

Bern Convention Complaint June 2014 United Kingdom. Ecological perturbation and failure to conduct Impact Assessments.

FURTHER INFORMATION: United Kingdom failure to conduct sufficient assessment of potential disturbance and damage to Bern Convention Appendix II species and their habitats.

Background

Ecosystem perturbation

It is widely accepted that removing or reintroducing a dominant predator in any ecosystem may have a widespread impact upon a wildlife community and that the impact is hard to predict (FERA 2011 [2]). The issue was identified following a £1.8 million species research programme that was a part of the UK Randomised Badger Culling Trials (1998-2005). The final report on the 'Ecological Consequences of Removing Badgers from the Ecosystem' (DEFRA 2007 [7]) revealed that the theoretical level of change resulting from badger *Meles meles* removal, as predicted by 'food web modelling', was mostly 'inaccurate' or 'uncertain' and required further study. This was because the figures from detailed species research showed significant changes to be occurring in most of the small number of species tested. For example the increase in red fox *Vulpes vulpes* numbers was predicted/modelled to be around 7%, whereas in some locations was measured as increasing by 100%. The report found that far-reaching impacts of 'competitive release in sympatric carnivores' following carnivore removal from ecosystems, should be an essential consideration when designing wildlife management processes. The DEFRA report and RBCT publications (Trewby et al. 2008, Trewby et al. 2014 [8 & 9]) show that species populations and habitats may be significantly impacted when badgers are culled. A range of Bern Convention listed Appendix II species and their habitats (App.II.S&H) may be directly or indirectly impacted by badger culling, including mammals, migratory and resident birds, invertebrates and plants. Included are species that are rare or declining and that may be subject to recovery and specific recovery and/or reintroduction plans and programmes. Therefore any decision as to whether to cull or not in any area must address the wide issue of protected species impact throughout and beyond the edge of a cull area to a significant distance and fully address the identified uncertainty of the impacts of any action.

Details of incorrect impact screening and appraisal by the UK

This complaint concerns a range of past and present badger culling programmes in the UK, including the Randomised Badger Control Trials (RBCT) undertaken 1997-2005 in south west England and the West Midlands. It also includes the Pilot badger cull areas that were initiated in 2013 in parts of Somerset and Gloucestershire, that are planned to run for four years including 2014. It also relates to the proposed extension of badger culling in 2014, including possibly in Dorset and over a wider area from 2015. The focus of the complaint however is in the more recent 2013 culls and the preparation done in advance.

The UK Ministerial plan to cull badgers in England was announced in December 2011 by the UK Environment Secretary Caroline Spelman. The UK government's analysis of its own plan to cull badgers (FERA 2011 [2]) was of the vulnerability of the cull plan in respect of ecosystem disruption and the need for further appraisal before culling could be considered and licenses issued. The 2011 FERA report had included a specific mention of the impact of increased numbers of predatory mammals. The report stated ***"Given the importance of the fox as a predator in the areas likely to be subject to badger culling, any such population response [increase] could have significant knock-on consequences."*** The report *executive summary* stated that the onus for undertaking actions to consider and manage such a problem should be placed individually or jointly upon the culling contractors and the licensing body (Natural England), prior to the commencement of any culling; ***"It is not desirable or possible at this stage to conduct a formal Ecological Impact Assessment (EclA) given that no [badger culling] licence applications have yet been made. However it may be appropriate for potential applicants and NE to conduct such an EclA before the determination of an individual licensing decision. It will be incumbent upon applicants and the relevant authorities to evaluate the appropriate course of avoidance or mitigation of impacts of the actions, and ensure the obligations arising from the various legislative provisions are addressed."***

Some of the species under consideration following assessment of Grade A and B SACs, included vulnerable and declining species. Despite this awareness and the stated need for reviews and precautions however, the final identified process was not conducted properly by the cull companies or their agents (licensees) and Natural

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England. The evidence is that Natural England received information on the proposed boundaries of the culling areas in spring/summer 2012 and rather than require screening and HRA to be done by the licensee, conducted the exercise internally, themselves. However, this appears to have been restricted to a few and possibly just one Grade A/B SAC/SPA in Somerset. It did not address the large number of potential impacts to species that were shown as 'uncertain' or 'unknown' in the FERA review of negative impacts within such areas or a wide range of other designated sites and at locations immediately outside designated areas or cull zone boundaries where Appendix II/European Protected species and habitats were/are vulnerable to impacts. The irrational screening by NE indicated incorrectly that there was no impact on vulnerability in Gloucestershire. In Somerset the appraisal just states in a few words that culling operations were 'not capable of significantly affecting the SAC's Qualifying Features'. The exercise carried out therefore was deficient in respect of its scope of area coverage, number of species and sites appraised and consideration of the measure and extent of impacts, particularly from meso-predator competitive release including;

Bern App II/European Protected Species and habitats on SACs Grade A, B and C that were not considered
Bern App II/European Protected Species and habitats on SSSIs not designated SPA or SAC Grade A B or C
Bern App II/European Protected species and habitats outside SSSIs in the wider countryside
Bern App II/European Protected species on sites immediately outside the edge of cull zones – to an identified distance of significance

In hindsight, FERA erred in recommending that such a process could be left until the point at which licences were issued just a few weeks from the start of the planned culling. This is because the determination of uncertain or unknown impacts, as indicated in their report required detailed investigation and in some cases research to investigate, might take a year or more. The breaches of the Bern Convention are also breaches of European law with regards to adequate screening, HRA and related procedures such as EIA.

More detail on the impact of 'meso-predator release' upon Bern App. II species, habitats & designated sites

Bern Appendix II species including migratory and resident ground roosting and ground nesting birds are frequent in and around the edges of the 2013-2016 Somerset and Gloucestershire cull zones. Such species may be vulnerable to increased predation of adults, young, fledglings and eggs. As indicated above, they, with many other animal and plant types may respond to changes in herbivore (prey) populations and altered vegetation patterns and structure that results from meso-predator disruption and their suitability for sheltering and protecting species. The Gloucestershire cull zone alone for example, contains over 20 Sites of Special Scientific Interest and at least as many County Wildlife Sites and locally designated wildlife areas. In total within the twenty RBCT cull zones and two 2013 cull zones there are an estimated 200-300 nature reserves of national importance to Bern-listed species, including many that are a part of the NATURA 2000 series, covering many thousands of hectares. Many coastal and upland sites within the cull zones have citations for their migratory waders and waterfowl. One RBCT area contained internationally listed Important Bird Areas (IPA's) that the UK is pledged to protect.

In the 2013 Pilot Gloucestershire cull zone, extensive cull areas border the Severn Estuary RAMSAR Site and numerous SSSI/SPA/SAC areas. There are internationally important wetland sites that are Special Protected Areas and Special Areas of Conservation with species interest. In Somerset, the cull area includes very many protected designated sites. The Somerset and Gloucestershire Pilot cull areas have extensive tracts of undesignated important habitats for Bern Appendix II, Birds Directive Annex 1 birds and Habitats Directive listed fauna and flora. An assessment was made by the complainants to locate designated sites within 8 randomly selected RBCT and the two 2013 Pilot cull zones (Figures 1 and 2), with examination of standard citations and checklists of breeding birds as an initial target group of vulnerable species. Around 30 designated sites were identified as an initial sample. 15 Bern App II species were located in the sample, some occurred at up to 26 (87%) of designated sites. Given the small sample size, many more protected species are likely to be present within and out-with the large number of designated sites. The vulnerability of habitats and species that exist outside designated sites within or at the boundaries of cull zones is also important.

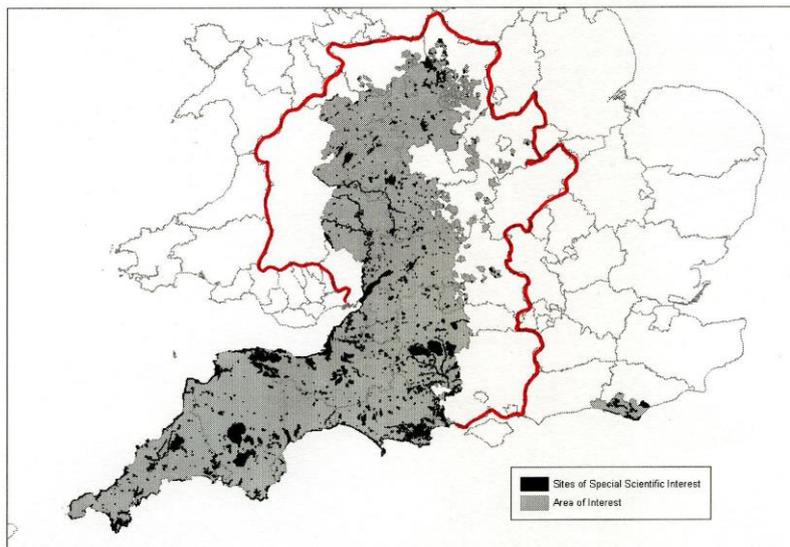


Figure 1. UK government 'Area of Interest' (shaded grey) for 2013 Pilot cull and possible 2015 extension areas with Sites of Special Scientific Interest shown in black. Red line shows surrounding administrative areas where community disruption/ecological perturbation may result from boundary effects following culling, including a cross-territory influence in Wales.

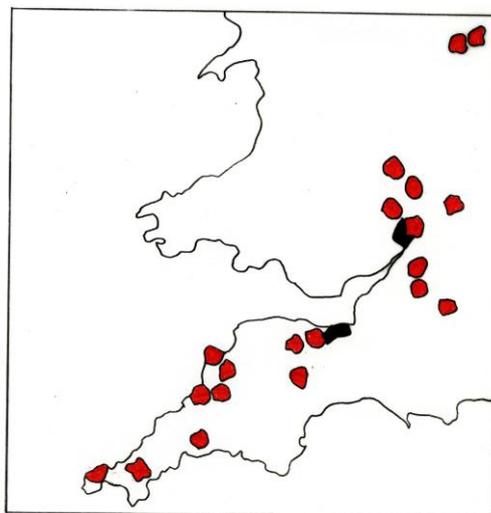


Figure 2. Approximate location of Randomised Badger Cull Trial (RBCT) Areas 1997-2005 (red) and 2013-2016 Pilot badger cull zones (black), where undetermined and unmitigated ecological perturbation of Bern-listed species and their habitats is expected to have taken place since 1998, in breach of the Bern Convention.

Conclusions regarding incorrect screening/assessment;

This Complaint finds that the UK, in not taking adequate steps to determine and evaluate the impact of badger culling on Bern species and their habitats and in carrying out and planning to carry out further such culling, that there has been and is a breach of the Articles of the Bern Convention including Articles 2, 4 and 6.

- Article 2 requires Contracting Parties to take requisite measures to maintain wild fauna.
- Article 4 (3.) requires Contracting Parties to give special attention to the protection of areas that are of importance to migratory species specified in Appendix II of the Convention.

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- Article 6 requires Contracting Parties to take appropriate and necessary legislative and administrative measures to ensure the special protection of Appendix II species including (c.) the deliberate disturbance of wild fauna particularly during the period of breeding, rearing and (d.) in relation to the destruction of eggs.

Significance of indiscriminate badger culling method and the need to adopt the alternative ‘satisfactory solution’; a breach of Article 8.

The report into the 2013 pilot badger culls in Somerset and Gloucestershire by the government appointed *Independent Expert Panel* (IEP 2014 [10]) provides clear evidence that the UK’s methods of killing badgers, is ineffective at reliably determining the numbers or proportion of any population at any given time. The IEP report shows that the UK has been unable to determine badger population levels accurately, with two different methods resulting in wide variation and large confidence intervals. Government agency reporting shows that the estimated reductions in badger populations across the two pilot cull areas were **28 – 65 % and 50-144%** for one area and **19-43% and 29-42%** for the other. These are sufficiently inaccurate and imprecise to make meaningful day to day management decisions on achieving target population reduction impossible. The IEP report and DEFRA response (DEFRA 2014 [11], show how the UK’s culling is indiscriminate. This risks both failure of the purpose of culling (because of the potential for greater bTB spread via perturbation effects) if under-culling is achieved, and local extinction of badgers in the case of over-culling; with greater sympatric meso-predator release (increase) and consequent ecosystem disruption. The DEFRA response [10] also states in relation to future badger population estimating; **“Defra will work with Natural England and AHVLA to adopt more cost-effective methodologies to assess effectiveness of culling that do not rely solely on measurement of population numbers. We will aim to take a more cost-effective approach to monitor effectiveness of the cull. Rather than focusing primarily on pre-cull numerical targets based on population estimates which we now know are subject to considerable uncertainty, we will focus on more useful indicators of progress of the cull.”** Such ambiguity is both an indication of current failure and that an even more uncertain ‘low-tech’ method may be used. The FERA 2011 [2] report suggested that indiscriminate culling is likely to give rise to unknown and unpredictable local effects on ecosystems and protected species. The UK is therefore in breach of Bern Convention Article 8 in respect of it allowing indiscriminate methods (unmeasured culling) that results in a ‘means of killing’ of an Appendix III species, capable of causing serious disturbance to or local disappearance of Appendix II species.

Failure to choose alternative satisfactory solution; a breach of Article 9

Contracting parties may make exceptions from Articles 4, 5, 6 and 7, provided that the killing of Appendix III-species is done to prevent serious damage to livestock and there is no other satisfactory solution. The Bern Convention commissioned a detailed interpretation of Article 9 (Shine 2010 [12]). In order to justify culling there be “no other satisfactory solutions”. The Shine report maintains that **‘A solution must not be deemed unsatisfactory just because it would cause greater inconvenience or compel a change in behaviour of the beneficiaries of the derogation’**. The recent bTB statistics for Northern Ireland and Wales show that cattle-based measures to limit bTB spread are achieving very significant and ongoing reductions in bTB incidence, and the numbers of cattle slaughtered as reactors or in-contacts, without any associated wildlife interventions [13]. Cattle-focused measures introduced in Wales, including annual testing of cattle, zero tolerance of overdue cattle tests, prompt isolation and removal of reactor cattle, improved biosecurity, and a focus on risk-based trading, have resulted in a reduction in the numbers of cattle slaughtered by 48% over the past 4 years. The most recent published figures indicate that in the 12 months to the end of February this year, new herd incidents in Wales fell by 23% compared to the previous 12 months, and the number of cattle slaughtered fell by 35% from 9,436 to 6,167.

In 2013, the UK placed emphasis upon the perceived ‘success’ in bTB reduction achieved in the Republic of Ireland (ROI) where extensive badger culling has been ongoing for many years. However, there is no scientific evidence for badger culling being responsible for a reduction in incidence of bTB in the ROI. Since 2007 the decline in bTB incidence in the ROI has been reflected by similar declines in Northern Ireland where no badger culling has taken place (NI Badger Group 2014 [14]). Further, recently in 2014 the Department for Food, Agriculture and Rural Affairs (DEFRA) found that computer error had meant that in 2012/13 it had overstated the number of cattle herds infected by tuberculosis in Britain and that there had been a decline in bTB incidence in the year preceding the badger cull in September 2013 rather than the rise it had previously

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indicated [15]). The Bern conventions requirements on *satisfactory solutions* demonstrates how, taken together;

- a) the trends in bTB incidence in Ireland and Wales in recent years
- b) the IEP report from England in March 2014 and
- c) the scientific research findings of the RBCT,

show the UK's current badger culling method to be completely unsatisfactory. Current badger culling trials in England are not just an inferior unsatisfactory solution, but may be completely superfluous to achieving actual bTB control.

References for the Complaint and further information.

- [1] <https://www.gov.uk/government/publications/the-government-s-policy-on-bovine-tb-and-badger-control-in-england>
 - [2] Food and Environment Research Agency (2011) Evaluation of the Potential Consequences for Wildlife of a Badger Control Policy in England (2011)
 - [3] Independent Expert Panel (2014) Pilot badger Culls in Somerset and Gloucestershire. Report by the Independent Expert Panel for the Secretary of State for Environment, Food and Rural Affairs. March 2014.
 - [4] AHVLA (2014) Monitoring the efficacy of badger population reduction by controlled shooting during the first six weeks of the pilots. Report to DEFRA 31 January 2014.
 - [5] <http://wales.gov.uk/statistics-and-research/incidence-tuberculosis-cattle-great-britain/?lang=en>
 - [6] Natural England Freedom of Information disclosure Request No RFI 2461 released 02 June 2014
 - [7] DEFRA (2007) The Ecological Consequences of Removing Badgers from the Ecosystem. SID 5 Research Contract, Final Report. 35 pp
 - [8] Trewby ID, Wilson GJ, Delahay RJ, Walker N, Young R, et al. (2008) Experimental evidence of competitive release in sympatric carnivores. *Biology letters* 4: 170–172. doi: 10.1098/rsbl.2007.0516
 - [9] Trewby ID, Young R, McDonald RA, Wilson GJ, Davison J, et al. (2014) Impacts of Removing Badgers on Localised Counts of Hedgehogs. *PLoS ONE* 9(4): e95477. doi:10.1371/journal.pone.0095477
 - [10] Independent Expert Panel (2014) Pilot badger Culls in Somerset and Gloucestershire. Report by the Independent Expert Panel for the Secretary of State for Environment, Food and Rural Affairs. March 2014.
 - [11] Defra (2014) Defra response (April 2014) to: Pilot badger Culls in Somerset and Gloucestershire: Report by the Independent Expert Panel.
 - [12] Shine C. (2010) Interpretation of Article 9 of the Bern Convention of European wildlife and natural habitats. Standing Committee 30th meeting, Strasbourg, 6-9 December 2010 T-PVS/Inf (2010) 16
 - [13] <http://wales.gov.uk/statistics-and-research/incidence-tuberculosis-cattle-great-britain/?lang=en>
 - [14] <http://www.badgersni.org.uk/tbireland.html>
 - [15] <http://www.independent.co.uk/news/uk/politics/government-releases-figures-showing-badger-cull-case-was-exaggerated-by-flawed-bovine-tb-statistics-9130563.html>
- Note: Natural England endorsed Guidelines on EclA are available at http://www.cieem.net/data/files/Resource_Library/Technical_Guidance_Series/EclA_Guidelines/TGSEclA-EclA_Guidelines-Terrestrial_Freshwater_Coastal.pdf
- Habitats Directive Assessment Screening and EclA for Wales (where a decision not to cull was taken) are available at: <http://wales.gov.uk/docs/drah/publications/110304annex26en.pdf>
- <http://wales.gov.uk/docs/drah/publications/110304annex27en.pdf>