



Department
for Environment
Food & Rural Affairs

Guidance to Natural England on licensed badger control to prevent the spread of bovine tuberculosis

**A consultation exercise contributing to the delivery
of the Government's Strategy for achieving
Officially Bovine Tuberculosis Free (OTF) status for
England**

December 2016



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Part A: Background

1. Purpose of this consultation

- 1.1 This consultation is part of the Government's Strategy to eradicate bovine tuberculosis (TB) in England. The disease is the most pressing and costly animal health problem in the UK. It threatens our cattle industry and presents a risk to other livestock, wildlife, pets and humans. The estimated average cost of a confirmed new TB breakdown in the High Risk Area of England (2016 prices) is £9,500 to farmers and £8,600 to Government. Dealing with the disease is costing the taxpayer over £100 million each year. Last year alone over 28,000 cattle had to be slaughtered in England to control the disease, causing devastation and distress for hard-working farmers and rural communities.
- 1.2 While the Strategy has a strong emphasis on strengthening cattle testing and movement controls and improving biosecurity, the scientific consensus, summarised in Professor Charles Godfray's independent restatement of the evidence base in 2013¹, is that TB spreads within and between populations of badgers and cattle and that disease spread from badgers to cattle is an important cause of herd breakdowns in high-incidence areas.
- 1.3 Licences have been issued under section 10 of the Protection of Badgers Act 1992 and section 16 of the Wildlife and Countryside Act 1981 to enable the culling or vaccination of badgers for the purpose of controlling the spread of TB in endemic TB areas. When successfully completed, these licensed intensive culls can be expected to reduce cattle TB breakdowns (see paragraph 3.2) in an area for around seven and a half years. To prolong the disease control benefits it is necessary to maintain a steady badger population at the level achieved at the end of the licensed culls.
- 1.4 Natural England (NE) would need to licence a supplementary form of culling to achieve this. Continuing with badger control in this way is consistent with the TB Strategy's adaptive, evidence-based, long-term approach to disease control and would complement the other measures within the Strategy.

¹ H. Charles, J. Godfray, Christl A. Donnelly, Rowland R. Kao, David W. Macdonald, Robbie A. McDonald, Gillian Petrokofsky, James L. N. Wood, Rosie Woodroffe, Douglas B. Young, Angela R. McLean (2013). A restatement of the natural science evidence base relevant to the control of bovine tuberculosis in Great Britain. Proc. R. Soc. B 2013 280 20131634; DOI: 10.1098/rspb.2013.1634.

- 1.5 We are consulting on the Guidance to NE that the Secretary of State for Environment, Food and Rural Affairs would publish to set out the licensing criteria that NE, as the delegated licensing authority, must have regard to when considering such licence applications.
- 1.6 TB policy is devolved and this consultation applies to England only. Details of the proposal are set out in Part B and the draft Guidance is at Annex A. Responses to the questions in Part C are invited by 10 February 2017.

2. Licensed badger control to date

- 2.1 Since 2013 NE has licensed voluntary, farmer-led badger culling operations, in line with the published statutory policy guidance. These are evidence-based, carefully planned and take place over a short, intensive period of a few weeks each year of a licence. The operations are intended to last for a minimum of four years.
- 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 strategy².

Part B: Proposal for a supplementary form of badger control, to be licensed by Natural England

3. Rationale, evidence and current disease control measures

- 3.1 The Government is taking strong action to deliver a long-term plan to eradicate the disease and protect the future of our dairy and beef industries. The comprehensive TB strategy includes strengthening cattle testing and movement controls, improving biosecurity on farm and when trading, and badger control in areas where TB is rife.

² CVO advice 2016: <https://www.gov.uk/government/collections/bovine-tb-controlling-the-risk-of-bovine-tb-from-badgers>

- 3.2 We know from the Randomised Badger Culling Trial³ (RBCT) that disease control benefits persisted for at least 7.5 years after the last cull operation⁴. As no further badger control measures were put in place, over this time the reduced incidence of confirmed TB breakdowns in cattle within cull areas gradually returned to a level comparable to that within control areas where culling had not taken place.
- 3.3 This is likely to be explained by a recovering badger population with continued TB infection. The badger population will have recovered through breeding and immigration and some of this recovered population will be infected with TB. We continue to bear down on TB breakdowns that result from cattle to cattle transmission and infection from badgers. Defra's consultation in August 2016 proposed enhanced cattle measures, including increasing the use of interferon-gamma testing in TB breakdown herds in England's High TB Risk Area (HRA). The test will only be used in areas where licensed badger population control has been in place for two years. The maximum disease control benefits from badger culling will only be realised if comprehensive cattle controls are also applied rigorously within each cull area. This includes both more sensitive testing regimes to clear disease from infected herds and effective measures to prevent re-introduction of disease via inward cattle movements into these areas⁵.
- 3.4 Biosecurity remains an important part of the TB Strategy. Defra and industry continue to deliver actions in the joint Defra/industry Biosecurity Action Plan⁶, although complete protection of cattle from the risk of indirect spread of TB from badgers at pasture is impractical.
- 3.5 We have also considered the wider deployment of existing measures for badger control. Licensed badger vaccination has a role to play, even though the BCG vaccine does not provide complete protection or cure infected animals, which continue to spread TB. Deployment of the injectable vaccine continues to be hampered by supply issues. Potential new vaccine deployment methods such as an oral bait BCG vaccine remain at the experimental stage, are not guaranteed to be successful, and are at least 8 years away. However, if and when more efficient and cheaper deployment options for badger vaccine are available, they may offer an effective and time efficient means of replacing culling.

³ Final Report of the Independent Scientific Group on Cattle: TB

<http://webarchive.nationalarchives.gov.uk/20081107201922/http://defra.gov.uk/animalh/tb/culling/index.htm>

⁴ Defra research project SE3279

<http://sciencesearch.defra.gov.uk/Default.aspx?Menu=Menu&Module=More&Location=None&ProjectID=17993&FromSearch=Y&Publisher=1&SearchText=se32&GridPage=6&SortString=ProjectCode&SortOrder=Asc&Paging=10#Description>

⁵ CVO Advice 2016: <https://www.gov.uk/government/collections/bovine-tb-controlling-the-risk-of-bovine-tb-from-badgers>

⁶ Cattle biosecurity: a joint Defra/industry action plan for improving herd resilience to bovine TB
<https://www.gov.uk/government/publications/cattle-biosecurity-action-plan-for-improving-herd-resilience-to-bovine-tb>

3a. International evidence

- 3.6 There is international evidence that supports longer-term control of a TB wildlife reservoir. Bovine TB control in the Republic of Ireland, New Zealand (NZ) and the United States of America (USA) have indicated through modelling and experience that long-term culling of wildlife hosts will be necessary to control and eradicate TB.
- 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”⁷ such that TB levels in culled badgers have stabilised to be comparable to those found by Murphy et al⁸ in un-controlled low TB herd incidence areas.
- 3.8 In NZ, where possum populations were able to recover after an intensive removal operation, surveillance data found that TB in cattle also increased. Modelling suggested that in order to eradicate TB from the possum population and therefore from cattle, sustained control operations for at least ten years would be needed⁹. This approach was then trialled¹⁰ and a similar outcome to the modelling was achieved¹¹. NZ currently rely on sustained organised control over at least ten years. As a result, NZ report that some of their possum populations are now TB-free¹².
- 3.9 Modelling has been utilised to identify the impacts of various control programmes’ potential to reduce TB prevalence in white-tailed deer in Michigan (USA), a wildlife reservoir of TB in that State. To achieve TB eradication in the wild deer population the modelling suggested that, even with double the current level of deer harvest, sustained control lasting at least 10-20 years would be required¹³.

⁷ Byrne, A. W., Kenny, K., Fogarty, U., O’Keeffe, J. J., More, S. J., McGrath, G., Teeling, M., Martin, S. W. & Dohoo, I. R. (2015) Spatial and temporal analyses of metrics of tuberculosis infection in badgers (*Meles meles*) from the Republic of Ireland: Trends in apparent prevalence. *Preventive Veterinary Medicine* 122, 345-354

⁸ Murphy, D., Gormley, E., Collins, D. M., McGrath, G., Sovsic, E., Costello, E. & Corner, L. A. (2011) Tuberculosis in cattle herds are sentinels for *Mycobacterium bovis* infection in European badgers (*Meles meles*): the Irish Greenfield Study. *Vet Microbiol* 151, 120-125

⁹ Barlow, N. D. (1991) Control of Endemic Bovine Tb in New Zealand Possum Populations: Results From a Simple Model. *Journal of Applied Ecology* 28, 794-809

¹⁰ Caley, P., Hickling, G. J., Cowan, P. E. & Pfeiffer, D. U. (1999) Effects of sustained control of brushtail possums on levels of *Mycobacterium bovis* infection in cattle and brushtail possum populations from Hohotaka, New Zealand. *New Zealand Veterinary Journal* 47, 133-142

¹¹ Nugent, G., Buddle, B. M. & Knowles, G. (2015) Epidemiology and control of *Mycobacterium bovis* infection in brushtail possums (*Trichosurus vulpecula*), the primary wildlife host of bovine tuberculosis in New Zealand. *N Z Vet J* 63 Suppl 1, 28-41

¹² OSPRI Annual Report 2014/2015 <http://www.ospri.co.nz/Detail/tabid/287/ArticleID/4942/OSPRI-Annual-Report-TBfree-Research-Disease-Control-Report-13-14.aspx>

¹³ Ramsey, D. S. L., O’Brien, D. J., Cosgrove, M. K., Rudolph, B. A., Locher, A. B. & Schmitt, S. M. (2014) Forecasting eradication of bovine tuberculosis in Michigan white-tailed deer. *The Journal of Wildlife Management* 78, 240-254

- 3.10 There is no evidence on the effects of longer-term control of badgers in areas that have completed a four-year culling period. From the RBCT we know that the benefits of reduced disease in cattle erode over time from the end of culling operations. Maintaining the badger population at the level achieved by a minimum 4-year culling operation is the only available means of maintaining the reduced potential for infectious contacts between badgers and cattle.
- 3.11 The risk of potential perturbation effects as a result of disturbed badger social groups and increased disease transmission to cattle are expected to have been manifested primarily in the first year of a 4-year badger population control operation¹⁴. This risk should be much lower during supplementary badger control as the badger population in that area will be much smaller and territorial social groups are not expected to reform for several years after cessation of culling¹⁵.
- 3.12 So, in addition to the strengthened cattle measures referred to above, the Government proposes to amend its Guidance to Natural England to indicate its view that licences could appropriately be granted to permit a supplementary form of badger population control that can only be undertaken after a successfully completed culling operation.

4. Proposal for a supplementary form of licensed badger control

- 4.1 Any decision by the Secretary of State to amend the guidance in this way will be informed by the scientific and veterinary evidence available, experience from the badger control operations to date, and responses to this consultation. Responses are invited to the questions in Part C.
- 4.2 The aim of supplementary badger control is to prolong the disease control benefits from a completed licensed cull. This aim would be achieved by keeping the badger population at, or below, a level consistent with that achieved by the end of that cull.
- 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. Enabling a voluntary farmer or landowner-led operation to continue would draw on the expertise accumulated over the prior culling operation, as the farmers and landowners would be experienced and know their area well.

¹⁴ Final Report of the Independent Scientific Group on Cattle: TB
http://webarchive.nationalarchives.gov.uk/20090330154646/www.defra.gov.uk/animalh/tb/isg/pdf/final_report.pdf

¹⁵ Cheeseman, C.L., Mallinson, P.J., Ryan, J. & Wilesmith, J.W. 1993. Recolonisation by badgers in Gloucestershire. In: Hayden, T.J. (Ed) *The Badger*, 78-93. Dublin, Royal Irish Academy.

- 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.
- 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.
- 4.6 Any supplementary badger control licence would not need to replicate some of the licensing requirements for a completed, four-year cull, e.g. a specified level of sign-up with complex access agreements and full upfront funding, because of the reduced risk of perturbation.
- 4.7 However, certain fundamental safeguards would remain. Operations would not be permitted during the closed seasons for welfare considerations, 1 December to 31 May for cage-trapping and 1 February to 31 May for controlled shooting.
- 4.8 The onus would be on applicants to demonstrate to NE how they would plan and deliver an effective supplementary badger control operation. Culling must take place in a limited period within the open season.
- 4.9 A licence would be granted for five years and would enable culling to continue each year within the licence period, provided that NE was satisfied that the annual operation was effective in maintaining a reduced level of badger population. NE's ongoing monitoring of the badger population for this purpose would also prevent the possibility of local extinction. The licence could be revoked, if appropriate and necessary, at NE's annual evaluation or at any other time on reasonable grounds.
- 4.10 A 5-year licence would give the licensing authority and the licensee a fixed review point. If the supplementary control operation had been effective, taking into account the local disease situation and other factors, NE could consider applications for a further 5-year licence.
- 4.11 The licence would enable operations to be undertaken wherever access is granted within the boundary of the completed prior cull. Applicants 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.
- 4.12 Licensed supplementary badger control must start in the year following the conclusion of a prior cull, as allowing the badger population to recover and then undertaking badger population control risks causing a perturbation effect in cattle TB incidence and undermining the disease control benefits achieved.

- 4.13 Licensees will remove at least a minimum number and no more than a maximum number of badgers as specified by NE.
- 4.14 NE will ensure compliance with the standards set out in the Best Practice Guides for controlled shooting and cage trapping and dispatch of badgers through risk-based monitoring, assessing new contractors and training audits. Participating landowners must permit NE access to their land for risk-based compliance monitoring purposes.
- 4.15 There will be a field survey requirement at the end of the licence period, and if NE decides that it is necessary to evaluate badger activity in the area during the licence period. The Animal and Plant Health Agency (APHA) may carry out quality assurance on surveying activity carried out in a licensed area. Participating landowners must permit APHA access to their land for this purpose.

5. Summary of economic impacts

- 5.1 The 2016 badger control policy value for money analysis¹⁶ estimates that prior culling delivers net benefits of £0.56m per area over the four-year period. Evidence from the RBCT shows that these benefits would deteriorate over time without supplementary licensed badger control.
- 5.2 Benefits: Supplementary licensed badger control preserves the disease control benefits of a net reduction in cattle TB breakdowns from the prior culls. Farmers and government would benefit from reduced disease control costs that would otherwise return gradually to pre-cull rates. Existing licence holders would benefit from continuity if they chose to continue with supplementary badger control. Licence holders will also not require upfront funding as they did in prior culling.
- 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 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.
- 5.4 Overall: The benefits of preserving disease control in prior culling areas are expected to outweigh the costs of supplementary badger control.

¹⁶ <https://www.gov.uk/government/publications/bovine-tb-badger-control-policy-value-for-money-analysis>

Part C: Tell us what you think

6. Your comments invited

- 6.1 **Our proposal is designed to enable farmer-led licensed supplementary badger control in order to maintain disease control benefits in areas where successful culls have been completed over at least 4 years. We invite views on how this proposal can be made as effective as possible. We would particularly welcome views on the following specific issues:**
- A:** The proposed approach to licensing – including the conditions of licensing, the discretion in Natural England’s decision-taking and the licence period.
- B:** The proposed plans to ensure badger welfare is maintained, including views on the most appropriate time limit for badger control within the open season.
- C:** 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 effective disease control benefits are prolonged.
- 6.2 Please provide any additional comments which you feel are relevant but not captured by the questions above.
- 6.3 Animal health policy, including TB, is devolved. This consultation therefore applies to England only¹⁷.
- 6.4 This consultation is about badger control policy. The deadline for responses is 10 February 2017.
- 6.5 We have written to principal organisations that we believe have a direct interest to raise awareness about this consultation and inviting them to respond. We hope this will help ensure a wide range of informed views can be considered. Anyone else who would like to respond to the consultation is free to do so. Each response will be considered in its own right and on its own merit.
- 6.6 You can respond in one of three ways:
- **Online** by completing the questionnaire at: <https://consult.defra.gov.uk/>

¹⁷ Further information is available on TB policy in Northern Ireland, Scotland and Wales can be found at: Northern Ireland <https://www.daera-ni.gov.uk/topics/animal-health-and-welfare/animal-diseases-diseases-affect-cattle/bovine-tuberculosis>, Wales <http://gov.wales/topics/environmentcountryside/ahw/disease/bovinetuberculosis/?lang=en> and Scotland <http://www.gov.scot/Topics/farmingrural/Agriculture/animal-welfare/Diseases/disease/tuberculosis>.

- **Email** to: bTBengage@defra.gsi.gov.uk

- **Post** to:

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- 6.7 Our preferred method is online because it is the fastest and most cost-effective way for us to collate, analyse and summarise responses. If you require a different format, please let us know.
- 6.8 We intend to publish a summary of responses to this consultation. It will not be practical to describe every response in detail.
- 6.9 The summary will not include your personal name (unless you have asked us to include it) or other personal data such as contact details. The summary may contain the name of your organisation, if you are responding on an organisation's behalf.
- 6.10 Defra will retain copies of responses for a suitable length of time. Please note that a member of the public can ask to see copies of information held. If you need to keep any part of your response confidential, please tell us when you respond. Please note that confidentiality disclaimers automatically added to e-mails do not count.
- 6.11 **Important:** We will take your reasons into account if someone asks for information. Because we must comply with the law, including access to information legislation, we cannot promise that we will always be able to keep details that you provide to us confidential.

Annex A: Guidance to Natural England

Guidance to Natural England

Licences under section 10(2)(a) of the Protection of Badgers Act 1992 for the purpose of preventing the spread of bovine TB

December 2016



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PB 14384

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Scope of this Guidance

1. This guidance is given by the Secretary of State to Natural England under section 15(2) of the Natural Environment and Rural Communities Act 2006 (NERC Act), and represents the Secretary of State's considered views, based on current scientific evidence, about what is required for any cull of badgers for bovine tuberculosis (TB) control purposes to be effective, safe and humane.
2. Section 15(6) of the NERC Act requires Natural England to have regard to this Guidance in discharging its functions. The Secretary of State has consulted Natural England and the Environment Agency in accordance with section 15(3)(a) and (b) of the Act and, in accordance with section 15(3)(c) of the Act, has also consulted more widely through a public consultation.¹⁸
3. An agreement under section 78 of the NERC Act was entered into with effect from 1 October 2006 authorising Natural England to carry out various Defra functions including those relating to licensing under the Protection of Badgers Act 1992 and the Wildlife and Countryside Act 1981.
4. This guidance relates only to licensing functions under section 10(2)(a) of the Protection of Badgers Act to kill or take badgers for the purpose of preventing the spread of TB, and any associated licensing functions under section 16(3)(g) and (h) of the Wildlife and Countryside Act 1981 in relation to any activity that (in the absence of such a licence) would be prohibited under section 11 of that Act. Guidance for all other licensing relating to badgers is given in a separate document.¹⁹
5. TB policy is devolved. With the exception of paragraph 27, this guidance relates to England only.

The Policy

6. The Government's policy is to enable the licensed culling or vaccination of badgers for the purpose of controlling the spread of TB, as part of the Strategy for achieving Officially Bovine Tuberculosis Free status for England.²⁰ There are two types of culling licence and each is applicable to a different phase of culling operations:

¹⁸ https://www.gov.uk/government/publications?departments%5B%5D=department-for-environment-food-rural-affairs&publication_filter_option=consultations

¹⁹ <https://www.gov.uk/government/collections/badger-licences>

²⁰ The Strategy for achieving Officially Bovine Tuberculosis Free status for England (PB 14088).
<https://www.gov.uk/government/publications/a-strategy-for-achieving-officially-bovine-tuberculosis-free-status-for-england>

- A Badger Disease Control licence is required where culling is to take place for the first time, or where NE considers that a Supplementary Badger Disease Control licence is not the appropriate form of licence.
 - A Supplementary Badger Disease Control licence is required where culling is to take place to prevent the recovery of the badger population following the completion of annual culling that has lasted at least four years under a Badger Disease Control licence.
7. Throughout this document, where the term ‘completed’ or ‘prior’ cull is used this describes a cull that was carried out under a Badger Disease Control licence for a minimum duration of four years. A Glossary can be found at the end of this Guidance.

Culling Policy Requirements

8. Applications for **badger disease control licences** must meet the following **criteria**.
- a. All participating farmers are complying, and for the duration of any licence continue to comply, with **statutory TB controls**.
 - b. Reasonable **biosecurity** measures are being, and for the duration of any licence will continue to be, implemented by participating farmers on their land to provide a strong protection against the spread of infection. For this purpose ‘reasonable measures’ means measures that in the particular circumstances are practicable, proportionate and appropriate, having regard to the Bovine TB Biosecurity Five-Point Plan.²¹
 - c. The application must cover an area of at least 100km².²²
 - d. The area must be composed of land wholly within the **High Risk** or **Edge Areas** at the time of application.²³
 - e. The size and number of areas of **inaccessible land** within the application area should be minimised for the purposes of effective disease control, with approximately 90% of the land within the application area either accessible or within 200m of accessible land. The variance from 90% which will be accepted will be decided by Natural England on a case-by-case basis, taking into account such specific circumstances as Natural England considers relevant, e.g. topography, land use and badger sett surveys or any other matter that Natural

²¹ <http://www.tbhub.co.uk/biosecurity/protect-your-herd-from-tb/>

²² Paragraphs 3.13 and 3.14 of the 2015 consultation on revised licensing criteria for Badger Disease Control explain the rationale for this area size: <https://www.gov.uk/government/consultations/bovine-tb-updating-the-criteria-for-badger-control-licence-applications>.

²³ These areas are currently subject to a minimum of annual herd testing.

England considers relevant. Natural England should have regard to any advice on the application from the UK Chief Veterinary Officer (CVO).

- f. Applicants must **put in place reasonable measures to mitigate the risk to non-participating farmers and landowners** of a potential increase in confirmed new incidents of TB in vulnerable livestock within the culled area and in the 2km ring surrounding the culled area; and consider whether any measures are needed to protect the interests of any non-farming interests that may be affected by badger control.
- g. For this purpose ‘reasonable measures’ means measures that in the particular circumstances are practicable, proportionate and appropriate. When assessing the reasonableness of measures, applicants and Natural England should take into account the cost of measures relative to the potential cost to non-participants of the anticipated increase in TB incidence.
- h. Applicants must enter into an agreement with Natural England under section 13 of the NERC Act (the “Badger Control Deed of Agreement”) requiring them to comply with the requirements contained in this guidance and any additional licence conditions for the purpose of ensuring that –
 - i. an effective cull is carried out each year for a minimum of four years; and
 - ii. the financial deposit (see paragraphs 7k and l) is sufficient and is managed appropriately.
- i. All land holders, unless the agreement states otherwise, must enter into agreements with Natural England under section 7 of the NERC Act (the “TB Management Agreement”) requiring them to permit access to their land for culling (including by Government) and to take appropriate biosecurity measures (as required in paragraph 7b), and agreeing that Government can recover any additional costs of culling.
- j. Where land is tenanted, the freeholder owners (or landlords) must generally also sign an undertaking appended to this agreement agreeing to permit access to the land for culling (including by Government). Natural England may permit dispensations in certain cases, provided it considers that the likelihood of the total accessible land falling below an acceptable level (approximately 90% of the control area either accessible or within 200m of accessible land, see paragraph 7e above) as a result of the termination of any tenancy for any reason would still be very low. This may depend on:
 - i. the margin of accessible land above 90% that is accessible or within 200m of accessible land;
 - ii. the proportion of accessible land where the freehold owner is not participating, and

- iii. the length of the tenancies to which the accessible land is subject.
 - k. Applicants must have arrangements in place to **deposit sufficient funds** in a reputable bank to cover the total cost of a four-year cull, plus a contingency sum of 25%. This deposit must be made before culling begins into an account held by the applicants. Applicants will need to provide evidence to support the cost estimates and confirmation from the bank that the deposit has been made.
 - l. The funds must be managed in line with the requirements set out in the Badger Control Deed of Agreement, including the requirement to ensure that at all times the amount remaining in the account is sufficient to ensure that culling is carried out in accordance with the licence and the Badger Control Deed of Agreement.
9. Further, applicants must satisfy Natural England that they are able to deliver an **effective cull** in line with this policy and have arrangements in place to achieve this. To deliver an **effective cull**, the following requirements must be met.
- a. Culling must be **co-ordinated** on accessible land across the entire control area.
 - b. Culling must be **sustained**, which means it must be carried out annually (but not in closed seasons) for the duration of the licence (minimum of 4 years). The culling of badgers must commence during the culling season, on or after the date specified by Natural England in its letter of authorisation, and will continue until Natural England requires it to cease in all or part of a control area. The duration of the cull needs to achieve a balance between sufficient intensity to achieve effective disease control and what is realistically deliverable by a cull company.
 - c. Culling will not be permitted during the following **closed seasons**:
 - i. 1 December to 31 May for cage-trapping and shooting badgers;
 - ii. 1 February to 31 May for controlled shooting; and
 - iii. 1 December to 30 April for cage-trapping and vaccination.
 - d. Culling must remove a minimum number of badgers in each year as specified below:
 - i. in the first year of culling, a **minimum number of badgers** must be removed which must be carried out throughout the land to which there is access, until the licensee is notified by Natural England that culling should be discontinued for the remainder of the culling season. This minimum number should be set at a level that in Natural England's judgement should **reduce the estimated badger population of the application area by at least 70%**;

- ii. a **minimum number of badgers** must also be removed in subsequent years of culling carried out throughout the land to which there is access, until the licensee is notified by Natural England that culling should be discontinued for the remainder of the culling season. This minimum number should be set at a level that in Natural England's judgement should maintain the badger population at the reduced level required to be achieved through culling in the first year.

10. Further, applicants must satisfy Natural England that they are able to deliver the cull as safely and humanely as possible. The following requirements must be met in that respect.

- a. In order to ensure humaneness, only two **culling methods** will be permitted (which can be used in combination, or alone):
 - i. cage-trapping followed by shooting; and
 - ii. controlled shooting of free-ranging badgers ('controlled shooting').
- b. Those licensed to cull badgers must be able to demonstrate a level of **competence** appropriate to the method they will be licensed to use. Successful completion of a training course approved by Government will be taken as proof of competence.
- c. Culling must be in line with the relevant Best Practice Guidance.

11. Natural England should aim to ensure that culling will "not be detrimental to the survival of the population concerned" within the meaning of Article 9 of the Convention on the Conservation of European Wildlife and Natural Habitats, and for this purpose in considering applications for a licence should have regard to the guidance of the Standing Committee on the interpretation of Article 9 of that Convention. For that purpose Natural England should:

- a. determine appropriate area-specific licence conditions; and
- b. set a maximum number of badgers to be removed from the licence area.

Defra considers that this approach is sufficient to be confident that culling will not be detrimental to the survival of the relevant population of badgers.

12. Further, Natural England should take into account conservation considerations for designated sites, for example Sites of Special Scientific Interest (SSSIs), Special Areas of Conservation (SACs), and Special Protection Areas (SPAs). Under the Conservation of Habitats and Species Regulations 2010, (SI 2010/490), an "appropriate assessment"

must be carried out before granting a licence which might have a significant effect on a **European protected site** (principally SACs & SPAs).²⁴

Supplementary badger disease control requirements

13. Applications for **Supplementary Badger Disease Control licences** must meet the following **criteria**.

- a. The application must relate to the whole of an area in relation to which, in the view of Natural England, an effective cull has been carried out under a licence for a period of at least four years.
- b. Supplementary Badger Disease Control will commence in the year after the end of a successful completed cull, to provide continuity of badger population control.
- c. All participating farmers are complying, and for the duration of any licence continue to comply, with **statutory TB controls**.
- d. Reasonable **biosecurity** measures are being, and for the duration of any licence will continue to be, implemented by participating farmers on their land. For this purpose 'reasonable measures' means measures that in the particular circumstances are practicable, proportionate and appropriate, having regard to the Bovine TB Biosecurity Five-Point Plan.²⁵
- e. The area to which the application relates must lie wholly within the **High Risk or Edge Areas** at the time of application.
- f. All land holders must permit Natural England access to their land for **compliance monitoring**.
- g. The duration of a Supplementary Badger Disease Control licence will be **limited to 5 years**. (The licence may, however, be revoked if appropriate following a progress evaluation or on reasonable grounds.) This does not preclude an

²⁴ Where the assessment concludes that the grant of a licence might result in an adverse effect on the integrity of a European protected site, the licence must not be granted unless there are no alternative solutions and the rationale for the policy can be relied upon as an imperative reason of overriding public interest (pursuant to regulation 62(2) of those Regulations). Where the European protected site hosts habitat which for the purposes of the Habitats Directive is a priority habitat or a species which is a priority species, any such overriding public interest cannot be relied upon except pursuant to advice from the European Commission that it may be.

²⁵ See footnote 3.

application in due course for a further licence to take effect at the expiry of the period in question.

14. Applicants must satisfy Natural England that they are able to deliver an **effective** cull in accordance with this policy and have arrangements in place to achieve this. Natural England should assess whether applicants meet this requirement having regard to the following criteria -

- a. The application must be submitted by an experienced company or group considered capable of **co-ordinating and overseeing** effective control activity in the area.
- b. To be effective, culling should **maintain the population** at the level achieved after the prior cull, by removing each year the minimum number of badgers set by Natural England and not exceeding the maximum number set.
- c. Culling must be **co-ordinated** on accessible land across the control area and the resources deployed in culling must be such as are assessed by Natural England to be sufficient to ensure the supplementary control operation will be effective.
- d. Culling must be **sustained**, which means it must be carried out annually within the open season for the duration of the licence (unless wholly discontinued before the expiry of the licence), and for a limited duration of such period as NE permits in the year in question.
- e. Culling will not be permitted during the following **closed seasons**:
 - i. 1 December to 31 May for cage-trapping and shooting badgers;
 - ii. 1 February to 31 May for controlled shooting; and
 - iii. 1 December to 30 April for cage-trapping and vaccination.

15. Applicants must satisfy Natural England that they are able to deliver the cull as **safely and humanely** as possible. The following requirements must be met in that respect.

- a. In order to ensure humaneness, only two **culling methods** will be permitted (which can be used in combination, or alone):
 - i. cage-trapping followed by shooting; and
 - ii. controlled shooting of free-ranging badgers ('controlled shooting').
- b. Persons to be authorised to carry out culling pursuant to the licence must be able to demonstrate a level of **competence** appropriate to the method they are licensed to use. Successful completion of a training course approved by Government will be taken as proof of competence.

- c. Culling must be carried out in accordance with the relevant Best Practice Guide.
16. Natural England should aim to ensure that Supplementary Badger Disease Control will “not be detrimental to the survival of the population concerned” within the meaning of Article 9 of the Convention on the Conservation of European Wildlife and Natural Habitats, and for this purpose in considering applications for a Supplementary Badger Disease Control licence should have regard to the guidance of the Standing Committee on the interpretation of Article 9 of that Convention. For that purpose Natural England should:
- a. determine appropriate area-specific Supplementary Badger Disease Control licence conditions; and
 - b. set a maximum number of badgers to be removed from the licence area.
17. Licensees must complete a sett survey where NE, on the CVO’s advice, deems it necessary after taking into account all appropriate information.
18. Natural England should take into account conservation considerations for designated sites, for example Sites of Special Scientific Interest (SSSIs), Special Areas of Conservation (SACs), and Special Protection Areas (SPAs). Under the Conservation of Habitats and Species Regulations 2010, (SI 2010/490), an “appropriate assessment” must be carried out before granting a licence which might have a significant effect on a **European protected site** (principally SACs & SPAs).²⁶

Vaccination Policy Requirements

19. It is possible to apply to Natural England for a licence to trap badgers for the purpose of TB vaccination. The vaccine may only be used under veterinary prescription. Vaccination must be carried out either by someone who is sufficiently competent (either by a trained and accredited lay vaccinator, or by a practising vet with access to personnel with adequate trapping experience).
20. Vaccination may be used independently of culling as part of a package of measures to prevent or control TB, or it may be used in combination with culling, for example as a buffer for areas where vaccination may help reduce the risks to vulnerable livestock of increased TB incidence, both within and surrounding a control area, as a result of perturbation of the local badger population.
21. Where the use of vaccination in combination with either type of culling licence is proposed, the following best practice is recommended:

²⁶ See footnote 6.

- a. where vaccination is to be used as a buffer, it should be used at active badger setts found on, or adjacent to, land where vulnerable livestock are present and which fall within 2km of the edge of a control area;
- b. vaccination should take place at least 4 weeks prior to culling to allow immunity to develop in uninfected vaccinated animals;
- c. to mitigate any ongoing perturbation effect and begin to build up “herd immunity”, vaccination should be carried out annually, continuing for at least the same length of time as any culling on adjacent land; and
- d. where culling and vaccination are taking place on adjacent land, applicants should take reasonable steps to negotiate an agreed approach to badger control operations along the relevant boundary with that landowner/occupier.

Implementation

22. Before granting a culling licence, Natural England should be satisfied that the application meets the licence criteria and the policy requirements. Natural England, on behalf of the Secretary of State, will determine applications for culling and vaccination licences on a case-by-case basis.
23. To enable Natural England to assess licence applications, it will require applicants to demonstrate how they will meet the culling policy requirements, including details of contingency plans in case the chosen culling strategy proves ineffective.
24. Natural England should keep the duration of a cull in each year under review. The review will allow Natural England to consider whether or not to take action to terminate operations on a case-by-case basis. Natural England may take into account factors such as the CVO’s advice on disease control; the latest evidence and advice on the remaining badger population; and whether any immediate action is appropriate.
25. In considering whether operations should be terminated, Natural England should take into account the extent to which the licensee’s annual operational planning is being complied with and the licensing criteria continue to be met (for example, in the case of a Badger Disease Control licence, whether the extent of access has been reduced since the licence was granted) and, if so, whether this is likely adversely to affect the effectiveness of operations in reducing badger numbers.
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. Applications will be prioritised according to the extent to which they best meet the primary aim of the policy (i.e. to eradicate TB).

27. Each Badger Disease Control licence will be granted for a period of not less than four consecutive years or such other period as Natural England may determine is appropriate to ensure that the proposed cull achieves the policy aim.
28. Each Supplementary Badger Disease Control licence will be granted for a period of not more than five consecutive years following on directly from the conclusion of a successful completed culling operation.
29. Natural England should give the public an opportunity to comment on any licence applications that are made.
30. Natural England will seek advice from local police forces on whether additional licence conditions are required to protect public and operator safety.

Monitoring

31. As part of its licensing operation, Natural England should monitor compliance with licence conditions and agreements in place for culling and vaccination. The use of site visits will be in accordance with a risk-based approach that complies with Better Regulation principles and the Regulators' Code for Compliance. Natural England should maintain sufficient oversight of the progress of each cull area to ensure that removal of badgers and/or the level of effort deployed is consistent with that set out in operational planning, allowing cull companies (or coordinating groups) to flexibly manage their resources and approach to deal with changing circumstances. Natural England should be ready to advise the CVO on progress at regular intervals, reporting on effort across each cull area, progress with badger removal and compliance issues.

Reporting and Disclosure of Information

32. Natural England should disclose as much information as practically possible. Each year, or more frequently if appropriate, Natural England should, as a minimum, publish on its website the numbers of applications received and licences granted, and for each licence issued:
 - a. the county or counties included within the licensed area;
 - b. the size of the licensed area;
 - c. the number of badgers reported culled by each method; and
 - d. the number of non-target species caught and culled.

Enforcement

33. Natural England should apply its published Enforcement Policy Statement to breaches of licences that it has issued. Wildlife offences that are not breaches of licences may be reported to the police for investigation.
34. In relation to operations carried out under a Badger Disease Control licence, Government intervention will be considered where, in particular, in the judgement of the Secretary of State, any of the following circumstances apply:
- a. where culling has not taken place at all during any year after the culling commenced in year one (applicants should detail in the operational planning the dates during which culling will be carried out);
 - b. where in any of the four years of the Badger Disease Control licence the minimum number of badgers to be culled during the cull period (specified by Natural England for the year in question) is not attained;
 - c. where the area of accessible land in relation to which the Badger Disease Control licence is granted has dropped below the acceptable level (approximately 90% of the control area either accessible or within 200m of accessible land);
 - d. where there has been any other breach of the Badger Disease Control licence which the licence holder has been asked to remedy and has failed to remedy within a reasonable period; or
 - e. where there is an Event of Default as defined in the Badger Control Deed of Agreement.

Welsh Border

35. Natural England and the Welsh Government should consider on a case-by-case basis any licence applications in respect of areas which cross the Welsh border. If an application relates to an area which is solely within England but within 2km of the border, Natural England should determine the licence application in the normal way but will consult the Welsh Government.

Glossary

Access/accessible land: land within a control area that is participating in the application and accessible for culling to take place.

Applicants: those persons named as the applicant(s) on the licence application.

Application Area: land included in an application, including both access land and non-participating land.

Badger Disease Control: a form of badger population control which lasts for a minimum of 4 years.

Biosecurity measures: measures to reduce the risk of transmission of infectious disease.

Controlled shooting: the shooting of free-ranging badgers in the field (as distinct from shooting those that have first been trapped in cages).

Control Area: land included in the licence, once granted, including both land that is participating and land that is not participating in culling.

CVO: Chief Veterinary Officer (UK). Advises on the programmes necessary to control, and, where appropriate, eradicate disease.

Edge Area: one of the three geographical TB management zones defined in the Strategy for achieving Officially Bovine Tuberculosis Free status for England.

Effective Cull: a cull that meets the requirements set out in paragraph 8.

Habitats Directive: Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna (OJ L 206, 22.7.1992. p.7).

Herd immunity: an epidemiological term that refers here to the protection of sufficient susceptible individuals through vaccination in a population as a means of protecting remaining susceptible, unvaccinated animals in that population from infection.

High Risk Area: one of the three geographical TB management zones defined in the Strategy for achieving Officially Bovine Tuberculosis Free status for England.

Non-participating land: land within a control area that is not participating and where access has not been permitted for culling to take place.

Participating farmers: all freehold owners and tenants of accessible land who are in occupation of that land and have signed the TB Management Agreement.

Supplementary Badger Disease Control: a form of continuing badger population control which follows an effectively completed minimum 4 year Badger Disease Control operation.