Introduction

This submission has been developed by The Wildlife Trusts in response to Defra’s consultation entitled ‘Bovine TB: Supplementary badger disease control’.

There is a Wildlife Trust caring for wildlife and wild places near you. We have a shared mission to create an environment rich in wildlife for everyone. We know that a healthy natural environment is the source of our prosperity and our wellbeing. We want to inspire people about the natural world so that they value it, understand their relationship with it and take action to protect and restore it. We are actively engaged in the planning system, promoting opportunities to improve the natural environment and reviewing more than 60,000 planning applications a year. We have more than 800,000 members including 150,000 members of our junior branch Wildlife Watch. Every year we work with thousands of schools and our nature reserves and visitor centres receive millions of visitors. Each Wildlife Trust is working within its local communities to inspire people about the future of their area: their own Living Landscapes and Living Seas.

*A Living Landscape* is a recovery plan for nature championed by The Wildlife Trusts since 2006 to help create a resilient and healthy environment rich in wildlife and to provide ecological security for people. In *A Living Landscape* habitats are restored and reconnected on a large scale with the local community closely engaged. The vision is a primary objective of The Wildlife Trusts and builds on a groundswell of landscape-scale activity at a county level. The Wildlife Trusts have a long track record of delivering landscape-scale conservation. Across the UK there are now more than 150 Living Landscape schemes covering an area of more than four million hectares. These are being delivered in partnership with many different individuals and organisations, including farmers and landowners, water companies, land-based industries, local authorities, other NGOs, statutory agencies, local communities and volunteers.
A: Please give us your views on the proposed approach to licensing: including the conditions of licensing, the discretion in Natural England’s decision-taking and the licence period.

Critique of the rationale for supplementary badger disease control

Much of the evidence used in the rationale for the proposal is unclear. In our response, The Wildlife Trusts highlight where the presentation of the evidence is flawed. We want the Government to rethink the prioritisation of culling over increasing efforts to establish a comprehensive vaccination scheme.

Evidence is omitted on the effectiveness and uptake of the Government’s TB eradication strategy measures (see 3.1, i.e. cattle testing, movement controls, improved on-farm biosecurity and badger control). Badgers are not the primary culprits in the spread of bovine tuberculosis (bTB) in cattle: the primary route of infection is via cow-to-cow contact1. However, a study of 56 farms in the north-west of England over an area of 100km² found that uptake of biosecurity measures varied widely between farms. It is imperative that more research is done to understand best practice and how farmers could be better supported if preventive medicine is to be employed and embraced completely by the agricultural industry2.

3.5 We have also considered the wider deployment of existing measures for badger control...Deployment of the injectable vaccine continues to be hampered by supply issues...However, if and when more efficient and cheaper deployment options for badger vaccine are available, they may offer an effective and time efficient means for replacing culling.

Recent information from Defra is that they are not planning to undertake a badger vaccination programme in 2017 due to the global shortage of the BCG vaccine. However, badger vaccination has been found to be an important element in the control of bovine TB. In 2012, a four-year study conducted by Carter et al., based at The Food and Environment Research Agency (FERA) tested the effects of the Badger BCG vaccine in an area of very high badger densities across 55km² of Gloucestershire. This clinical trial found that the BCG vaccine reduced the risk of vaccinated badgers testing positive to a test of progressed infection by 76%, and reduced the risk of testing positive to any of the available live tests of infection by 54%3.

Modelling by FERA demonstrated that due to failings in the practical delivery of a culling strategy, such as low rates of land access, low efficacy, or early cessation, it was likely to lead to an overall increase in cattle herd breakdown. However, vaccination carried no risk of the negative effects associated with culling4. A study published in January 2017 found that over a three-year period in three study zones, oral BCG vaccination gave protection to badgers and could be used to reduce

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incident rates in tuberculosis-infected populations of badgers\textsuperscript{5}. Vaccination remains the best option for the control of bTB in badgers; it is more practical than culling and offers the best value for money.

As we know that the primary route of infection is via cow-to-cow contact, the control of bTB in cattle should be the main focus of efforts to control this problem\textsuperscript{6}. Cattle vaccination offers the best long-term way to reduce bTB in the cattle population. The Wildlife Trusts want research into cattle vaccination accelerated.

Section 5 of the consultation document details the economic impacts of culling, stating that ‘prior culling delivers net benefits of £0.56m per area over the four-year period.’ However, this is a highly misleading figure. The value for money analysis actually states that ‘the benefits are expected to be greater than the costs by around £0.56m per area, but with considerable uncertainty.’ In fact, between 2012 and 2014, £16.8 million of taxpayers’ money was spent on the culling of 2,476 badgers. This is nearly four times more expensive than Defra anticipated and is a cost of £6,800 per dead badger. Of this figure, more than £4.9 million was spent on policing costs - equivalent to the annual salary costs of more than 120 police officers over a two-year period\textsuperscript{8}. In comparison, 5,000 badgers have been vaccinated in Wales over four years - and all for the price of two weeks of badger culling in England. It costs £293 per badger vaccinated in The Wildlife Trusts’ vaccination programmes. That’s a difference of £6,482 per badger culled and badger vaccinated.

a) Conditions of licensing

4.13 Licensees will remove at least a minimum number and no more than a maximum number of badgers as specified by NE.

With no reliable estimations of the size of badger populations in the cull zones, it is impossible to know when the critical target level of 70% removal has been achieved. This undermines the credibility of the results and invalidates the purpose of the licensing process. This proposal raises concerns about the setting of targets for the number of badgers to be removed. The changes to licensing would be heavily reliant on a flawed process to generate targets that have been described as ‘scientifically rubbish.’

4.3 The badger control company that completed the cull would be able to apply for a licence to continue its operations in subsequent years. If the company did not want to continue, an appropriately experienced, alternative body could be licensed.

This raises concerns with regards to the accountability of the person undertaking the cull and how closely Natural England could regulate and keep a record of those skilled enough to carry it out. This could risk contravening requirement 10 of the licence – applicants must satisfy Natural England that they are able to deliver the cull as safely and humanely as possible.

\textsuperscript{6} http://currents.plos.org/outbreaks/article/the-contribution-of-badger-to-cattle-tb-incidence-in-high-cattle-incidence-areas/
\textsuperscript{7} https://www.gov.uk/government/publications/bovine-tb-badger-control-policy-value-for-money-analysis
\textsuperscript{8} These figures were provided in response to a Freedom of Information (FOI) request, which is available in full on the Gov.uk website.
\textsuperscript{9} Professor Rosie Woodroffe, member of the Independent Scientific Group on Cattle TB and badger ecologist, October 2014
4.4 Any continued control operation would be under the terms and conditions set out in the licence from NE, under section 10 of the Protection of Badgers Act 1992 and section 16 of the Wildlife and Countryside Act 1981. Applications for a licence would only be considered if the prior cull was judged effective in achieving a population reduction likely to reduce disease transmission to cattle.

The Independent Expert Panel (IEP) was set up to assess the effectiveness of the culls but was dissolved after it reported that controlled shooting was ineffective and inhumane\textsuperscript{10}. This left the badger culls with no independent scientific oversight. By moving the goalposts at regular intervals, the Government has undermined the scientific credibility of its own research. As a result, no definitive scientific conclusions can be drawn from the pilot culls and in 2014, the Chair of Natural England’s Scientific Advisory Committee, Professor David Macdonald, described the pilot culls as an ‘epic failure’\textsuperscript{11}.

**With no prior cull having met the standards set out by the Independent Expert Panel, and therefore deemed effective, supplementary cull licenses should not be considered and indeed the premise appears premature and flawed.**

4.5 As the statutory purpose of a licence in these circumstances is to prevent the spread of disease, NE would take appropriate steps to evaluate the effectiveness of the licensed activity in terms of such things as numbers achieved and effort deployed.

Numbers of badgers culled and effort deployed are not on their own good proxies for measuring spread of disease. Natural England’s evaluation of effectiveness should focus upon prevalence of disease within culled badgers, prevalence of disease within cattle (within and surrounding cull areas) and numbers of badgers culled as proportion of known badger population rather than numbers culled as stated in Natural England’s annual reports\textsuperscript{12}.

**Culling for prolonged periods and removing ‘too few’ badgers both serve to increase the risk of perturbation and therefore disease risk to cattle**\textsuperscript{13}. Incomplete removal of badgers during localised culling operations appears to have at best no effect and at worst may cause an increase in cattle herd breakdowns.

5.3 Costs: Licensing costs to NE could rise, depending on the level of interest from farmer-led groups. Additionally, Defra and APHA may incur costs as a result of needing to quality assure surveys and monitoring for any supplementary badger control. Local police forces incur costs in relation to maintaining public order and safety: these costs are met by taxpayers. The main costs of badger control to licensed farmers will be preparation and coordination, which include communication, planning, support, management and administration; and delivery of culling, which includes


\textsuperscript{11} Available here: https://www.theguardian.com/environment/2014/dec/18/government-admits-badger-cull-could-fail-reduce-bovine-tb


equipment and manpower and, by exception, surveying. These costs are expected to be similar to prior culling measures and have come down substantially since badger control first started.

As Natural England bases effectiveness of a cull partly on the proportion of the population culled, it would be crucial to conduct regular monitoring and survey of badger populations.

b) The discretion in Natural England’s decision-taking

Severe budget cuts for ecological expertise call into question whether there are enough people in Natural England to be able to manage, monitor or review the new approach.

c) License period

3.2 We know that the Randomised Badger Culling Trial (RBCT) that disease control benefits persisted for at least 7.5 years after the last cull operation.

Culling for prolonged periods and removing ‘too few’ badgers serves to increase the risk of perturbation and therefore disease risk to cattle. Incomplete removal of badgers during localised culling operations appears to have at best no effect and at worst may cause an increase in cattle herd breakdowns. The RBCT states that ‘repeated culling would sustain perturbation... in both proactive and reactive areas’

2.2 Two such farmer-led operations have now completed successfully their fourth and final year, eight areas have two or three years to run and more than 30 other areas have expressed interest in starting operations. The UK Chief Veterinary Officer (CVO) advises that preserving over the long term the benefits achieved through these operations is important to sustain the good progress being made on the strategy.

26. A maximum of ten new Badger Disease Control areas may be licensed each year unless there are compelling reasons to increase or decrease that number.

4.11 The licence would enable operations to be undertaken wherever access is granted within the boundary of the completed prior cull. Applications would be expected to secure access to as much land as possible within this. NE would have discretion to decide what constitutes a sufficient extent of access.

It is vital that land is directly accessible for the purpose of conducting sett surveys to accurately assess the size and distribution of local badger populations, and therefore set meaningful targets; and also to ensure an intensive and sustained culling effort throughout the cull zone. It is not clear how this could be achieved if a significant proportion of land is not directly accessible, particularly if there is continued and increasing reliance on cage trapping as opposed to controlled shooting.

3.7 The Republic of Ireland has had a national policy of badger control since 2003. They report a “dramatic decline in prevalence of TB in badgers from culled areas in Ireland, from 26% to 11% during 2007-2013”.

14 The conclusions of the RBCT are available to download, contained within the Final Report of the Independent Scientific Group on Cattle TB - ‘Bovine TB: The scientific evidence.’
The RBCT states that to apply these results in the UK would be “unsubstantiated and must be treated with considerable caution”, due to the very different natures of the studies15.

**B: Please give us your views on the proposed plans to ensure that badger welfare is maintained, including views on the most appropriate time limit for badger control within the open season.**

Natural England should only award licences for badger culling when they are satisfied that licensees can carry out the cull as *safely and humanely* as possible (according to requirement 10 of the license agreement). However controlled shooting of free-ranging badgers is included as a method for culling in this proposal. The British Veterinary Association (The BVA) recently announced that the pilot culls ‘did not demonstrate conclusively that controlled shooting could be carried out effectively and humanely’16. This puts into serious question whether culls can be carried out humanely via this method.

**C: Please give us your views on how Natural England should evaluate the effectiveness of supplementary badger control over the five-year licence period to ensure that it meets the aim of keeping the population at the level required to ensure that effective disease control benefits are prolonged.**

4.10 A 5-year licence would give the licencing authority and the licensee a fixed review point.

The proposals outlined in this consultation remove the vast majority of mechanisms designed to ensure the intensive, sustained removal of badgers as recommended by the RBCT. Instead, it is proposed that during the five-year licence there would be one ‘fixed review point’ when ‘Natural England will ensure compliance’. This review comes only ‘at the end of the licence period, and if the Natural England decided that is it necessary’ to do so during the five year period. Reviewing the effectiveness of delivery after the event is a flawed approach. This would fail to ensure that licensees were adhering to the requirements of the license during the five-year license period. This could put the badger populations in unnecessary danger and waste time and money. At the very least Natural England should undertake annual reviews during the five-year licence to ensure the minimum and maximum numbers of badgers culled were being upheld and that the highest standard of animal welfare were met. This would give Natural England the ability to revoke the license or to issue warnings at any point during the five-year licence period.

This gives the Natural England complete discretion to ensure licence holders are removing ‘at least a minimum number and no more than a maximum number of badgers’, and to decide whether to take action to terminate operations on a case by case basis. Given that the pilot culls have consistently breached existing, tighter licence conditions by failing to meet minimum targets – particularly in Gloucestershire – with no repercussion, we have no confidence in Natural England’s ‘discretion’ or in its ability to terminate ineffective culling operations17.

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15 *Ibid*
**D: Any further comments?**

Badgers are not the primary culprits in the spread of bovine tuberculosis (bTB) in cattle: the primary route of infection and transmission of the disease is via cow-to-cow contact.\(^{18}\) The control of bTB in cattle should be the main focus of the efforts to control this problem.

Almost twenty years ago, the Government commissioned the RBCT, a comprehensive study\(^{19}\) into the spread of bTB through cattle by badgers. The research ran from 1998 – 2006 and remains the most comprehensive scientific study of the effect of badger culling on levels of bovine TB in badgers and cattle in the world. The conclusion of the report was undeniable. **Badger culling would not have any meaningful effect and could in fact make the situation worse.**

The badger cull pilots have been a catalogue of errors, contradictions and last minute changes - departing significantly from the expert advice from the start. No control zone studies were established, no systematic badger post mortems were organised and no detailed scientific monitoring established. The recommended cull period has not been completed\(^{20}\), changes\(^{21}\) were made to the target numbers of badgers\(^{22}\) and the means of culling has been changed.

The Independent Expert Panel (IEP)\(^{23}\) was set up to assess the effectiveness of the culls but was dissolved after it reported that controlled shooting was ineffective. This left the badger culls with no independent scientific oversight. By moving the goalposts at regular intervals, the Government has undermined the scientific credibility of its own research. As a result, no definitive scientific conclusions can be drawn from the pilot culls and in 2014, the chief scientific adviser to Natural England described the pilot culls as an ‘epic failure’\(^{24}\).

**A widely held view among experts is that the poorly conducted trial culls in Somerset and Gloucestershire will in fact have helped spread the disease**\(^{25}\). Culling programmes disrupt badgers’ typical territorial system. As a result, badgers that have evaded culling are more infectious to cattle.

**Conclusions**

In summary, if the Government insist on continuing with badger culling, there must be far more work done to monitor its effectiveness in reducing the incidence of bTB in the countryside. It is crucial that the culling of a protected species is underpinned by robust scientific evidence. However, we believe the Government should rethink the prioritization of culling over increasing efforts to establish a comprehensive vaccination scheme.

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