

Minutes of the 12th Lead Ammunition Group meeting

25 June 2014

Defra, Bristol

Attendees

Mr John Batley

Mr Stephen Crouch

Mr Ian Coghill

Mr Rhys Green

Dr James Kirkwood

Prof Len Levy

Dr Debbie Pain

Mr John Swift (Chairman)

Mr Mark Tufnell

Sir Barney White-Spunner

Observing

Mrs Elaine Kendall - (Defra)

Mrs Kate Fouracre - (Defra)

Secretariat

Dr Matt Ellis - (BASC)

1. Welcome and introductions

1.1. Apologies were received from Dr Kevin Hargin and Mr Ashley Smith.

2. Minutes of the 11th meeting

2.1. The minutes were accepted without change.

3. Matters raised for inquiry in the context of mitigation

3.1. The benefits and dis-benefits of using lead shot over other materials (from 11.9.5). This item was discussed at length in 3.10.1.

3.2. Consultation with experts from other countries which have experienced full or partial replacement, or who are now reintroducing lead (from 11.9.6). A communication from the Norwegian Hunting and Fishing Federation was drawn to the Group's attention that a proposal

exists to be put before the Norwegian parliament to reauthorise the use of lead ammunition for shotgun shooting outside wetlands. It was noted that this could be due to the low intensity of such shooting and the negligible resultant risks to health or wildlife.

3.3. Mitigation Subgroup was to form a list of actions to be undertaken immediately by stakeholders (from 11.9.8). These actions had been raised within the Mitigation Subgroup, but the Group was informed that as yet no list has been prepared. Some of the suggestions are however covered in the draft risk register discussed below.

3.4. The Shooting representative was to approach the Code of Good Shooting Practice committee to make changes to the COGSP in the terms described (from 11.9.9). The Group was informed that the shooting organisations are planning a series of articles in the shooting press, and the matter will also be discussed at the next meeting of principals of shooting organisations (known as “the Shoot Summit”). Recommendations will then be made by the Summit to the Code of Good Shooting Practice Steering Committee. No timescale was available.

Action Point 12.1. Sir Barney White-Spunner to recommend changes to the Code of Good Shooting Practice, which should include direct and specific recommendations on the use of non-lead shot and alternatives.

The Group discussed non-compliance with the current lead shot regulations for wetlands and wildfowl shooting but reiterated that compliance enforcement is not part of the Group’s job (although it is the remit of the group to suggest measures to reduce risks and these may include measures to increase compliance). It was agreed that non-compliance bears on the effectiveness or possible effectiveness of measures that might be recommended to mitigate known or identified risks. The shooting organisations’ commitment to self-regulation means they have the direct interest to promote effective compliance and the LAG has a direct interest to keep progress under review.

3.5. FSA guidance to be rendered more precise (from 11.9.10). It was felt that awareness of the current FSA guidance especially within the shooting communities is currently very low. The FSA guidance was considered to be vague and of limited effect.

It was agreed to request that the FSA review their guidance in the light of LAG risk assessments and to take account of any new information presented therein.

Action point 12.2. to request FSA to review their guidance on consumption of game and venison in the light of the LAG risk assessments.

3.6. Demonstrating the viability of using non-lead shot types for shooting wildfowl (from 11.9.12). The Group was informed that no progress has been made on this action yet.

3.7. The shooting interest groups to look into the possibility of revocation of or refusal to grant shotgun certificates of anybody in breach existing lead regulations (from 11.9.13). The Group was informed that Gun Trade Association has received advice that the possibility for revocation of a person's firearms certificate on the grounds of prosecution for placing game or wildfowl illegally shot with lead was unlikely. The Firearms Act (1968) s30(2)(a) and (b) specifies reasons for revocation of shotgun and firearms certificates, and non-compliance with the lead shot regulations is not a recognized reason. This was confirmed by the Chairman who had also sought advice from BASC's Director of Firearms, Bill Harriman. It was accepted that this measure for promoting compliance would not be considered further by the shooting interest.

3.8. Shooting groups were to call a meeting with game dealers, providers and producers for agreement over the need to enforce traceability (from 11.9.14). The Group was informed that there has been no meeting yet. The purpose of such a meeting was to promote compliance with existing regulations by ensuring that anybody who placed wildfowl illegally shot with lead on the market could be held to account.

It was pointed out that although under food law all game dealers and handlers should have traceability forwards and backwards currently this is not enforced as it is believed that the FSA think there is little perceived health risk with game meat.

3.9. Discussion with FSA about labeling all game sold (from 11.9.15). The Group was informed that no progress has been made on this action yet.

3.10. Consideration of other issues to be reported back to the Group (from 11.9.16).

a) Ballistics and effectiveness of steel shot in the field?

The Chairman put two questions to the meeting, on the strength of a publically available BASC information sheet on the use of lead alternatives which had been presented to the Mitigation Subgroup in May[1]; firstly, whether a standard lead shot cartridge customarily used for field shooting is replaceable with a comparably priced steel shot cartridge delivering a specified lethal number of pellet strikes in a 30 inch circle up to the recommended maximum distances for field shooting i.e. 40 to 50 yards? Secondly, he asked whether, subject to checking every cartridge gun combination, such standard steel alternatives are normally useable in standard proofed shotguns? (Noting that if greater performance were needed then a higher standard of gun and cartridge proof would be required). This was an important question bearing on whether the standard shooter might continue to pursue his activity using effective alternatives at little or no additional cost?

This led to considerable discussion over the nature of the evidence behind the BASC information paper, which specified the number of pellet strikes in a 30" circle required to ensure a lethal pattern.

Even though there might be standard steel loads useable in a standard proofed shotgun delivering the required number of pellet strikes at 40 to 50 yards the shooting representative argued that the differences between field shooting practices in the UK and the USA (where much of the evidence in the BASC information paper was from) caused him to disagree that steel might be a comparable field replacement for lead, and he requested a review of the evidence.

It was asked what age of gun could safely shoot standard performance steel shot. The Group was reminded that all cartridges (whether steel or lead) were for safety purposes “proved” to the same standard and so should be safe for use in any standard proofed shotgun. However, it was noted that older (pre 1920s), thin walled, English game guns with tight chokes might not be suitable for use with steel shot.

b) Possible impact of steel shot in forestry?

The Chairman reported that there is no documented evidence of any problem with the use steel ammunition in forestry in the Nordic countries (Denmark in particular). It had been raised as a serious concern when lead was to be prohibited in the 1990s in Denmark, and the forestry authorities had recommended against the use of steel; and there is still significant concern among some woodland owners for its potential. Experience from Scandinavian countries suggests however that it hasn't been a significant problem; except possibly in woodlands managed for veneer timber, though even in this instance it hasn't been a major issue in practice.

c) Possible impact of steel shot when ingested?

The Chairman reported that he was aware of no evidence of adverse effects in waterfowl, and no known evidence in humans.

d) Possible impact of steel shot in the environment?

The Chairman reported that there are no reasons for believing that steel shot creates any environmental risk. One representative suggested the possible interaction between iron oxide (rust) and agricultural nitrates might be examined, and it was agreed that this would be done.

Action Point 12.3. Professor Levy to seek advice on the possible interaction between iron oxide and agricultural nitrates.

e) Possible increase in sepsis in birds wounded by steel shot?

The Chairman reported that he had uncovered no evidence of increased risk of sepsis in birds wounded by steel shot compared to those injured with other materials. He cited one paper from 1996 that had concluded that inflammatory reactions to steel shot were localised and had no systemic effects on mallard health under experimental conditions.[2]

f) Possible risk to people with steel shot retained in their gut undergoing MRI scans?

The Chairman reported on the correspondence on this issue in Shooting Gazette in 2011, the precautionary screening that takes place before scans are done, and the lack of any reported problems in UK or other countries; and concluded that there is no evidence of additional risk.

g) Possible benefit of developing “encapsulated lead shot”?

The Chairman reported this was likely to be of little benefit to wildfowl, as the lead core would exceed the allowable lead content under the lead shot regulations. Early research in the 1970's had showed that the powerful muscular gizzard of waterfowl is able to erode the encapsulation, eventually leading to lead toxicity.

It was questioned whether encapsulated lead shot could help to reduce toxicity in humans, but this was discounted as the main issue resulted from the fragmentation of lead shot. This would result in small un-encapsulated fragments of lead that could easily be more easily absorbed.

h) Possible additional risk of ricochet using steel shot.

The Chairman referred to a paper on this subject by BASC's Director of Firearms Bill Harriman and concluded that even if steel shot ricochets at greater angles and with greater retained energy than lead, fundamentally however, any unsafe shot with steel would also be an unsafe shot with lead, regardless of the ricochet potential.

Action Point 12.4. Sir Barney White-Spunner agreed to distribute to the Group a 1996 report on ricochet of steel shot conducted by the Royal College of Military Science and commissioned by the Birmingham Proof House.

i) The development and availability of biodegradable shot cups for use with steel shot?

The Chairman reported that in his experience this problem was likely to be overcome. Biodegradable wads for use with steel loads are being developed and coming onto the market.

It was pointed out by one representative that if all cartridges fired in the last year were steel cartridges with plastic wads then there would have been approximately 500 tonnes of plastic wad deposited over the countryside.

The Group discussed the risk to livestock from ingestion of plastic wads but no members of the Group were aware of any recorded instances of death or disease from wad ingestion, but individual members were encouraged to conduct their own research.

4. To receive and discuss a structured plan for mitigation options, assessment, risk reduction and supporting action plan

4.1. The Group received from the Mitigation Subgroup a draft risk-mitigation Register for its consideration and development. The Group also agreed to follow a protocol for recording and scoring risks provided by Defra. This involved scoring risks before mitigation and after mitigation in terms of their likelihood and impact.

Current likelihood of a risk occurring was to be assessed as: “high” if it was considered to be very likely (significantly greater than 50:50) chance of occurring this year or at frequent intervals in the foreseeable future (e.g. 18 months to 3 years); “medium” if around 50:50 chance of the risk occurring this year or more than once in the foreseeable future; “low” if significantly less than 50:50 chance); “very low” if very unlikely to occur this year and unlikely to occur in the foreseeable future.

Current impact was to be assessed as: “high” if causing death or significant public health concerns, major environmental impact or loss of public confidence; “medium” if causing some public health effects, significant environmental impact, or longer term damage to reputation; “low” if causing minor or reversible health effects, minor impact on the environment or short term reputational damage; “very low” if causing negligible public health, environmental or reputational effects.

The likelihood and impact scores are to be combined to provide a current risk rating.

4.2. There was much discussion over who might be best placed to score the level of risk for each of the risks identified in the Register. (The outcome is covered by the conclusions of this section).

4.2. It was pointed out that there was as yet no overview of all the possible mitigation measures (some of which address multiple risks). It was suggested that once the risk register is completed a table is compiled of all the various countermeasures, what risks they will address, and an assessment given of how effective they are likely to be in combination or alone. It was agreed that such an overview would be beneficial and might be appended to the register and may also be covered in narrative form in the final report.

4.3. The Group noted that not all of the risks identified in the risk assessments are listed in the risk-mitigation Register. This is particularly the case for wildlife welfare impacts and some of the livestock risks. Many such risks had not been included in the first draft as it had been felt that the risks were small. However, it was agreed that they should be added to the Register to show a full assessment of all of the identified risks. It was noted that the assessment of possible impacts on welfare was a difficult subject area.

4.4. There was discussion about the choosing the correct “population at risk” for each of the risks. There was consensus that this should be the population currently indicated to be at risk (e.g. the number of children indicated to be consuming at least one game meal per week). However, assessment might also be made relative to the whole population (e.g. the number of children of a certain age group who might be exposed to some degree). It was agreed that further consideration

be given to settle on a consistent approach, in particular by the PERA Subgroup as regards scoring risks before mitigation.

4.5. It was agreed, as regards assessing residual risk after mitigation, that if for example a scoring of “low” for residual risk was to be given compared to a higher level of risk before mitigation it would have to be contingent on a thorough and credible mitigation action plan being in place e.g. a campaign of awareness raising and on there being some indication, e.g. based on other similar campaigns, of the likely level of efficacy of such a campaign. For the purposes of drafting the Register it was agreed that the score after mitigation would assume such an effective action plan being put in place; but, in accord with established Defra guidance, it would be graded “red” if preparatory work for such an action plan had yet to be done and agreed by the Group.

4.6. Based on previous work by Pain et al. (2010), it was noted that an education on game meat handling and trimming of damaged meat might not reduce risk as much as might be expected in small game (e.g. gamebirds). Although further work is needed to assess the current level of game meat handling.

4.7. The Group also noted that the current food labelling “may contain lead shot” is not aimed at protecting human health, but to alert consumers to possible risks to their teeth.

4.8. The Group was agreed that outlawing the sale of game meat shot with lead ammunition and containing lead ammunition fragments might affect only a small proportion of the people at risk. It was considered that most high-level consumers eat game shot by themselves or sourced informally and not purchased. Therefore, as a countermeasure it was to be considered unlikely to have a significant effect; and hence the residual risk would be unchanged. However, data have not been collected on this topic.

4.9. In conclusion it was agreed that the Primary Evidence and Risk Assessment Subgroup will concentrate on completing the scoring of the remainder of Risk Register before mitigation, according to consistent principles taking into account the points already made within the Group. All members of LAG were invited to join the subgroup for this process by indicating their special interest to Professor Levy.

Action Point 12.5. PERA Subgroup to establish a consistent approach to scoring risks before mitigation and complete that part of the Register for reporting back to the Group.

4.10. It was agreed also that the Mitigation Subgroup will focus on developing effective action plans for the countermeasures. If other countermeasures, additional to those already listed, are identified they should be communicated to Matt Ellis. All members of LAG were invited to join the subgroup for this process, by indicating their special interest to Sir Barney.

Action Point 12.6. All to submit any further possible mitigation options to the Mitigation Subgroup.

Action Point 12.7. Mitigation Subgroup to develop mitigation action plans for measures already discussed.

5. Any other business

5.1. The Chairman requested feedback on the principle of holding a Lead Ammunition Group forum. This would be hosted by the Edward Grey Institute at the University of Oxford, provisionally on December 10th and 11th 2014. An invited list of participants would include senior representatives from the stakeholder groups and possibly experts from other countries with directly relevant research or practical mitigation experience. The aim of the forum was to engage a wider audience in the evidence presented by the risk assessments along with the Group's emerging conclusions on potential mitigation options. It would also provide an important forum for discussing these potential mitigation options, and for providing consultation feedback. The Group agreed in principle and thought it could form a useful part of the stakeholder consultation process.

Action Point 12.8. Chairman to circulate a proposal for lead forum to obtain members' views and suggestions.

5.2. Publication of the risk assessments.

It was stressed that the risk assessments were finalised in October 2013 and that they still were not publically available. However, as it had been previously agreed that the risk assessments should not be published until mitigation options have been agreed, their publication will continue to be held until this point.

6. Date of the next meeting

6.1. No date was set as the Mitigation Subgroup and Primary Evidence and Risk Assessment Subgroup need to meet first.

7. Action points carried forward

Action Point 6.2. Progress report after one year will be submitted April 2013.

Carried forward

Action Point 11.1. Circulate the minutes of the first Mitigation Subgroup meeting and the draft report.

Completed

Action Point 11.2. Send the consensus wildlife risk assessment statement to the group

Completed

Action Point 11.3. Send the game consumption report to the group once completed

Completed

Action Point 12.1. Barney White-Spunner to recommend changes to the Code of Good Shooting Practice, which should include direct and specific recommendations on the use of non-lead shot.

Action point 12.2. to request FSA to review their guidance on consumption of game and venison in the light of the LAG risk assessments.

Action Point 12.3. Prof Levy to seek advice on the possible interaction between iron oxide and agricultural nitrates.

Action Point 12.4. Sir Barney to distribute to the group a 1996 report on ricochet of steel shot conducted by the Royal College of Military Science and commissioned by the Birmingham Proof House.

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Action Point 12.6. All to submit any further possible mitigation options to the Mitigation Subgroup.

Action Point 12.7. Mitigation Subgroup to develop mitigation action plans for measures already discussed.

Action Point 12.8. Chairman to circulate draft proposal for lead forum for comment.

[1] Lead Substitutes – What you need to know. 7 pp. Updated 13 May 2014.

[2] J Wildl Dis 1996.