in the final impact assessment.<sup>30</sup>

A more recent response sets out the costs to Government for monitoring the effectiveness of the cull at £850,000:

Mary Creagh: To ask the Secretary of State for Environment, Food and Rural Affairs how many staff of his Department and its agencies have been assigned to visit badger cull areas to take DNA samples and conduct sett surveys; how many such surveys (a) have taken place and (b) are expected to take place; and what estimate his Department has made of the total likely cost of such surveys, including the cost of contractor and staff remuneration, transport, accommodation and subsistence.

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<sup>27</sup> Farmers Guardian, [TB: The science behind the decisions](#), 4 September 2009

<sup>28</sup> Defra, [Annex B: The Randomised Badger Culling Trial \(Proactive & Reactive culling\)](#), September 2010

<sup>29</sup> Jenkins *et al*, [The Duration of the Effects of Repeated Widespread Badger Culling on Cattle Tuberculosis Following the Cessation of Culling](#), 10 February 2010

<sup>30</sup> HC Deb 21 December c 2010 c1333W

Mr Heath: 55 DEFRA network staff have been assigned to visit badger cull areas to take DNA samples and conduct sett surveys. 61.7km(2) of land has been surveyed in West Somerset, and 74.4km(2) in West Gloucestershire. The costs of the licensing and monitoring operations are not calculated in such a way that the fieldwork component can be easily extracted. The estimated total cost of the effectiveness monitoring, for which the bulk of the surveys work was conducted, is £850,000.<sup>31</sup>

## 6.4 Second Consultation

Caroline Spelman, Secretary of State for Environment, Food and Rural Affairs, announced the Government response to the consultation - which received 59,000 responses - on 19 July 2011.

A cull was proposed within the framework of a new [Bovine TB Eradication Programme for England](#), which would include the following measures:

- Cattle surveillance and control measures to address cattle to cattle transmission.
- Promoting good biosecurity, to address transmission between cattle, and between badgers and cattle.
- Control of TB in badgers, to reduce transmission from badgers to cattle in TB endemic areas.
- Measures to tackle TB in non-bovine farmed species (including pigs, goats, deer, sheep, alpacas and llamas).
- Advice and support for farmers.
- Robust governance, monitoring and reporting arrangements.<sup>32</sup>

In view of the concerns raised in response to the initial consultation, a further consultation would first be carried out to determine whether a cull could effectively enforced and monitored by Natural England who would be issuing licences under the Protection of Badgers Act 1992. A cull would initially be piloted in two areas, before being extended to other parts of the country

I wish there was some other practical way of dealing with this, but we can't escape the fact that the evidence supports the case for a controlled reduction of the badger population in areas worst affected by bovine TB. With the problem of TB spreading and no usable vaccine on the horizon, I'm strongly minded to allow controlled culling, carried out by groups of farmers and landowners, as part of a science-led and carefully managed policy of badger control."<sup>33</sup>

The new consultation document set out the main concerns about a badger cull raised by respondents to the previous consultation, and which it now aimed to address:

The main issues and concerns raised during the public consultation in relation to the operation of a badger cull were:

- a) concerns that ineffective or incomplete culling could make TB worse and that culling licences would not be enforceable;
- b) requests for the inclusion of a requirement for 'simultaneous' culling and for a definition of 'simultaneous';
- c) mixed views on allowing the shooting of badgers in the field as a culling method (referred to in this consultation paper as "controlled shooting"), in addition to the

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<sup>31</sup> HC Deb 18 Oct 2012 c 383W

<sup>32</sup> Defra, [Bovine TB Eradication Programme for England](#), July 2011

<sup>33</sup> Defra, [Next steps to tackle bovine TB in England](#), 19 July 2011

- shooting of cage-trapped badgers, and concerns about the effectiveness and humaneness of the former method;
- d) concern about the risk of negative impacts on non-participating farmers and landowners with vulnerable livestock within and at the edge of the Control Area;
- e) concerns over security and personal safety for those participating and for the general public;
- f) queries and uncertainty about the impact of culling on the badger population;
- g) questions about whether there will be sufficient resources to carry out adequate monitoring; and
- h) agreement that the Government should do more to support and encourage the use of badger vaccination.<sup>34</sup>

The proposals were that culling would only be permitted by cage-trapping and shooting or by controlled shooting of badgers in the field, carried out by competent operators. The number of annual culling areas would be limited to ten. Vaccination would also be encouraged. The Government would monitor: actions taken under the licence; the impact on cattle herd breakdowns within the areas culled or vaccinated; humaneness of the culling methods; and the impacts on the remaining badger population. In the event that culling was not carried out effectively by the licensed farmers/landowners Government would be able to intervene, assume responsibility for completing the culling operation, and recover the costs from the farmers and landowners. If a decision to cull is made it will be reviewed after four years.<sup>35</sup>

Professor Krebs, the scientist who led the Randomised Badger Cull Trials, expressed the view that a cull would not have a significant impact:

Professor Lord John Krebs [...] was commenting on the publication of a Defra report suggesting that, based on the findings of the trial, culling badgers would reduce bTB incidence in cattle by approximately 12-16 per cent over a nine year period.

“You cull intensively for at least four years, you will have a net benefit of reducing TB in cattle of 12 per cent to 16 per cent. So you leave 85 per cent of the problem still there, having gone to a huge amount of trouble to kill a huge number of badgers. It doesn't seem to be an effective way of controlling the disease.”<sup>36</sup>

And

Lord Krebs said the Government should instead try to develop a vaccine in the long term, and in the short term to introduce better farm biosecurity measures to reduce the risk of infection from badgers and cattle-to-cattle spread.<sup>37</sup>

## 7 Culling Announcement

The Government announced its decision to go ahead with a cull on 14 December 2011. At the same time it published [The Government's policy on Bovine TB and badger control in England](#), which explained the decision:

We are satisfied that culling badgers in line with the strict licence criteria outlined in [section 5](#) below will prevent the spread of TB in the culled area and we consider a

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<sup>34</sup> Defra, [Consultation on Guidance to Natural England on the implementation and enforcement of a badger control policy](#), July 2011

<sup>35</sup> *ibid*

<sup>36</sup> Farmers Guardian, [Badger cull would not work – Krebs](#), 12 July 2011

<sup>37</sup> *ibid*

reduction of the scale seen in the RBCT to be substantial in the context of dealing with bovine TB, which is a “slow-moving”, chronic, latent and infectious disease.<sup>38</sup>

The document sets out in detail the conditions that a cull must meet. This includes the requirements that all participating farmers must be compliant with TB cattle controls. A cull will be trialled in two pilot areas to assess the effectiveness of the proposals. If a full scale cull goes ahead a maximum of 10 areas per year will be licensed to carry out culls over a four year period, each covering an area of 150km<sup>2</sup>. Culls will take place over a six week period and will be required to reduce the badger population by 70%. As in the original proposals the costs of culling will be met by farmers.<sup>39</sup> Natural England will licence the culls.

To minimise perturbation – badgers spreading disease by moving out of their territory - farmers will have to identify natural barriers to badger movements:

Farmers will have to take reasonable measures to identify barriers and buffers, such as rivers, coastlines and motorways, or areas where there are no cattle or where vaccination of badgers occurs, at the edge of culling areas to minimise the ‘perturbation effect’, where disturbing the badger population is thought to cause an increase in TB in cattle in the surrounding area.<sup>40</sup>

The document also addressed issues such as cost of policing and the potential for the use of vaccination.<sup>41</sup>

## 8 Trial Culls

In December 2011 it announced the decision to carry out pilot badger culls in two 150km<sup>2</sup> areas. In each area farmers would be licensed to control badgers by shooting and would bear the costs of any culls. The Government pledged to bear the costs of licensing and monitoring the culls.

In January 2012 two pilot areas were announced: West Gloucestershire and West Somerset. Licenses were granted by Natural England for the two areas in autumn 2012, but, following concerns from the NFU on the late start for the cull, were postponed until 2013. In February 2013 an announcement was made that the cull would go ahead from the 1<sup>st</sup> June. The culls commenced on 27<sup>th</sup> August 2013 and the initial 6 weeks cull in both areas was extended after failing to meet the 70% culling targets. Despite this the cull targets were missed with 65% culled in Somerset and less than 40% culled in Gloucestershire

In March 2012 the Government appointed members to an Independent Expert Panel to monitor the effectiveness, humanness and safety of controlled shooting, which is due to publish its report in February 2014. The cull is not intended to make any assessment of the effectiveness of shooting to control TB. A much longer, more extensive, cull would be required to do this.

According to leaks reported by the BBC in February 2014 the Expert Panel found that less than half of all badgers were killed in both trial areas and that between 6.8% and 18% of badgers took more than 5 minutes to die . The standard set originally was that this should be less than 5%. Full details of the trial culls can be found in Library Note SNSC 6837.

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<sup>38</sup> Defra, [The Government’s policy on Bovine TB and badger control in England](#), 14 December 2011

<sup>39</sup> *ibid*

<sup>40</sup> Defra, [Update on measures to tackle Bovine TB](#), 14 December 2011

<sup>41</sup> *ibid*

## 9 New Cattle Control Measures

The EU published a report on TB control measures in the UK in March 2012 which highlighted some of the weaknesses in the implementation of existing TB control measures in England and Wales:

While the approved eradication programme is broadly applied as described, the audit identified a number of potential weaknesses. These include numerous movement derogations, pre-movement test exemptions (including extended time intervals between testing and movement), the operation of "linked" holdings over large geographical areas, incomplete herd testing and the operation of specialist units under restriction, which lacked the necessary bio-security arrangements. Furthermore, despite efforts by the CA [Competent Authority] – some of their key targets could not be met in relation to the removal of reactors from breakdown herds and the instigation of epidemiological enquiries.

There is a fragmented system of controls, involving a number of responsible bodies. This combined with a lack of co-ordination (particularly with Local Authorities) makes it difficult to ensure that basic practices to prevent infection/spread of disease (such as effective cleaning and disinfection of vehicles and markets) are carried out in a satisfactory way.<sup>42</sup>

The report also focused on measures to control TB in badgers:

Measures to prevent re-infection from other sources focus on the risk presented by wildlife (badgers). The CA maintains that the delay in implementing the proposed wildlife controls (i.e. a managed cull of badgers), which is a significant element of the approved eradication programme, remains the major obstacle to progress.<sup>43</sup>

The [full report](#), together with the Government response, is available on the Europa website.

New cattle control measures were announced by Defra on 18 October 2012 as set out below:

England will be divided into two cattle TB testing frequency areas. Annual TB testing of farms will be extended in the south-west, west and central England, and East Sussex to include adjoining areas which are at greatest risk from geographic spread of TB as well as the existing high risk areas where most TB cases are found.

The rest of England will be placed on four-yearly testing. Most TB breakdowns in this area are caused by the movement of infected cattle from the high risk areas. However, surveillance around TB breakdowns in the four-yearly tested area will be enhanced and herds at higher risk of TB infection will continue to be tested annually.

There are also new rules about cattle movements:

- In all cases, farmers who have had a case of TB in their farm will not be allowed to bring new cattle in until the rest of the herd has been tested for TB and a vet has carried out an assessment;
- Farmers now have 30 days, down from 60, to move cattle that test negative for TB from a TB breakdown farm;

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<sup>42</sup> EU Commission, [Final Report Of An Audit Carried Out In The United Kingdom From 05 To 16 September 2011 In Order To Evaluate The Operation Of The Bovine Tuberculosis Eradication Programme](#), March 2012

<sup>43</sup> *ibid*

- Approved Quarantine Units (AQUs) are going to be phased out as they are considered too risky. AQUs are quarantine units on farms for calves from TB breakdown farms. From the new year existing AQUs will not be able to take on any more calves; and
- TB free cattle are sent to Approved Finishing Units (AFUs) from TB infected farms for fattening before they are slaughtered. The conditions in these will be strictly monitored to maintain high standards and prevent the spread of TB. Some operators could even see their licences removed for serious breaches.<sup>44</sup>

## 10 Bovine TB Strategy to eradicate TB in cattle in England

The Government [announced](#) a consultation on a draft strategy to eradicate TB in England within the next 25 years in July 2013. Defra published a document which sets out:

The strategy sets out action in areas such as disease surveillance, pre- and post-movement cattle testing, removal of cattle exposed to bTB, tracing the potential source of infection and wildlife controls including culling and vaccination trials.

It also focuses on the development of new techniques such as badger and cattle vaccines and new diagnostic tests that could one day offer new ways of tackling the disease.

The draft strategy, consultation and impact assessment are available on the [Defra website](#). The approach taken is to divide the country into three different areas, with different approaches for each, as set out in the consultation document:

In refining what a better risk-based approach will look like, the Strategy splits the country into three geographical areas. These are called the “Low Risk Area”, the “High Risk Area” and the “Edge Area”. The latter represents the boundary between the Low and High Risk Areas. Each area has a sub-strategy tailored to it. Each includes its own objectives that support the Strategy’s overarching Aim, and each has a set of measures to deliver the objectives.

The consultation also looks at how the strategy will be funded. [Defra](#) refers to “the significant potential benefits of having a robust government-industry partnership approach to tackling bTB”. The consultation document expanded on the options the Government is considering:

The Government will develop proposals for a sustainable funding model for the Strategy. The experience of both New Zealand and the Republic of Ireland provide evidence of the success of co-financed bTB control strategies. The Strategy considers possible options including stakeholders paying more for bTB measures such as testing and vaccination, government reducing its intervention in the market by reducing the differential between compensation and carcase salvage value, developing options for commercial insurance, or establishing a mutual fund co-financed by government and stakeholders.

Further details, including information notes on strategies for different areas and funding for badger vaccinations in 2013 are available [here](#) on the Defra website.

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<sup>44</sup> Defra, [Cattle movement controls and surveillance strengthened to tackle bovine TB](#), 18 October 2012

## 11 Policy in Wales

The Welsh Assembly Government announced on 8 April 2008 that a TB eradication programme would be put in place. The main measures put forward by the Minister involved removing sources of infection, including badgers:

### **Cattle Surveillance and Control**

A key step for the first year will be to establish an additional one-off test of all cattle herds across Wales in order to identify the extent of the infection and to remove diseased animals.[...]

### **Change compensation regime**

[..] By the end of 2008 plans will be published to amend the current system to ensure compensation arrangements encourage herd owners to comply with legal and best practice requirements.[...]

### **Identify and Remove all on-farm sources of infection**

Previous studies have already concluded that badgers are a wildlife reservoir of bovine TB in the UK and they are involved in the transmission of infection to cattle, and vice versa. The results of the Wales Badger Found Dead Survey were consistent with this, because they showed that levels of infection in badgers were highest in Gwent, Pembrokeshire and Carmarthenshire and other areas of high incidence of TB in cattle.<sup>45</sup>

An area of north Pembrokeshire and small areas of Ceredigion and Carmarthenshire were designated as a pilot area for the new TB controls. The measures which were to come into force 1 May 2010 included the following:

- Cattle herd testing every six months;
- Two clear tests 60 days apart required after a positive test to regain official TB free status;
- All breakdowns will be subject to tracing and associated herds tested;
- Increased restrictions on cattle movements, and all movements to be reported and pre-movement testing carried out;
- Veterinary surgeons to visit farms to offer advice on biosecurity and preventing disease transfer;
- A limited badger cull within the pilot area;
- Penalties for farmers who do not comply with testing.<sup>46</sup>

Following a Court of Appeal ruling which temporarily halted the proposed cull the Welsh Assembly announced in September 2010 how it would be taking forward its plans for a cull by consulting on a new draft regulations.<sup>47</sup>

The Labour Party won a majority in the Welsh Assembly in May 2011. Soon after this it made an announcement that proposals for badger culling would be suspended pending a review of the science. This was followed by an announcement in March 2012 by the Environment Minister, John Griffiths, of a new [Strategic Framework for Bovine TB Eradication](#) and the

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<sup>45</sup> ibid

<sup>46</sup> Welsh Government, [Strict cattle control measures come into force in west Wales pilot area](#), 29 April 2010

<sup>47</sup> Welsh Assembly Government, [New bovine TB Eradication proposals announced by Welsh Rural Affairs Minister](#), 20 September 2010

cancellation of the proposed culling, which would be replaced by a badger vaccination programme.

Further details of the can be found in the Library Note on [TB vaccination in Badgers](#) SNSC 6447.