Minutes of the 4th Lead Ammunition Group meeting

29 September 2010

Defra offices – London

Attendees
Mr John Swift - British Association of Shooting and Conservation
Dr Deborah Pain - Wildfowl & Wetlands Trust
Dr Stephen Tapper - Game and Wildlife Conservation Trust
Mr John Batley - The Gun Trade Association
Prof Len Levy - Institute of Environment and Health
Dr James Kirkwood - Universities Federation for Animal Welfare
Mr Adrian Gane - Country Land and Business Association
Mr Stephen Crouch - National Game Dealers Association
Ms Lucy Munro – Defra
Mr Tim Andrews - Defra

Guest Attendees:
Dr Diane Benford - EFSA report
Dr Christina Baskaran – FSA
Dr Kevin Hargin – FSA
Mr James Legge - The Countryside Alliance
Mr Jeff Knott - Royal Society for the Protection of Birds

1. Apologies, welcome and introductions.

1.1 The Chair welcomed guests to the meeting. Apologies were received from Mark Avery and Robert Gray.

1.2 The Chair reminded the Group of the terms of reference in respect to the Group's membership. In the event of members being unable to attend future meetings they should contact the secretariat and the Chair so that a proposed deputy can be agreed and arrangements made.

2. Review of the published minutes of the 6 July. (All)

2.1 There were no further comments on the published minutes of the third meeting on 6 July.

3. Review of the Action Points from the last meeting. (All)

3.1 **Action 3.1** The Chair agreed to repeat his invitation to FSA officials to attend the next meeting.

Action completed. The Chair expressed his gratitude to FSA for their attendance.

3.2 **Action 3.2** PE subgroup to redraft the ToR and circulate this to the group

Action completed.

3.3 **Action 3.3** PE subgroup to produce a list of key references for publication by the end of July.

Action partially completed. As recorded in the last minutes the PE subgroup report is still in preparation and would be considered later in this meeting.

3.4 **Action 3.4** Prof.Levy to invite Dr Benford and Prof. Boobis to present on the EFSA report at the next meeting.

Action completed. The Chair expressed his gratitude and welcome to Dr Benford.

3.5 **Action 3.5** PE subgroup to organise a day's session to deal with the background science established so far.

Action completed. Gratitude was expressed to the FSA for providing accommodation for the meeting.

3.6 **Action 3.6** PE subgroup to propose to the Group how the risk assessment process might be taken forward

Action completed. The proposal has been circulated to the Group for consideration.

3.7 **Action 3.7** The Group to consider names of those who could contribute constructively to the risk assessment process should the expansion of the sub group be agreed.

Action partially complete.

The Chair expressed that he was keen to involve representatives from the wider affected stakeholder interests; this will be discussed later in the meeting

3.8 **Action 3.8** PE subgroup to establish how the first meeting of the extended PE subgroup will be organised – how a day's session might be organised to cover the background science to give everyone an insight into aspects affecting human health.

Action partially complete.

3.9 Three actions were carried over from the previous meeting and these remain ongoing:

Action 2.6 John Batley to circulate a proposal with draft terms of reference for his proposed sub group.

Action ongoing.

Action 2.7 Defra to pull together all the regulations, guidelines and Directives which are relevant to the Lead Ammunition Group.

A preliminary draft was received at the meeting. This was circulated and it was resolved that members might give it their consideration with a view to it being further discussed at the next meeting and consideration being given to it being published on the website.

Action 2.12 TA to amend Gantt chart for sign off at next meeting

Action not yet complete. It was explained that this was important as timetabling needs to be transparent. Currently a progress report is due to be made a year after the Group's inception which will be March 2011. By then it will be possible to estimate when a full and conclusive report might be concluded. This was agreed.

4. Dr Benford's presentation on the EFSA report.

4.1 Dr Benford explained her background, she is Head of Chemical Risk Assessment at FSA and also Vice-Chair of the Panel on Contaminants in the Food Chain of the (CONTAM) EFSA, sitting on the panel as an independent expert rather than representing a UK position. As Head of Chemical Risk Assessment she deals with a range of chemicals on a scientific basis rather than dealing with any policy considerations.

4.2 By way of introduction Dr Benford provided information on the UK's position on the risk assessment prior to the recent evaluations of EFSA and the Joint Expert Committee on Food Additives (JECFA). This had been based on the JECFA Provisional Tolerable Weekly Intake (PTWI), originally set in 1986 at a level not expected to cause an increase in blood lead in young children, and endorsed by the EU Scientific Committee on Food (SCF). The UK Committee on Toxicity of Chemicals in Food, Consumer Products and the Environment (COT) had advised that the JECFA PTWI could not be considered fully protective and that there was a need to reduce lead exposure from all sources. She pointed out that blood lead levels in humans have reduced significantly over the past 25 years. This means that one can see increases in blood levels at lower levels of exposure. The opinions of COT, JECFA, SCF and EFSA all focussed on risks to human health rather than on the environment or wildlife.

4.3 In Europe EFSA was established in 2002 to provide objective scientific advice and risk assessment. The European Commission sets regulatory limits in consultation with the member states. An outline of the processes involved and the objectives behind the recent EFSA opinion was provided. Unlike most contaminants in food, there is a large amount of data on different effects of lead in human populations, obtained from epidemiological studies. Data from studies in experimental animals provide support for the observations. Of the wide range of reported effects lead can have, the ones seen at the lowest levels of exposure are on neurodevelopment, cardiovascular endpoints and kidney toxicity. Particular focus is given to developmental effects

resulting in decrease in IQ in children at low levels of exposure. In regard to the possible carcinogenic and genotoxic risk EFSA had concluded that lead was unlikely to be a significant risk at the low levels that are present in food.

4.4 The principle of calculating a benchmark dose (BMD) and its lower confidence limit (BMDL) was explained in the context of assessing risk for substances where no lower threshold level of effect is identifiable. The rationale behind EFSA setting the BMDL for lead at 12 micrograms per litre of blood i.e. the level that was estimated to result in a 1 IQ point reduction in the population as a whole was explained. A 1 IQ point reduction has been estimated to result in a 4.5% increase in the risk of failure to graduate to high school and in later life in a decrease in worker productivity of 2%.

4.5 A BMDL for cardiovascular effects was based on increased systolic blood pressure in five studies showing a dose-response relationship with lead levels. A 1% increase in SBP was considered significant as it is associated with a 2.5% increase in mortality from stroke or heart attack and a 3.1% increase in treatment for hypertension. In identifying the most relevant BMDL EFSA did not take the most precautionary level but estimated an average of 36 micrograms per litre in blood from the five studies.

4.6 For kidney effects and chronic kidney disease a BMDL of 15 micrograms per litre of blood, associated with a 10% increase in chronic kidney disease, was derived from one large study from the USA. These BMDL levels expressed as level of lead in blood, were then converted to dietary exposure in terms micrograms per kilogram bodyweight per day to produce the different clinical effects. Risk characterisation is measured for the different population groups in terms of margin of exposure which is the BMDL divided by the estimated dietary exposure.

4.7 EFSA concluded that there are some groups possibly at risk such as those with higher levels of exposure such as those who eat a lot of game meat; also children and the developing foetus in pregnant women; and that overall efforts should continue to reduce exposure to lead; and the European Commission is now considering what to do with that recommendation.

4.8 JECFA discussed lead in June 2010 and its full opinion has not yet been published and is expected next year in 2011; but the summary conclusions have been published which agreed with the EFSA opinion in regard to developmental and cardiovascular effects. JECFA withdrew its previously established PTWI. Dr Benford concluded that the recent conclusions of both EFSA and JECFA are similar and the PTWI has been withdrawn on the grounds that it is no longer considered to be health-protective; effects on some groups are possible at current exposure levels and these are good reasons for considering the need for reduced exposure to lead.

5. Discussion on the key points of the EFSA report – Q&A session. (All)

5.1 The following questions were made and responded to by Dr Benford:

- **What is the estimation of "high exposure" to lead based on**? Dr Benford replied that there is a lack of good information on amounts of game eaten by high game consumers. EFSA did not have good data so the estimation was based on one portion per week. This is partly why the FSA are undertaking their current study in Scotland.
- **What is the contribution of eating game and how much does this vary with each meal as a percentage to lead intake as there were calculations made with using leaded and non-leaded petrol and these calculations showed under-estimation?** Dr Benford replied that she had not seen any good estimates of that sort. We know that the levels of lead in game meat can be higher than that which has not been shot. But because we do not have estimates of how much game meat people eat it would be very difficult to estimate what the contribution to total diet would be.
- **On the basis that the PTWI is now no longer considered to be robust enough, and looking at a new way of measuring the risk from lead, what is the limit and what is the increased risk in practical terms?** Dr Benford replied that the new data do not provide any indication of a threshold below which effects are unlikely to occur, and there is the possibility of a risk at virtually any level of exposure. Quantitative estimates have now been made of the level of risk for children and adults at various levels of exposure and these can be used in future risk assessments.
- **When it comes to game meat how did they decide the level of lead in game meat as the selection of the part and the way the meat is prepared is very important? Dr** Benford replied that the exposure assessment methodology had not been covered in any detail in this presentation but there is a lot of information in the EFSA opinion. Exposure assessments would use the average amount of lead found in the samples which reflects that you are not always going to eat the meat which includes lead, but Dr Benford agreed that better data on exposure from game meat would be useful.
- **Would it be correct to assume from table on page 53 of the EFSA opinion that the risk posed to human health from lead in game is irrelevant?** Dr Benford replied that table on page 53 sets out total lead exposure from different foods and agreed that the amount of game meat eaten at population average level is relatively small; but the table does not reflect individuals with specific dietary habits and thus the exposure of individuals in the different risk groups. Calculations that EFSA made showed that lead exposure increased when consuming a higher amount of game. Those who consumed a higher amount of game appeared to have a higher exposure to lead.
- **Is it not the case that the contribution of consuming game in terms of the overall population's exposure to lead is small and it is a matter of choice whether to eat game determining the levels of additional lead you are exposed to?** Dr Benford agreed that at the general population level, the effects of eating game meat are negligible. However there are population groups shown to be more at risk than others.
- **With reference to the different benchmarks and different scales how did the EFSA authors come to the figure of 12 micrograms as an average?** Dr Benford replied that

different statistical models were used. The value of 12 was selected as providing an average of the best approximations drawn from the data by the different methods used.

- **Do these tables show that the risk posed by lead in game meat is a deterministic risk; and if you are exposed to an increased level of lead then you are subject to an increased risk?** Dr Benford replied that there is a range of susceptibility of individuals within the different groups and not everyone will for example have a one IQ point decrement – this is the average estimated reduction in IQ at the population level.
- **How does this study compare with other studies on chemicals/heavy metals such as mercury and cadmium?** Dr Benford replied that the difference with lead is that you cannot identify a threshold. There is an unusual dose-response relationship where the lower the exposure the more steep the dose-response relationship curve and no lower threshold level can be found below which lead can be ingested without effect. Logically you might think there will be a very low level at which lead is safe – but this cannot be identified.
- **What proportion of lead comes from sources other than food?** Dr Benford replied that there have been estimations used within the EFSA opinion. With children around two years this could be around 50% from soil and dust. This, of course, would not be the same for all children.
- **What confidence can be placed on the shape of the curve in the model used? The negative gradient is what might be expected to occur with a non-threshold substance but there is a very steep response at low levels lying outside the points on the graph?** Dr Benford replied that EFSA had indeed not at first been very confident but had asked for re-analysis of these data. Taking the raw data from the study on children and the dose-response relationship the BMDL (Benchmark dose lower confidence limit) identified is not based on the Lamphear report alone, but on the reanalysis.
- **Presumably it would be possible to have a lead free diet and if so are there any studies on animals?** Dr Benford replied that there are no studies which can be referred to as it would be very difficult to undertake a study of this nature as lead is so ubiquitous in the environment.
- **Given the shape of the dose-response curve, if we are looking at a very small intake of lead in isolation one might be tempted to assume a significant dose-response; but if the intake (from game for example) is additional to other sources the response might be minimal?** Dr Benford replied that you are already exposed to a significant amount of lead from other factors. When the PTWI was first set 25 years ago, blood lead (B-pb) levels would have been higher in the general population, e.g. due to use of leaded fuel, and that a small intake of lead from game would not have shown as a significant contribution. Now that lead levels have come down contributions from other sources can be more important.
- **Have there been any other studies going back over the years on lead levels in game meat as the quality of lead in ammunition has changed?** Dr Benford replied that there may have been although none is specifically cited in the EFSA report which was based on

recent studies; but she was not aware of reasons for lead concentration levels in game meat to have changed.

- It was noted that there are data on lead in grouse where grouse from the Pennines were shown to have higher than normal concentrations of lead due in part to the proximity of the local lead mines.

5.2 In response to the discussions and observations being made following the presentation, the Chair warned against moving too quickly into the next risk assessment stage.

5.3 The Chair warmly thanked Dr Benford for her presentation which was agreed by all to be extremely informative. He added that the Group may wish to come back to her with further questions at a future date.

5.4 The Chair noted that one of the areas the presentation did not cover was the amount of lead in game meat. The Group will need to look at this in proper context. The Chair also noted from the EFSA study that a lot of the game meat which was analysed had come from different parts of Europe, from the Czech Republic, Romania and from Germany etc. He expressed a note of caution as game is hunted and processed in very different ways and to different standards in the different parts of Europe. It would need to be considered how this relates to how the UK handles its game. More background would be required on the method applied to the lead assays. DP in her work and other studies for example have been clear about method.

5.5 This was a helpful introduction to the framework of concepts which will be important to the risk assessment. One of the most important concepts is the distinction between threshold and non-threshold substances and how this works out in the modelling which follows from that. The Chair hopes that the Group is comfortable with this distinction and what it means in qualitative if not quantitative terms. One of the key messages that comes out of the presentation is the need for better data – this will be needed in further discussions.

5.6 It was further asked of Dr Benford what influence this report will have on the Commission? Dr Benford explained that the Commission has asked for this report and it would be logical for them to conclude that there should be efforts to reduce the exposure of lead in food. How to achieve this would need to be discussed and agreed with the Member States and in the UK the policy aspects would be handled by others in the FSA.

5.7 It was suggested that a number of routes might be followed. It might be that legislation is changed to reduce the limits of lead in diet as much as possible. Alternatively a satisfactory outcome might be achieved through advice or the setting of guidance values. There have been no discussions on this yet and there could be a number of different routes.

5.8 It was asked how the Commission could take this forward – that is how would they offset the consumption of game against other foods? This was not answered but it was recognised that there

are levels for lead set already for other foods – bovine, offal, poultry, vegetables, fish and cereals. There is currently no limit for game.

5.9 It was explained that any decision likely to be made by the Commission would be made only when the Commission working group is next likely to meet. This is not known and there is no timetable for taking this work forward.

5.10 It was agreed that it is a very real consideration that the Commission could over-ride any recommendations of the Lead Ammunition Group however this should not impede the progress of the Group's work.

5.11 It was agreed that consumption needs to be taken into account when carrying out the future risk assessment.

5.12 Dr Benford was requested to provide a short introduction so that we can contextualise the presentation. It was agreed that the presentation should be placed on the website.

Action point 4.1 Dr Benford to provide a short introduction to her presentation for publication on the website.

Action point 4.2 Publish Dr Benford's presentation on the website and if there are questions received via the website they will be passed to the most appropriate member(s) of the Group for a concise response.

5.13 FSA was asked to give the background to their current research contract.

- Last year WWT and RSPB wrote to FSA and Defra with the results from their study which concluded that consumption of game can increase lead exposure. At the FSA they carried out a risk assessment. Risk assessment data on consumption is usually provided by the National Diet and Nutrition Survey (NDNS). However on looking at the data on game consumption it was found that they had very little data on this type of consumer, especially for the younger end of the population group i.e. young children. It was concluded that this was not statistically robust enough for the FSA to carry out a full risk assessment.
- As the WWT/RSPB report had raised the issue that there could be certain population groups that consume high amounts of game and because there is no threshold for the toxic effects of lead, the FSA saw the need to identify this particular population and consumer group. So it was decided to carry out a consumption survey among people who are likely to eat a higher quantity of game and to identify which population group this is, how much they eat, what their habits are i.e. how do they actually process their game, which parts they eat etc.
- FSA published the tender for this research. This work will be carried out by FSA Scotland because of the way that finances are handled; it is also recognised that there could be a

high number of game consumers within Scotland. So for this research the target population will be the Scottish population. The first part of the research will be a feasibility study on whether the population group can be identified. The second phase of the study is to actually carry out interviews and collect the data. Input from the Social Science Research Team of the FSA has been obtained to ensure this study on consumption habits is completed to a standard that will allow risk assessments to be carried out.

- The deadline for the tender process has now passed and the contract is still in the process of being decided upon. FSA is hoping the work will begin, at the latest, by the end of October. The contract was initially intended to run until the end of March but this is now delayed so completion will more likely be the end of April 2011.
- It was corrected that the FSA research contract would not include a risk assessment – it had been recorded in the previous minutes that it would. The object of the tendered research is to obtain the consumption data in order for the FSA to carry out its risk assessment.

5.14 It was asked if game seasons will be taken into account for the research as consumption of game varies over the year. It was answered that the survey would be designed to obtain data for the whole year.

5.15 It was asked whether there would be much confidence in the data received that comparisons could be made between consumer groups in Scotland and consumer groups in England. It was mentioned that the study that BASC carried out on its members could be useful as this covered some consumers within England. The Chair (wearing his BASC hat) noted the point and reminded the Group that the BASC Research Committee would be dealing with this in November. He cautioned that the data being referred to had resulted from the answers to a number of questions in a marketing study and it had not been a stand-alone piece of research. It covered a sample of members in Cheshire and North Wales which is the only part of the UK which does not have deer in significant numbers. Nor was it clear whether the results related to the game season or the whole year. The use of such data to estimate consumption would therefore be unwise. It is data which might be of interest when considering results from a properly set up study but otherwise it has the potential to be misleading.

It was suggested however that as little consumption data is available and the BASC data included a large number of respondents it could be useful as long as it is interpreted in context and that its limitations are clearly stated.

5.16 It was asked whether the Group could see the FSA study protocol. FSA explained that it is not usual to publish this. So it was further asked if someone could present to the Group on the study in order that comments could be made to the future contractor. It was explained that it might be possible to do something of this nature but FSA could not agree to this when the contract has not been fully decided upon. FSA agreed to look into this.

6. Progress report of the PE subgroup. (LL etc.)

6.1 There were three documents circulated. The first one for discussion was the revised Terms of Reference (ToR) for the Primary Evidence Subgroup (PESG).

6.2 Terms of Reference

It was explained that essentially the PESG is trying to collect data across the three defined areas for the purpose of risk assessment. The PESG discussed how they were going to look and consider papers and the ToR give background to the methodology so that outside observers can see the approach being taken especially concerning the quality and origin of the referenced sources. It was accepted that there may be areas where further independent advice is needed and that if so then this will be called upon.

Action Point: Insert ToR into the title.

6.3 It was raised that the ToR does not include looking at alternatives to lead and that this exclusion was included in the Group's main ToR. It was explained that considering alternatives might be a second phase exercise should the first phase identify the need. This might be a risk assessment of a management option the need for which has not yet been demonstrated. It was also raised that if looking at alternatives there will be other factors that go beyond wildlife and food consideration such as ricochet/ballistics which will require further research.

6.4 The Group agreed the ToR and their publication on the website subject to the insertion of "ToR" into the title of the document.

Action 4.3 Publish the PESG ToR on the website.

6.5 List of references

The PESG have collected the current list of references. All the research referred to is now available to the PESG. It was suggested that the circulated list is not quite complete. Under the risk to wildfowl there should be a reference to research on compliance with the Lead Shot Regulations and it was proposed that this is included in order to assess any continuing risk to wildfowl. However the PESG had not fully agreed on this as non-compliance with the current regulations is beyond the ToR for the whole Group.

6.6 In that light it was proposed to the Group that such compliance research is included. The Chair posed the question that as this is an evidence base which relates to the risk to wildlife and human health so should compliance which has not yet been quantified as a risk, be included?

6.7 It was noted that the most recent compliance study on the lead shot regulations is due to be published at the beginning of November.

6.8 It was suggested that the rationale for including it would be that the government has decided that there is a significant risk to wildfowl so legislation has been introduced to deal with this risk. If there is non-compliance as evidenced by a report in 2002 that showed there was still shooting of wildfowl using lead shot it is possible that a risk remains. It had been agreed that re-assessing all the literature that had given rise to the existing lead regulations would not be a good use of time.

6.9 It was agreed that the following wording be included within the list of references:

“Assessments of compliance with the regulations in England have been undertaken including a recent assessment commissioned by Defra. Publication of that report is imminent and will be included in the evaluation of ongoing risks to wildfowl.”

6.10 It was asked whether there was reference to the relevant legislation. It was explained that the relevant legislation (which is the document being put together by Defra/TA see above) will be included on the website so it was felt unnecessary to include it here within the list of references.

6.11 It was suggested that a disclaimer should be attached to the list of references to explain that this is “a list of publications and reports being considered as primary evidence”.

6.12 The Group agreed that the list of references being considered as the primary evidence be published on the website subject to the above amendments and noting that other references may be included in the future.

Action 4.4: Reference list to be amended and published on the website.

6.10 Proposal for the risk assessment process

A draft paper outlining the proposed risk assessment procedure produced by the PESG had been circulated to the Group in advance of the meeting.

6.11 It was explained that risk assessment is not the same as risk management and the proposed approach is a basic framework which would be generally accepted by experts carrying out a risk assessment on chemicals. The background to the document was briefly explained to the Group. If the Group wishes the PESG to lead on the risk assessment this document proposes how they would go about it

6.12 The four steps identified for the risk assessment in basic terms are: what is the harm? What level of this substance poses this harm? What is the exposure of the substance? What is the likelihood of the harm occurring?

6.13 It was accepted that the EFSA report looks at Europe but that this whole process is to look specifically at the UK. The risk assessment will become more detailed with the inclusion of matrices as it develops. It was suggested and agreed that it would be useful to align the findings of the assessment with the findings of the EFSA report.

6.14 It was asked how the FSA Scottish study will blend into the Group's work. It was noted this was discussed in the last meeting where the view was taken that the Group should continue with its work. It is not fully known when the Group's work should finish but it was accepted that there will be a confluence of the two studies at some point. It had been agreed that the Group should not slow down its work to await the FSA Scotland results but that it was agreed that conclusions should not be finalised until this work has been completed.

6.15 It was re-iterated that this is the reason it is so important to have the opportunity for the Group to contribute to the FSA Scotland's research protocol. The FSA agreed to look into this.

Action point 4.5 FSA to consider how the PESG may contribute the research protocol of FSA Scotland's game consumption research.

6.16 There was a query on the final sentence of the paper where it refers to data from non-UK countries. It was queried whether this is referring to lead in game and consumption of game rather than the epidemiological data. It was explained that this was worded to reflect that game is treated differently in different Member States. However the PESG would not want to dismiss the epidemiological data already available on the health effects.

6.17 It was agreed that the following wording would address this: "The evidence base will involve worldwide literature. However the purpose of the risk assessment is related to the situation in the UK and therefore data on exposure to lead from game from non-UK countries will be assessed carefully in terms of its applicability".

6.18 To put this into context it was explained that there had been concern from some of our constituencies on the use of irrelevant evidence and that the Group is on the brink of making decisions on evidence which is drawn from the different backgrounds of Member States which may treat game very differently.

6.19 The next steps would be to start undertaking the risk assessment along these lines. Then a draft of the findings would be put before the Group so that any gaps in the information can be identified and further steps considered. In order to do this the PESG will need to be expanded one of the reasons being the issue of workload.

6.17 The Chair invited thoughts on how the subgroup should be expanded. The possibilities of expanding the PESG were discussed. It was agreed in principle that the PESG needs to be expanded by not more than four to a maximum of eight people. We are looking to involve someone

with the relevant expertise from each of the deer sector and game sector in particular. Several names were put forward for consideration. Some skills would be prerequisite such as being experienced with risk assessment processes and able to understand the science. It was noted there are a number of meetings of key stakeholder groups where suggestions might be forthcoming. It was considered important that the risk assessment group is seen to be broadly based.

Action point 4.6 The current PESG is to consider suggestions and as a starting point ask those suggested if they might be prepared to do this work – especially from the deer and gamebird sectors. If so they are requested to provide the PESG with their technical backgrounds.

Action 4.7 Once the PESG has reached its conclusions on how to expand the PESG this should be shared with the main Group through correspondence including brief biographies and technical skills. The final decision would be considered by the main Group at the next meeting.

6.18 It was clarified that there is no funding for this activity. If it was feared that the best people for the job might be barred from attending due to funding this will be discussed at the next meeting.

7. Communications.

7.1 A small number of contacts have been received through the website but there were no significant communications to report.

8. Any other Business.

Nothing further to add.

9. Date of the next meeting.

9.1 The date of the next meeting was confirmed as 11.00 a.m. on 5 November 2010 to be held in Birmingham. [Post meeting note: John Batley has confirmed that the Birmingham proof House have extended an invitation for LAG to hold its 5th meeting at their premises.]

Summary of Action Points

Action point 4.1 Dr Benford to provide a short introduction to her presentation for publication on the website.

Action point 4.2 Publish Dr Benford’s presentation on the website and if there are questions received via the website they will be passed to the most appropriate member(s) of the Group for a concise response.

Action point 4.3 Publish the PESG ToR on the website.

Action 4.4: Reference list to be amended and published on the website.

Action point 4.5 FSA to consider how the PESG may contribute the research protocol of FSA Scotland's game consumption research.

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Action points carried over from previous meetings:

Action 2.6 John Batley to circulate a proposal with draft terms of reference for his proposed subgroup.

Action ongoing.

Action 2.7 Defra to pull together all the regulations, guidelines and Directives which are relevant to the Lead Ammunition Group. A draft has been circulated for comment to be discussed at the next meeting. Group members have been invited to comment on the draft in the meantime.

Action 2.12 TA to amend Gantt chart for sign off at next meeting

Action not yet complete. To be completed for the next meeting.