

Written submission to the Public Bill Committee of the Environment Bill

Concerning an amendment tabled by Daniel Zeichner MP regarding lead ammunition used for the taking of wild quarry using shotguns

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1. Executive Summary

- The Lead Ammunition Group makes this written submission to the Public Bill Committee of the Environment Bill, on the question of Regulations to support the phasing out lead ammunition used in shotguns. The LAG consists of internationally recognised experts and practitioners from all relevant disciplines, who maintain detailed and critical overview of the emerging evidence concerning lead ammunition and its threats to wildlife, human health and the environment.
- In 2015, the LAG provided detailed evidence of the harm caused by continued use of lead gunshot and rifle ammunition to wildlife, the environment, and human health in the [final report](#) to the Secretary of State for the Environment.
- In 2018, the LAG [updated this evidence](#). Subsequently the economic effects of continued use of lead ammunition and the practicality of using available non-lead ammunition types were assessed in a special issue of the science journal [Ambio](#).
- New evidence shows that more bird species (especially predatory and scavenging species) are affected by exposure to lead from ammunition, at more places, and at lower exposure levels than previously realised.
- [There is evidence that](#) populations of some duck species wintering in the UK, including the Common Pochard which is listed as threatened with global extinction, are declining because of ingestion of lead pellets from spent gunshot.
- Compliance with the 1999 Lead Shot Regulations prohibiting the use of lead gunshot for shooting ducks in England [has been very poor and has declined](#) despite a recent campaign by shooting organisations to encourage compliance. In 2016, in response to the LAG Final Report, the Secretary of State for the Environment stated that Defra would examine how these Regulations could be better implemented, but no action has resulted.
- [Thousands of children in the UK](#) consume wild game sufficiently frequently to present a neurodevelopmental risk. Tens of thousands of adults frequently consume wild-shot game. Health agencies in the UK and elsewhere in Europe have highlighted the contribution of ammunition-derived lead in wild-shot game to dietary exposure and the need to minimise consumption. Advice emphasises the avoidance of consumption of game shot with lead, especially by children and pregnant women.
- The [estimated economic costs to society](#) of continued use of lead gunshot for game and other wild animal shooting are high relative to those associated with transitioning to non-lead gunshot.
- Several multilateral environmental agreements to which the UK is signatory/party have strongly urged action, over periods of decades, to tackle this issue.
- Under REACH (the EU's Regulation, Evaluation, Authorisation and Restriction of Chemicals) the EU is [formally considering restricting the use of lead ammunition in all habitats](#). Such a restriction would probably have implications for UK trade in game and venison meat to the

EU, as would the introduction of Maximum Levels of lead in traded game under Regulation EC1881/2006, which have been called for by some as a supplementary measure.

- From the 2020/21 shooting season, the UK's major game retailer (Waitrose & Partners) will only sell game [brought to bag without the use of lead ammunition](#). Other supermarkets have indicated that they will do the same or are actively reviewing their policies.
- In February 2020, major UK shooting and rural organisations [called jointly for an end to lead in ammunition](#) used by people shooting all live quarry with shotguns within five years '*in consideration of wildlife, the environment and to ensure a market for the healthiest game products...*'. Hence, there is now agreement among major stakeholder groups, including shooting and rural organisations, conservation organisations, major retailers of game and human and wildlife health scientists, on the need for rapid transition away from using lead gunshot for game shooting.
- Considerable evidence and experience from UK and elsewhere argue that the desired transition will not succeed if based on voluntary exhortation alone.
- Wide acceptance of this evidence and stakeholder support for change therefore provides an imperative for regulation to protect the health of wildlife, the environment and consumers of wild-shot game.
- Without regulation, ammunition manufacturers do not have a guaranteed market for non-lead gunshot, and this will impede transition by affecting its supply and price, and thus successful uptake by users. A three-year transition period would allow time for manufacturers and retailers to scale up production and stocking of non-lead shot.
- While desirable, the aim to replace plastic with biodegradable wadding should not distract from or delay the urgent need to replace toxic lead gunshot and the associated timeframes for transition should be decoupled.

2. Recommendation

The new political landscape, passage of The Environment Bill and the adoption within it of the proposed amendment presents an opportunity to substantially reduce the risks associated with the use of lead gunshot.

We submit that all the published evidence supports adoption of an amendment to safeguard the health of wildlife, the environment and consumers of wild-shot game, and to respond to the declared interests and objectives of a diverse range of stakeholders including shooting and rural organisations, conservation organisations, major game retailers, public health authorities and human and wildlife health scientists and agencies.

3. Introduction

- 3.1. Waterbirds and terrestrial birds that eat spent lead gunshot mistakenly for grit or food, and scavenging and predatory birds that eat lead from ammunition or particles of ammunition shot into their prey, frequently die from lead poisoning. Lead gunshot fragments on impact leaving behind tiny lead particles that result in elevated lead concentrations in game meat presenting risks to frequent consumers and vulnerable groups, especially children.
- 3.2. In 2010, the Department for Environment, Food and Rural Affairs (Defra) and the Food Standards Agency (FSA) set up the LAG, bringing together key stakeholders and experts to identify key risks, explore possible solutions, and advise the government departments accordingly. Since the 2015 submission of the Group's report, the LAG, with some changed

members, has continued to review new evidence and developments relevant to the conclusions of the report.

- 3.3. [The final report](#) was submitted by the LAG Chair to the Secretary of State for the Environment on 3 June 2015. While several stakeholders resigned directly prior to submission due to differences of opinion over mitigation options, the report's accompanying detailed risk assessments, upon which the report was based, were widely agreed by all LAG participants ([16 April 2014](#)) and have not been contested by any of the Government's statutory agencies.
- 3.4. In the [accompanying letter to the final report of the LAG](#), the LAG Chair highlighted the identified risks to human and wildlife health associated with lead from ammunition, including neurodevelopmental harm to c. 10,000 children and mortality of tens to hundreds of thousands of birds in the UK annually. It was noted that current regulations restricting the use of lead shot in certain wetlands and for shooting wildfowl were poorly complied with in England and were insufficient for dealing with the wider risks that extend to terrestrial habitats. The Chair acknowledged that the necessity for further action was a matter of political judgment, but that anything other than an eventual transition from lead ammunition to non-toxic alternatives would fail to mitigate the identified risks.
- 3.5. In July 2016 [the Secretary of State responded to the LAG Chair](#) indicating that in the Government's opinion the impacts shown were not sufficiently significant to justify changing policy. She indicated that the report did not provide causal evidence linking bird population sizes and lead ammunition in the UK, but recognised the apparent poor compliance with the existing lead Regulations. She confirmed that Defra would look at how the existing Regulations could be better implemented, and that the FSA would consider if action was required to raise awareness of their advice amongst the identified at-risk population.
- 3.6. Since the 2015 LAG Report submission date, evidence of the extent of the problem has increased, and consequently there have been many developments in both policy and practice in the UK and internationally. Notably, these changes have resulted in a convergence of views across stakeholder groups on the need to replace lead gunshot and rifle ammunition for live quarry shooting with non-toxic alternatives. Regarding lead gunshot in particular this is now the view of shooting and rural organisations, major game retailers, conservation organisations and human and wildlife health scientists and agencies. (Phasing out the use of lead rifle ammunition for the management of deer and boar populations is proceeding along a different path which we do not cover in this submission.)
- 3.7. The consensus view regarding the extent of this problem together with evidence supporting the ineffectiveness of voluntary or partial regulatory measures in the UK, argue in favour of the proposed amendment to The Environment Bill.
Below we present new evidence and changes in policy and practice subsequent to completion of the LAG report.

4. Evidence -Risks to wildlife health

- 4.1. Considerable [additional evidence](#), especially for predatory and scavenging birds some of which had not previously been studied, suggests that poisoning from exposure to lead ammunition is likely to occur wherever it is used and feeding birds are exposed to it.
- 4.2. Sub-lethal effects from lead ammunition on wild birds have been [found at lower blood-lead concentrations](#) than previously reported.
 - Research suggests that lead from ammunition [affects, or is likely to affect, populations](#) of wildfowl, terrestrial birds, raptors and scavengers. Effects upon individuals or populations of

a species resulting from exposure to a given amount of lead from ammunition are unlikely to vary between geographical regions. [Recent correlative evidence suggests](#) that populations of some duck species, in particular the Common Pochard *Aythya ferina* and Northern Pintail *Anas acuta*, wintering in the UK, are declining because of ingestion of lead pellets from spent gunshot. The Common Pochard is globally threatened with extinction (Vulnerable) in the IUCN Red List because of widespread population declines. Wintering populations in Great Britain of this species and the Northern Pintail were classified as Endangered in a national assessment of extinction risk (Stanbury *et al.* 2017¹).

5. Evidence – Compliance with restrictions on the use of lead gunshot

- 5.1. In various parts of the UK, encouraged voluntary phase-outs of lead fishing weights in the 1980s and of lead gunshot over wetlands in the 1990s [were ineffective and consequently Regulation was introduced](#).
- 5.2. In England, where it has been illegal to shoot wildfowl using lead gunshot since 1999, [compliance studies consistently show](#) that only around 30% of locally sourced wildfowl have been shot with non-lead ammunition. A high profile campaign run by the shooting organisations to reduce illegal use of lead shot was ineffective, with only 23% compliance subsequently reported.
- 5.3. The ineffectiveness of the partial restrictions of the lead Regulation 1999 may partly result from the difficulty of policing them, partly because shooters can justifiably carry both lead and non-lead gunshot with them. However, [>96% compliance was reported \(in 2016 and 2017\) for the complete ban](#) on the use of lead gunshot introduced in Denmark in 1996.
- 5.4. 47% of respondents to [a recent GWCT survey](#) wanted to retain lead gunshot. This emphasises the need for regulation to achieve effective transition.

6. Evidence - Risks to human health

- 6.1. An estimated [five million people in the EU](#) may be high-level consumers of lead-shot game meat.
- 6.2. Approximately ten thousand children in the UK and [tens of thousands across the EU](#) may be consuming game contaminated with ammunition-derived lead frequently enough to cause significant effects on their cognitive development and IQ.

7. Evidence – Costs to society of continued use of lead ammunition

- 7.1. [A recent study estimated the economic costs](#) to society of the continued use of lead ammunition, associated with impacts on wildlife, people and the environment. While only a limited number of costs were included, these were estimated at a minimum of between €444 million and €1.3 billion in Europe every year. Costs appear to be considerably greater than the likely costs of switching to non-toxic alternative ammunition types.

8. Evidence – International consensus on the effects of lead from ammunition on wildlife and human health

- 8.1. There is worldwide scientific consensus on the risks arising from lead ammunition, and the need to replace it with non-toxic alternatives as highlighted by consensus statements from wildlife and human health experts from [North America](#) and [Europe](#), and [an open letter from European scientists](#).

¹ British Birds 110: 502-517

9. Policy and Practice – Advice to consumers of game shot with lead ammunition

9.1. The UK Food Standards Agency [advise that eating lead-shot game on a frequent basis can expose consumers to potentially harmful levels of lead](#). Those who eat lead-shot game should minimise the amount they eat, especially for small game animals, and this is especially important in the case of toddlers and children, pregnant women and women trying for a baby, because of the harm that lead can cause to the brain and developing nervous system. The FSA does not recommend any lower level of consumption as being safe for these at-risk groups. This is similar to recent advice given following risk assessments by equivalent agencies in other European countries who consider that these most vulnerable groups should eat little or no game shot with lead ammunition (Spain -[AESAN 2012](#); Norway -[Knutsen et al. 2015](#); France - [ANSES 2018](#); Germany - [Gerofke et al. 2018](#)).

10. Policy and Practice – Multilateral Environmental Agreements and Regulations

10.1. The issue of risks arising from lead from ammunition has recently been included in the agendas of both the [International Union for the Conservation of Nature](#) and the [United Nations Environment Assembly](#), which encourage governments to raise awareness of this matter and/or promote and help implement previous resolutions. At the recent UN Convention on Migratory Species Conference of Parties in February 2020, [a resolution was adopted](#) to create an ‘Intergovernmental Task Force on Phasing out the Use of Lead Ammunition and Lead Fishing Weights’

10.2. In early September 2020 the EU’s REACH (the EU’s Regulation, Evaluation, Authorisation and Restriction of Chemicals) committee voted to accept a [proposal to restrict the use of lead gunshot](#) for shooting in and over wetlands aimed at protecting waterbirds and harmonising measures taken across the EU. In addition, an [ECHA Investigation Report](#) found that there was a case for extending the restriction to all shooting, to protect both human health and predatory and scavenging birds, and the Commission subsequently [mandated ECHA to prepare a restriction proposal](#) on the availability and use of lead in ammunition (and fishing weights) used in both wetlands and other terrains. A [formal call for evidence](#) and a workshop on this wider restriction proposal have already taken place.

11. Policy and Practice – EU Maximum Levels

11.1. European Commission Regulation [EC1881/2006](#) sets maximum levels of lead allowed in traded meats from domesticated bovine animals, sheep, pigs and poultry, but also from some less frequently eaten meats from wild animals, including cephalopods and bivalve molluscs. No maximum level has been set for lead in game meat.

11.2. There have been recent calls to set a maximum level for game meat (Thomas *et al.* in press²) to complement and facilitate the transition to non-lead ammunition for European hunting. However, it is unlikely that a maximum level would be met by a high proportion of meat from game shot using lead ammunition. The maximum level set for the meat (excluding offal) of bovine animals, sheep, pigs and poultry is 100 ppb (0.1 mg kg⁻¹ w.w.). The average level of lead found in samples of 122 gamebirds (of 6 species) shot in the UK, following the removal of lead shot and readily visible lead fragments, [was 1181ppb](#). Maximum levels in some individual samples exceeded 100,000ppb.

² Thomas, V., Pain, D., Kanstrup, N & Green, R. 2020. Setting maximum levels for lead in game meat in EC regulations: an adjunct to replacement of lead ammunition. *Ambio. in press*

12. Policy and Practice – UK Retailers of game

- 12.1. Waitrose & Partners, the UK's largest retailer of game, announced its intention to [phase out the use of lead ammunition](#) for shooting game sold in its stores. By the 2020/21 season all of Waitrose & Partners game will be brought to bag without the use of lead ammunition. Other game retailing supermarkets have indicated that they will act similarly whilst others are actively reviewing their policy on lead.

13. Policy and Practice – Shooting and landowning organisations

- 13.1. On 24th February 2020, major UK organisations³ associated with shooting and rural interests [called for an end to lead in ammunition](#) used by people shooting all live quarry with shotguns within five years. They have called for this '*in consideration of wildlife, the environment and to ensure a market for the healthiest game products...*'.

14. Wider benefits and opportunities.

- 14.1. Adoption of the amendment would present advantages beyond the environment. It would:
- 14.1.1. help protect the health of people that purchase game through retail outlets or acquire game via other routes
 - 14.1.2. help ensure the continuity of a UK market for wild shot game with the major game retailers.
 - 14.1.3. remove the need for food safety advice, and food labelling on certain wild-shot game (suggesting that various groups limit or avoid consumption), presumably increasing demand and enabling the promotion of wild-shot game as a healthy meat.
 - 14.1.4. create a potential export market advantage, particularly if an EU maximum level is introduced for game meat.
- 14.2. As the main stakeholder groups concur that transition away from lead gunshot is needed for the taking of wild quarry, adoption of the amendment would substantially reduce the costs, parliamentary energy and red-tape associated with implementing new regulations to achieve this at a later stage. It would ensure transition by providing a guaranteed market for non-lead shot for ammunition manufacturers.

³ Game & Wildlife Conservation Trust, British Game Alliance, The British Association for Shooting & Conservation, Countryside Alliance, Country Land and Business Association, The Moorland Association, The National Gamekeepers Organisation, Scottish Land & Estates, SACS – UK-wide Shooting & Country Sports Advocacy