Wildlife and Countryside Link – Submission to the Godfray Panel 2025

28th February 2025

This submission is on behalf of Wildlife and Countryside Link (Link), a coalition bringing together 86 organisations to campaign for the natural world.

This submission is supported by Badger Trust, Born Free Foundation, Humane World for Animals UK, RSPCA

Summary

Wildlife and Countryside Link welcomes this opportunity to submit evidence to the 2025 Godfray Panel, regarding the Bovine TB strategy.

Bovine tuberculosis (bTB) in cattle is a serious and complex disease affecting thousands of farmers nationally, and effective measures should be taken to reduce its impact. It is essential that these measures are legal, sustainable, publicly acceptable, humane, and – crucially – based on credible scientific evidence.

Wildlife and Countryside Link has opposed the badger cull policy on the grounds that it does not meet these key tests. We welcome Government's commitment to end the cull, and to develop a refreshed national bTB strategy.

The new national strategy must take a holistic approach to managing bTB, and must be underpinned with rigorous scientific evidence, if it is to deliver a sustainable and successful transition away from culling. This reconvening of the Godfray panel is an important opportunity to address gaps that were present in the last review and to examine crucial new evidence, both relating to the (in)efficacy of badger culling and the success of cattle measures. We strongly recommend that badger culling should be suspended while the review is taking place.

We urge the 2025 panel to engage experts and stakeholders beyond those appointed, to ensure that wildlife, welfare and ethics are properly examined. In our submission, we recommend key literature and experts for the panel's consideration, to ensure that these gaps are addressed.

The findings of the panel should be made publicly accessible, and should be fully transparent, such that all stakeholders and public audiences can understand the conclusions that have been reached. Previous failures to clearly explain and differentiate between correlation, causation and/or association in results, such as in the comms around the Birch et al. 2024 paper, have led to inaccurate conclusions being communicated with the public and different stakeholder groups.

We would be pleased to discuss any of the points in our submission further.

Recommended literature

We encourage the panel to consider new evidence relating to the (in)efficacy of badger culling and the success of cattle measures. We also strongly urge the panel to consider literature particularly relating to wildlife, ethics and welfare, given that these areas were not fully explored in the previous review. We have outlined some suggestions below.

Cattle measures

- Fromsa, A., Willgert, K., Srinivasan, S., Mekonnen, G., Bedada, W., Gumi, B., Lakew, M., Tadesse, B., Bayissa, B., Sirak, A., Girma Abdela, M., Gebre, S., Chibssa, T., Veerasami, M., Vordermeier, H. M., Bakker, D., Berg, S., Ameni, G., Juleff, N., de Jong, M. C. M., … Kapur, V. (2024). BCG vaccination reduces bovine tuberculosis transmission, improving prospects for elimination. Science (New York, N.Y.), 383(6690), eadl3962. https://doi.org/10.1126/science.adl3962

- Voller, C., Perrin, L.D., Gibbens, J.C., Donnelly, C.A., Delahay, R.J., Heasman, L., Vial, F., Prosser, A., Heard, J., Robertson, A. and Brunton, L., (2025). Can biosecurity on farms reduce bovine tuberculosis risks in cattle in England? A review of observational and literature-based evidence. Veterinary Record, 196(1), e4912. https://bvajournals.onlinelibrary.wiley.com/doi/full/10.1002/vetr.4912
  The paper finds "consistent evidence for TB risk being reduced by reducing contact with neighbouring herds and preventing cattle at higher TB risk from entering herds. The evidence for the effectiveness of measures for reducing contact between badgers and cattle was inconsistent."

- McGill, I., and Jones, M., (2019). Cattle infectivity is driving the bTB epidemic. Veterinary Record, 185(22), 699-700.

https://bvajournals.onlinelibrary.wiley.com/doi/abs/10.1136/vr.l6845.
This paper emphasised the scale of 'hidden' infection among cattle that is being missed by the standard skin test for bTB, and that this hidden infection is driving the bTB epidemic.

- Wiseman, J., Cassidy, J. P. and Gormley, E. (2024). 'The problem that residual Mycobacterium bovis infection poses for the eradication of bovine tuberculosis'. The problem that residual Mycobacterium bovis infection poses for the eradication of bovine tuberculosis - ScienceDirect
  This paper examines how the different stages of M. bovis infection in cattle may contribute to the failure to diagnose infected animals using conventional testing methodologies and the attendant risk this poses in creating prolonged or recurrent herd breakdowns.

Badger transmission and control

- Torgerson, P.R., Hartnack, S., Rasmussen, P., Lewis, F. and Langton, T.E., 2024. Absence of effects of widespread badger culling on tuberculosis in cattle. Scientific Reports, 14(1), p.16326. Absence of effects of widespread badger culling on tuberculosis in cattle | Scientific Reports.
  This paper re-examined RBCT data using a range of statistical models. "Most models showed no evidence to support an effect of badger culling on bTB herd incidence 'confirmed' by visible lesions and/or bacterial culture post mortem following a comparative intradermal skin test (SICCT)".

- Langton, T. E. S., Jones, M. J. and McGill, I. (2022). 'Analysis of the impact of badger culling on bovine tuberculosis in cattle in the high-risk area of England, 2009–2020'. *VetRecord,* e.1384. https://doi.org/10.1002/vetr.1384.
  This paper uses Government surveillance data to examine bTB herd incidence and prevalence, its headline indicators, within and outside cull areas over the period 2009–2020, and found no association between badger culling and reduction in bTB among cattle herds.

- Woodroffe, R., Astley, K., Barnecut, R., Brotherton, P. N. M., Donnelly, C. A., Grub, H. M. J., Ham, C., Howe, C., Jones, C., Marriott, C., Miles, V., Rowcliffe, M., Shelley, T., & Truscott, K. (2024). Farmer-led badger vaccination in Cornwall: Epidemiological patterns and social perspectives. *People and Nature*, 6, 1960–1973.

https://doi.org/10.1002/pan3.10691

- Akhmetova, A., Guerrero, J., McAdam, P., Salvador, L., Crispell, J., Lavery, J., Presho, E., Kao, R., Biek, R., Menzies, F., Trimble, N., Harwood, R., Pepler, P., Oravcova, K., Graham, J., Skuce, R., du Plessis, L., Thompson, S., Wright, L., Byrne, A. and Allen, A. (2023). Genomic epidemiology of Mycobacterium bovis infection in sympatric badger and cattle populations in Northern Ireland. Microbial Genomics 9(5): mgen001023. https://www.microbiologyresearch.org/content/journal/mgen/10.1099/mgen.0.001023 This five-year-long study in Northern Ireland using bacterial genome data showed that transmission of bTB was 800 times more likely to occur from cattle to badgers than from badgers to cattle

- Ham, C., Donnelly, C.A., Astley, K.L., Jackson, S.Y. and Woodroffe, R., (2019). Effect of culling on individual badger *Meles meles* behaviour: Potential implications for bovine tuberculosis transmission. Journal of Applied Ecology, 56(11), pp.2390-2399. https://besjournals.onlinelibrary.wiley.com/doi/full/10.1111/1365-2664.13512 This paper reports expanded home ranges of badgers associated with culling.

- van Tonder, A.J., Thornton, M.J., Conlan, A.J., Jolley, K.A., Goolding, L., Mitchell, A.P., Dale, J., Palkopoulou, E., Hogarth, P.J., Hewinson, R.G. and Wood, J.L., (2021). Inferring Mycobacterium bovis transmission between cattle and badgers using isolates from the Randomised Badger Culling Trial. PLoS Pathogens, 17(11), p.e1010075. https://journals.plos.org/plospathogens/article?id=10.1371/journal.ppat.1010075

- Chang, Y., Widgren, S., de Jong, M.C., Tratalos, J.A., More, S.J. and Hartemink, N., (2025). Evaluating the effectiveness of badger vaccination combined with cattle test-and-removal in managing Bovine Tuberculosis: Insights from a two-host and multi-route transmission model. Preventive Veterinary Medicine, 235, p.106386. https://edepot.wur.nl/680471

- Chang, Y., Hartemink, N., Byrne, A.W., Gormley, E., McGrath, G., Tratalos, J.A., Breslin, P., More, S.J. and de Jong, M.C., (2023). Inferring bovine tuberculosis transmission between cattle and badgers via the environment and risk mapping. Frontiers in Veterinary Science, 10, p.1233173. https://www.frontiersin.org/journals/veterinary-science/articles/10.3389/fvets.2023.1233173/full

- Byrne, A.W., Allen, A., Ciuti, S., Gormley, E., Kelly, D.J., Marks, N.J., Marples, N.M., Menzies, F., Montgomery, I., Newman, C. and O'Hagan, M. (2024). Badger Ecology,

Bovine Tuberculosis, and Population Management: Lessons from the Island of Ireland. Transboundary and Emerging Diseases, 2024(1), p.8875146. https://onlinelibrary.wiley.com/doi/10.1155/2024/8875146

Welfare and ethics

- Dubois, S. et al. (2017). 'International consensus principles for ethical wildlife control'. International consensus principles for ethical wildlife control.
  This paper sets out seven ethical principles for managing human-wildlife conflict and offers a framework for ensuring welfare standards in wildlife management programmes.

- McCulloch, S. P. and Reiss, M. J. (2017). 'Bovine Tuberculosis and Badger Culling in England: A Utilitarian Analysis of Policy Options'.
  https://discovery.ucl.ac.uk/id/eprint/1571908/1/McCulloch%20&%20Reiss%202017%20JAGE%20Bovine%20TB%20and%20badgers%20-%20Utilitarian%20analysis.pdf
  This paper provides a summary Animal Welfare Impact Assessment of various approaches to badger control.

Further to the above suggestions, we also include a list of older key literature relating to badger control and transmission that we urge the panel to consider its review.

- Donnelly, C.A., Woodroffe, R., Cox, D.R., Bourne, J., Gettinby, G., Le Fevre, A.M., McInerney, J.P. and Morrison, W.I. (2003). Impact of localized badger culling on tuberculosis incidence in British cattle. Nature, 426(6968), pp.834-837.

- Pope, L.C., Butlin, R.K., Wilson, G.J., Woodroffe, R., Erven, K., Conyers, C.M., Franklin, T., Delahay, R.J., Cheeseman, C.L. and Burke, T. (2007). Genetic evidence that culling increases badger movement: implications for the spread of bovine tuberculosis. Molecular Ecology, 16(23), pp.4919-4929.

- Jenkins, H. E., Woodroffe, R., & Donnelly, C. A. (2010). The duration of the effects of repeated widespread badger culling on cattle tuberculosis following the cessation of culling. PLoS ONE, 5(2), e9090

- Donnelly, C.A. and Nouvellet, P. (2013). The contribution of badgers to confirmed tuberculosis in cattle in high-incidence areas in England. PLOS Currents, 5.

- Johnston, W.T., Vial, F., Gettinby, G., Bourne, F.J., Clifton-Hadley, R.S., Cox, D.R., Crea, P., Donnelly, C.A., McInerney, J.P., Mitchell, A.P. and Morrison, W.I. (2011). Herd-level risk factors of bovine tuberculosis in England and Wales after the 2001 foot-and-mouth disease epidemic. International Journal of Infectious Diseases, 15(12), pp.e833-e840.

- Conlan, A.J., McKinley, T.J., Karolemeas, K., Pollock, E.B., Goodchild, A.V., Mitchell, A.P., Birch, C.P., Clifton-Hadley, R.S. and Wood, J.L. (2012). Estimating the hidden burden of bovine tuberculosis in Great Britain.

Experts to engage

We would strongly encourage the 2025 panel to engage experts beyond those that have been appointed, particularly regarding wildlife, ethics and welfare, and regarding the efficacy of cattle measures. The panel should also take care to engage a diverse range of experts and stakeholders. We have outlined some suggestions below.

- Dr Sara Dubois, Chief Scientific Officer for the British Columbia Society for the Prevention of Cruelty to Animals (BC SPCA). Dr Dubois oversees teams of animal welfare science and policy experts, and is the lead author of the 2017 paper 'International consensus principles for ethical wildlife control.'

- Dr Sandra Baker, Research Fellow and member of the Wildlife Conservation Research Unit (WildCRU) in the Department of Zoology at the University of Oxford. Dr Baker is co-author of the Dubois 2017 paper. Dr Baker's research focuses on anthropogenic animal welfare impacts on wild vertebrates, examining the impacts of lethal and non-lethal methods, so that welfare can be taken into account alongside other factors in making decisions about wildlife management.

- Professor Ranald Munro. Professor Munro chaired the Independent Expert Panel which evaluated the efficacy and humaneness of badger culling in 2013-2014.

- Research Professor David Macdonald, founder of the Wildlife Conservation Research Unit (WildCRU) in 1986. Professor Macdonald has been Visiting Professor at Imperial

College, chair of the Darwin Advisory Committee, chair of Natural England's Science Advisory Committee (including during the introduction of the badger cull) and board member, a Trustee of Earthwatch, and council member of the Wildfowl and Wetlands Trust. Professor Macdonald's research interests focus on the scientific underpinning of practical and policy solutions to problems in wildlife conservation.

- Professor Paul Torgerson, Head of Unit at Universitat Zurich's section of epidemiology. Professor Torgerson has published some recent papers drawing different conclusions from RBCT data on badger culling. These are included in the 'Recommended Literature' section of our submission.

- Tom Langton, ecologist, Herpetofauna Consultants International Limited, Halesworth, Suffolk. Tom Langton has worked on the issue of bovine TB for many years, and was lead author on the 2022 paper 'Analysis of the impact of badger culling on bovine tuberculosis in cattle in the high-risk area of England, 2009–2020'.

- Professor Angus Nurse. Professor Nurse researches animal, environmental, and human rights law, green criminology and critical criminal justice. He was previously Head of Criminology and Criminal Justice at Nottingham Trent University (2021 to 2023) and prior to that was Associate Professor, Environmental Justice and Director of Policing Programmes in the Department of Criminology and Sociology at Middlesex University School of Law. Angus is a member of the Wild Animal Welfare Committee (WAWC), and previously worked for an environmental NGO, and as an Investigator for the Local Government Ombudsman.

- Professor Alastair Macmillan. Professor Alastair MacMillan began his veterinary career specialising in bovine brucellosis diagnosis and control leading to its successful eradication. During this time, he worked closely with the team working on parallel problems with bTB. Later, he advised policymakers in the UK, EU, FAO, and WHO on the control of bacterial zoonoses. Within Defra, he led the team commissioning research on bTB and providing evidence-based advice to policymakers, also representing Defra at meetings of the ISG. Following that, he became CVO of the RSPCA and is currently Veterinary Advisor to Humane World for Animals UK with a particular interest in how to

apply lessons learned from brucellosis control and eradication to bTB.

- Guda van der Burgt. Guda van der Burgt is a farm animal veterinary surgeon, qualified in 1987, and has worked 15 years in practice with an emphasis on farm and equine work before 10 years as a veterinary pathologist at VLA/APHA. Guda was project lead of two TB projects (cattle and non-bovine species), and carried out numerous badger post mortems over this period. After APHA, Guda worked in Industry for two years (MSD Animal health, senior specialist ruminants) and for the last nine years has been working as an independent consultant/pathologist.

Wildlife and Countryside Link (Link) is the largest nature coalition in England, bringing together 86 organisations to campaign for nature, climate, animal welfare and a healthy environment for everyone. Wildlife and Countryside Link is a registered charity number 1107460 and a company limited by guarantee registered in England and Wales number 3889519.

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