

Natural England confederation response to Defra consultation on badger culling

A new organisation – *Natural England* – is being created with responsibility to conserve and enhance the value and beauty of England’s natural environment and promote access, recreation and public well-being for the benefit of today’s and future generations.

The creation of the new organisation, *Natural England*, has already begun, with English Nature (EN), the Landscape, Access and Recreation division of the Countryside Agency (LAR), and the Rural Development Service (RDS) working together as partners. This natural partnership is delivering joint outcomes and paving the way for *Natural England*, whilst continuing to deliver their separate and respective statutory duties:

- **English Nature** is the independent Government agency that champions the conservation of wildlife and geology throughout England.
- **The Rural Development Service** is the largest deliverer of the England Rural Development Programme and a range of advisory and regulatory rural services.
- The aim of Countryside Agency’s **Landscape, Access and Recreation** division is to help everyone respect, protect and enjoy the countryside

This consultation response has been produced jointly by English Nature, the Rural Development Service and the Countryside Agency’s Landscape, Access and Recreation division who are working to create *Natural England*, a new agency for people, places and nature.

Question 1. In light of the evidence presented as part of this consultation, on balance, do you think a policy to cull badgers should be part of the approach to help control the disease in cattle in high incidence areas?

The Natural England confederation has no objection in principle to the sustainable management of wildlife populations. However, we would not support a badger culling policy unless it met the following criteria:

- Good scientific evidence that the culling strategy proposed would be helpful in delivering the policy objective of a sustained reduction in the incidence of herd breakdowns;
- Good evidence that the culling strategy can be delivered to an adequate standard to achieve the objective;
- Clear and measurable objectives within a stated timescale;
- Properly monitored and reviewed;
- Humane, target specific and carried out to an acceptable standard of animal welfare;
- No adverse effect on the conservation status of the badger at the regional and national level;
- No adverse effect on the conservation status of any other priority species at the regional and national level;
- Legal and compatible with the UK’s responsibilities under the Bern Convention;

In addition, we believe it is vital that a full cost-benefit and sustainability analysis is carried out before such a strategy is contemplated. Wildlife management is an open-ended commitment and Government needs to be very sure that such an approach is the most effective and economic option, over an extended period of time, for reducing the number of herd breakdowns to an acceptable level.

At the moment we have serious doubts that a badger culling strategy is likely to be beneficial and cost-effective however it is implemented. The recently reported results of the Randomised Badger Culling Trial (RBCT) illustrate the complexities of the problem and the dangers of making the situation worse rather than better. These results effectively rule out small-scale culls as a policy option.

The Government has already made it clear that the large-scale removal of badgers from the countryside is not an acceptable policy option, so a proactive cull would need to be on a limited basis and linked to breakdown 'hotspots'. However, to deliver a net benefit, any cull would need to be on such a scale that the edge effect, as shown in the RBCT, is outweighed by improvements inside the culled area. An area of about 300 km², as a minimum, has been suggested by the ISG and the Science Advisory Council (SAC) and an area of 500 km² or more may be needed to deliver a significant benefit. The permanent removal of all badgers from one or more areas of this size would affect the conservation status of the species at the regional level and would be opposed by Natural England. Even a temporary removal at this scale would be a significant conservation concern, particularly if the objective is complete removal. We would wish to see a detailed modelling study of the response of the regional badger population to the predicted rate and spatial pattern of a cull in order to quantify the wider conservation impact. In addition, a large-scale culling policy would bring the UK into conflict with the Bern Convention, which prohibits methods of control that result in the local disappearance of species.

If carried out by Defra staff, the cost implications for implementing badger culling at this scale and without a defined time limit are considerable. Cost-benefit analysis has already demonstrated that only with the most extreme assumptions could such a strategy deliver a net benefit and consequently this approach has already been ruled out on economic grounds.

Licensing landowners or their agents to carry out the badger culling is a possible option, but in our view this runs a very great risk of only achieving a partial cull, as not all landowners will wish to carry out this work and the effectiveness of control will be variable. This will create a mosaic of culled and uncultured areas, making the situation worse rather than better. In the RBCT, the percentage of the trial area for which permission to cull was available ranged between 48% and 76% (mean 66%) and the ISG has suggested that a wider area cull might achieve a similar level of cooperation. If an equivalent figure is achieved in a large area cull, this appears to fall well short of the 'effectively complete' coverage advised by the SAC. There are also difficulties in ensuring that the reduction in badger density is maintained in the longer term once the initial cull has been completed.

On the timing of any cull, we remain very concerned that the simultaneous, or near-simultaneous, introduction of three new initiatives, table valuations, pre-movement testing of cattle and badger culling would make it very difficult to determine the extent to which each of these contributes to

any observed change in herd breakdown rates. We recognise the seriousness of the situation, but are not persuaded that the need to reduce the level of herd breakdowns outweighs the need to be clear about the contributions of various initiatives. Unless steps are taken to separate the introduction of these treatments, particularly pre-movement testing and badger culling, it will be difficult to work towards a cost-effective long-term strategy that minimises the number of cattle and badgers killed.

In our view, pre-movement testing and other measures to reduce the cattle to cattle transmission of bTB, which the SAC considers probably the dominant infection route at present, should be implemented immediately and independently of any badger cull. Now that small area badger culls can be effectively ruled out, much more preparatory work on the conservation impact and deliverability of a large area cull is needed before such a policy is considered. For culls on this scale, the impact on the conservation status of the badger is a significant issue requiring further consideration. In addition, we are not aware of any persuasive evidence that the landowning community would be able to implement a badger cull of adequate coverage and intensity to achieve an overall reduction in herd breakdowns. Should such an approach be developed it would clearly be important to ensure that any increase in herd breakdowns arising from a failure to carry out an adequate badger cull did not result in greater compensation cost to the taxpayer.

Question 2. Comments are invited on the options considered and the costs and assumptions made in the Partial Regulatory Impact Assessment.

Option 1 – No badger management.

The RIA assumes that under this strategy the current trends for increase in incidence and spread of the disease in high incidence areas would continue. However, these assumptions do not take into account the implementation of cattle-based controls such as pre-movement testing, changes to the compensation scheme and improving farm biosecurity. Scientific opinion, supported by published research, is that cattle-to cattle transmission is probably dominant to badger-to-cattle transmission in GB at the moment, so it seems very likely that reducing cattle-to cattle transmission alone will deliver significant improvements in disease management. The RIA accompanying the proposal for pre-movement testing shows that, for England, the first stage of the option now being introduced should prevent about 520 new incidents each year and lead to an overall cost saving of about £5 million per year. These savings rise to 720 incidents and £7 million per year once the full scheme is in place. Benefits may also accrue from the strict application of an annual TB testing regime. In Northern Ireland, the number of herd breakdowns was reduced by 40% within a year in this way. Further benefits may arise from the wider use of the gamma-interferon test, which is more sensitive and specific than the skin test, and we recommend that this is used more widely as an adjunct to the skin test. Given the considerable uncertainties surrounding any badger culling strategy, we believe Defra and the farming industry should now focus firmly on cattle-based controls and ensure these are used to deliver the maximum benefit. We recognise that these controls alone may not completely eliminate bTB from the national herd, but they will reverse a worsening situation, allowing time for effective and evidence-based new ways of tackling any residual wildlife reservoir to be developed. We do not believe that it would be sensible to introduce culling at the same time as introducing measures to control cattle to cattle transmission as it will then become difficult, if not impossible, to monitor the impact of these two control strategies.

Option 2 – State controlled cull.

Whatever culling method is chosen, the RIA demonstrates that a state controlled cull will lead to higher overall costs. For this option to break even, it would need to achieve a reduction in herd breakdowns of 57% per km² per year. This is higher than the mean reduction achieved in the Irish four areas project, where access to land was almost unrestricted and badgers were virtually eliminated from the trial area. It seems an unfeasibly large reduction in breakdowns for England, where access to land may be about 66% by area and there is no evidence that badgers could be completely eliminated. Within the cull areas, the RBCT achieved a reduction in herd breakdowns of 19%, so this could be taken as more indicative of what might be achieved by a state controlled cull. In our view, this option, as described, can be ruled out on cost-benefit grounds. However, it is the only approach to control where there is evidence that an overall reduction in herd breakdowns can be achieved.

Option 3 – Licensing groups of farmers.

There is now convincing scientific evidence that small-scale badger removals, such as those originally envisaged under this option are likely to make matters worse rather than better. This is probably because of increased badger movements in perturbed populations and perhaps also a reduced immunocompetence because of stress. Such effects are reduced by increasing the size of the area to be culled, but they are still dominant in 100 km² cull areas, as used in the RBCT. The view of the SAC is that areas of at least 300 km² are needed and that the spatial coverage of culling would need to be effectively complete to avoid the creation of a mosaic of uncultured and perturbed areas where incidence would be likely to increase. Although the RIA suggests that this option could deliver a net cost saving, the analysis points out that there are many unknown factors relating to issues such as scale, farmer participation, the effectiveness of individual participants and the types of culling method permissible. We believe much more research on the deliverability, sustainability and cost-effectiveness of a farmer-led cull is required before such an option could be considered.

Question 3. Under what circumstances should the Government grant licences to cull badgers for the purpose of preventing the spread of bovine TB under the Protection of Badgers Act 1992?

There is provision in the Act for the Minister to issue licences to kill or take badgers for the purpose of preventing the spread of disease. In our view, such licences could only be issued if there was good evidence that any licensed action would contribute positively to the prevention of the spread of bTB. If this is not the case, there would be a very significant risk of legal challenge.

The lack of selectivity may also be a significant issue for licensing. Because it is not possible to determine with any certainty whether an individual live badger is infected with bTB, a badger culling strategy would seek to remove all badgers, regardless of their disease status. Estimates of the county-level prevalence of infection made by the ISG from a survey of badgers killed on the roads ranged between 8% (Devon) and 23% (Gloucestershire), meaning that between 77% and 92% of badgers culled could be healthy. This problem could only be addressed by the development of a sensitive and specific live-test that could be applied to trapped badgers and this remains an important research need.

Current scientific evidence indicates very clearly that culling on a scale less than or equal to that used in the RBCT (100km²) is likely to result in an overall negative effect and so should not be

licensed. The views of both the ISG and the SAC are that culling on a scale of 300km² or more would be required to deliver a net reduction in the spread of disease, though there may still be an edge effect, with some farms suffering an increased probability of a herd breakdown.

Question 4. What qualifying geographic criteria would be appropriate, achievable and reasonably likely to be an effective disease control measure?

Evidence from both the Irish study and the RBCT suggests that a badger culling strategy is most likely to be successful when the area to be culled has boundaries that are more or less impermeable to badgers. This could include coast, significant rivers or perhaps even motorways. Barriers of this type may reduce badger movements both out of the cull area (the perturbation effect) and into it (recolonisation). However, it may be difficult to find such areas within TB hotspots in England.

Question 5. How could farmers ensure sufficient coverage to deliver a sustained cull over a large area?

The only data available on farmer participation in a badger culling exercise arise from the RBCT. Here, the percentage of the trial area for which permission to cull was available ranged between 48% and 76% (mean 66%). The ISG have since indicated that they would not expect farmer participation to be any higher in a large area cull and that it could well be lower. Although cooperation between neighbouring farmers might be sufficient to achieve a high degree of coverage over a small area, we are not convinced that an informal farmer-led approach would be adequate for the size of cull needed to deliver a net benefit. It seems very likely that state facilitation would need to be a component of any culling strategy. More research on these issues is needed before such an approach could be recommended.

Question 6. What qualifying disease history would be appropriate?

One that clearly indicated the involvement of badgers rather than cattle to cattle transmission.

Question 7. What could be included in the criteria to define those farmers eligible for a licence to cull badgers?

Farmers would need to demonstrate that they could carry out control humanely and efficiently themselves or employ a suitably skilled contractor.

Question 8. Would it be practical for primary herd owners to recruit neighbours and adjoining landowners to achieve, say, 75% coverage within 1km of the boundaries of their holding? If not, what might be achievable and reasonable?

We are not aware of any evidence on this point. In addition, there is no evidence that a cull over 75% of any chosen area would deliver a net benefit. The RBCT achieved a coverage of about 66%, but the benefit of a 19% reduction in herd breakdowns within the cull area of 100 km² was more than offset by an increase of 29% in the 2km zone around it. As detailed above we do not believe culling at the scale implied by this question is supported by the evidence. There is no

evidence that increasing the proportion of badgers removed from the cull area would deliver a greater benefit or reduce the edge effect.

Question 9. Over what size of area could self co-ordinated groups of farmers and landowners be expected to manage a cull consistently and efficiently for up to 5 years, with a high degree of coverage?

We are not aware of any evidence on this point

Question 10. Are there other methods of culling which should be considered?

We do not wish to comment on specific culling methods other than to emphasis that any method adopted must be legal, safe, efficacious and meet appropriate standards of humaneness. For example, no gas is currently approved for use on badgers, so a full data package would be required to gain an Approval under the Control of Pesticides Regulations. The deployment of novel control methods, such as body restraints or gas, is likely to need training and supervision of any personnel involved.

Question 11. Is gassing appropriate for use under licence by groups of farmers, landowners and their agents?

No evidence is available on this point.

Question 12. Would there be a need for training of licensees? If so, what form should this take?

This would depend upon the methods used but all methods would need to be used competently.

Question 13. How could this training be best provided?

No comment on possible providers but the quality of any training to support culling should be monitored.

Question 14. Would permitting the shooting of free running badgers (under licence) be practical and acceptable?

Evidence not available.

Question 15. What features should be included in the design and use of the body snare? Are there particular features which should be avoided or included?

There is a need for pen and field trials to inform any debate on the efficacy, humaneness and selectivity of snaring. As this method is currently illegal in this country there is very little evidence available.

Question 16. What inspection intervals for checking snares would meet welfare considerations and be practical?

Question 17. What skills and competencies for culling are required to ensure body snares are safely and effectively deployed?

Question 18. Is there a need for training for farmers or licensees? If so, what form should this take?

Question 19. How could this training be best provided?

Question 20. What methods of disposal would be suitable to minimise risk of disease transmission, assist in monitoring a cull of badgers and be practical?

Should the government decide to go ahead with a badger cull, it is essential that the maximum amount of information about its effectiveness is collected. Although Defra does not currently intend to post-mortem badger carcasses to determine levels of infection, we believe such information will be important in understanding the dynamics of the disease in the badger. If gassing is used to cull badgers, this will leave corpses underground, so no data on the number of badgers culled or their disease status will be available.

Question 21. Do the proposals for monitoring the impact on wildlife (paras 93 - 95) look at the right issues? If not, what else do you think should be monitored?

We have already expressed our concerns about the impact of large area culls on the conservation status of the badger and emphasised the need for careful monitoring of the impact of culling on the badger population. Spotlight survey, using distance sampling techniques, seem to be the most appropriate method, but the use of other methods, such as trail cameras or similar remote sensing devices may be appropriate for low badger populations. We note that though the impact on other species is mentioned, no details are given in the consultation. Until more details of the scale and timescale of any proposed cull are available we are unable to provide a more specific response.