

CAP 772 Birdstrike Risk Management for Aerodromes
External Consultation – Comment Log

Safety and Airspace Regulation Group
Intelligence Strategy & Policy (Aerodromes)
Consultation: CAP 772 Aerodrome Wildlife Strike Hazard Management and Reduction
Consultation Period: 1 October – 26 November 2013

Comment Response Document
Summary

1 This document contains the CAA's response to comments received in respect of the CAP 772 Amendment consultation which ran for the duration 1 October to 26 November 2013. It contains responses to all sections of the consultation.

2 A total of 250 comments were received from the following organisations:

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|------------------------------------|--------------------------------------|
| 1. Heathrow Airport | 9. Guernsey Airport Ltd |
| 2. Gatwick Airport | 10. Airfield Wildlife Management Ltd |
| 3. Luton Airport | 11. Cobham Safety Assurance |
| 4. Highlands & Islands Airport Ltd | 12. Aerodrome Habitat Engineering |
| 5. Belfast International Airport | 13. Natural England |
| 6. Bristol Airport | 14. RSPB |
| 7. Glasgow Prestwick Airport | 15. Mineral Products Association |
| 8. Jersey Airport | |

Chapter/ Section/ Paragraph	Comment	CAA Comment	CAA Response
General	<p>In addition to the requirements of CAP 772 being in common sense terms onerous, unnecessary, impractical and unreasonable for the activities of a small or even mid-sized aerodrome.</p> <p>And in addition to the fact that engine failure as result of a bird-strike is primarily a risk faced by jet aircraft and is not applicable to propeller aircraft.</p> <p>Please see below:</p> <p><i>“There are clearly many private aerodromes that are too small to justify the provision of bird/wildlife control to the levels described in this document. However, in the opinion of IBSC, these standards should apply to any aerodrome carrying regularly scheduled commercial air traffic, irrespective of the movement frequency or type of aircraft involved.”</i></p> <p><i>International Birdstrike Committee Recommended Practices No.1</i></p> <p>http://www.int-birdstrike.org/Standards_for_Aerodrome_bird_wildlife%20control.pdf</p> <p>As referenced in ICAO Airport Services Manual Part 3</p>	Partially Accepted	<p>The status of CAP - It's status is guidance material which adopts ICAO Standards and Recommended practices and also includes widely accepted best-practice as described by the International Birdstrike Committee.</p> <p>In partially accepting the comment, the CAA has developed new guidance material aimed specifically at aerodrome operators of non commercial and public transport sites, to provide for a proportional and reasonable approach to wildlife hazard management.</p>

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	<p>As referenced in ICAO Annex 14 As referenced in CAP 772</p> <p>Given the sweeping declaration that the procedures outlined in CAP 772 do not need to apply to aerodromes which do not carry out regular 'scheduled commercial air traffic', do you not think that it would be prudent for the authors and distributors of CAP 772 to make this point clear so as to avoid the unnecessary confusion, expense and frustration that implementation of this document would otherwise entail.</p>		
General Points	<p>As well as management to minimise the hazards posed by bird and wildlife, we feel there is scope within this document to provide information on the potential to optimise, within operational constraints, the opportunities for management of land which would benefit wildlife both on-site and on sites near the airport. For example Stansted Airport has developed a Biodiversity Action Plan. An approach like this could serve to complement documents such as an aerodrome's Wildlife Hazard Management Plan.</p> <p>A proactive approach to delivering biodiversity benefits, whilst minimising risks, should be encouraged. A too tight focus on risks could have the effect of encouraging a scorched-earth approach.</p> <p>There is some useful detail in the sections on 13 km safeguarding zones but we feel that more could be said about the need to apply the policy with greater subtlety/proportionality in respect of the actual real risks associated with different types of habitat creation and the particulars of site design and the local landscape context. The legitimacy of habitat creation aspirations within safeguarding zones should be acknowledged and aerodrome operators encouraged to work with applicants to find solutions and avoid blanket bans or extreme precautionary approaches.</p>	Rejected	<p>The primary objective of this guidance material is to support the EASA Aerodrome Regulations surrounding Wildlife strike hazard management, address the risk to flight safety posed by birds and or wildlife on and in the vicinity of aerodromes (up to 13 km or beyond). The CAA considers that land-use optimisation and biodiversity matters to be beyond the regulatory scope of the CAA. We consider that aerodrome operators and non-aviation stakeholders should seek further advice and guidance on such matters from sources such as local planning authorities and environmental and conservation agencies.</p>
General Points	<p>The CAA's new publication duties (under the Civil Aviation Act 2012) provide an opportunity for aerodromes to report on the impacts of airport bird control activities and other aviation activities on bird populations and bird activity/movements, particularly where airports are located close to important wildlife sites designated for their bird interest.</p> <p>These activities, if carried out within the vicinity of such designated sites, may require an appropriate assessment of impacts or require assent from Natural England; monitoring data would be an important element of such assessments and decisions.</p>	Rejected	<p>CAA and EASA Aerodrome licensing requirements, and the Air Navigation Order do not require Aerodrome licensees (or Certificate holders) to notify the CAA of bird control duties (on or off aerodrome) where sites are close to wildlife sites designated for bird interests or protection. In relation to the licensing and oversight of aerodromes, the CAA does not require sight of environmental impact assessments.</p>
General	<p>Our comments reflect the discussions at a recent event (19 November) that the MPA held involving representatives of the minerals industry, CAA, airport operators, MoD, minerals planning authorities, and NGO's.</p>	Noted	<p>No response required.</p>
General	<p>A contents page would be helpful.</p>	Accepted	<p>A contents page shall be provided.</p>
Lasers – general comment	<p>The CAA should consider using the template of laser safety areas employed by Southampton Airport as best practice for other ALHs to use.</p>	Accepted	<p>CAA shall incorporate further details on lasers, based on the trials conducted by FERA and experience gained from Southampton airport.</p> <p>CAA does not consider it necessary to provide an airport safety map. It is the responsibility of respective aerodrome operators to consider and develop airfield maps to airside personnel as they deem necessary.</p>
Throughout	<p>The term 'wildlife' is mentioned repeatedly instead of 'hazardous wildlife' – this guidance needs to be clear, for both on and off aerodrome, that measures are required to reduce wildlife likely to present a hazard to aircraft, not wildlife in general. In addition it is very important to keep reiterating that the killing of wild birds and destruction of their nests and eggs can only be done under licence. The additional requirements for Schedule 1 and protected sites' species must also be elaborated, thus ensuring that operators are clear on all possible legislative requirements when creating their Wildlife Hazard (or Bird) Control Management Plans (WHCMP/BCMP) for on and off aerodrome measures.</p>	Noted	<p>In aligning the phraseology used in this document to that from ICAO and EASA, the term 'Wildlife' means Birds and Animals. Where we deem it more appropriate, we use the term 'birdstrike(s)' as the vernacular.</p> <p>CAA is aware of the provisions of the Class Licence issued by Natural England and nature agencies of the devolved governments permitting aerodrome managers and their representatives to use lethal methods to control wildlife on and in the vicinity of an aerodrome.</p> <p>CAA believes it is incumbent on users of a Class Licence (and its equivalent at the regional devolved governments) to be fully aware of the legal implications, constraints and caveats. We believe this is adequately emphasised within the document.</p>
Throughout	<p>References are made intermittently throughout the document to 'control', 'active wildlife control' and 'active control programmes'. The contexts within which they are used suggest they may be interchangeable, but some readers may consider 'active control' to imply lethal control, which does not appear to be the intention in some instances (e.g. paragraphs 5.63, 7.17 etc.). It would be helpful if these terms can be defined at the start of the document and used consistently and appropriately from then on.</p>	Accepted	<p>The text has been amended to provide explanation concerning what is meant by the terms 'Active' and 'Passive' in the context of 'on aerodrome' wildlife/bird hazard control activities.</p>

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Throughout	It is not always clear when the guidance is applying to action operators should be taking on the aerodrome itself or 'within the vicinity'. Better (and more consistent) separation of on and off airfield circumstances would be helpful.	Accepted	Where deemed appropriate, the text has been amended and annotated to provide actions and controls that might be taken on and off aerodrome.
Page 5	The paragraph which states: <i>"To meet these needs, as detailed in CAP 168 a Wildlife Hazard (or Bird) Control Management Plan (WHCMP or BCMP) should be developed in order....."</i> This does not reflect what the current CAP168 states.	Accepted	CAP 168 has been amended and, where applicable, reflects use of the term "Wildlife", mirroring ICAO and EASA phraseology.
1	No comment	Noted	No response required
Chap 1 General	There are several references to Natural England requirements and it is not always clear whether these are to be followed or taken into account if they are not contained in the geographical area guidance.	Accepted	In this regard, the document shall be amended to reflect the geographical regions of the UK, noting the devolved governmental departments/ agencies equivalent to Natural England. It is incumbent upon the reader to understand the legislation applicable to their locality.
1.1	CAP 168 does not 'enact' ICAO 'alongside' EASA. CAP 168 was written before any EASA documents.	Noted	CAP 168 adopts the Standards and Recommended Practices from ICAO Annex 14. EASA Aerodrome Regulations largely follow Annex 14. For those aerodromes within scope of EASA Regulations, CAP 168 is superseded by the EASA ADR Rules, Acceptable Means of Compliance. CAP 772 has the status of supplementary Guidance Material.
Chapter 1, paragraph 1.2	Point 3 states that evaluation of the wildlife hazard must be carried out by "competent personnel". This term is used elsewhere (e.g. see 1.8 point 5 where the terms both "competent" and "trained" are used). There is no definition regarding the term 'competent'. What makes someone "competent" to evaluate the wildlife hazard? What training is required over and above normal wildlife control training/experience? This needs to be clearly defined.	Accepted	A definition of what is meant by 'competent' has now been provided in the document. EASA regulation requires that an aerodrome operator shall ensure that operational personnel have demonstrated their capabilities in the performance of their assigned duties through proficiency check(s) at adequate intervals to ensure continued competence.
1.6	At the end of the final sentence, insert ' <i>and are compliant with wildlife protection legislation.</i> ' Aerodrome operators may indeed choose to deviate from the recommended methods, but they will still need to ensure that their activities are legal.	Accepted	Text has been amended.
1.8.2	We feel that the wording of the instruction ' Reduce wildlife and wildlife infestations ' [emphasis added] is inappropriate and should be altered. Wildlife strike management should be targeted towards those species likely to present a hazard to aircraft – not wildlife in general. 'Infestations' has unwelcome connotations and is not appropriate for use in relation to wildlife.	Accepted	Text has been amended.
1.9	Wildlife strike risk management has nothing to do with safety management culture. Yes it should be covered by the SMS but the word 'culture' does not belong here.	Accepted	Text has been amended.
1.11	Part of this statement is incorrect: Natural England doesn't provide the rules which apply in England. The 'rules' are made by legislation, which is set by Parliament. It is the differences between legislation set by devolved administrations that create differences between countries of the UK	Accepted	Text has been amended.
1.11	Those engaged in implementing WHCMP/BCMPs need to be fully aware of their obligations under wildlife protection legislation. To aid understanding of the law as it applies to licensing of lethal control, it would be helpful to outline in this paragraph the five general principles of licensing (as listed by Natural England at http://www.naturalengland.org.uk/ourwork/regulation/wildlife/policyandlegislation/authoritytoissuelicences.aspx . (The relevant licensing authorities in Northern Ireland, Scotland and Wales should be consulted to ensure the appropriate equivalent is presented for these countries). In England, a licence will be issued when: 1. There is a genuine problem to resolve or need to satisfy for which a licensing purpose is applicable; 2. There are no satisfactory alternatives; 3. The licensed action will contribute to resolving the problem or meeting the need; 4. The action to be licensed is proportionate to the scale of the problem or need; 5. The licensed action will not have an adverse effect on the favourable conservation status of any habitat type or species within its natural range. Where lethal control is covered in subsequent chapters (e.g. Chapter 5), reference should be made again to these	Accepted	Text has been amended.

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	principles.		
Introduction, page 6, Section 1.11	Natural England [http://www.naturalengland.org.uk/] provides the rules which apply in England. Stakeholders in other parts of the UK must similarly ensure they are familiar with their equivalent regulations and any restrictions that apply to wildlife and bird activities including any legal provisions and considerations for wildlife control on and around airports. The introduction should include comprehensive references to assist Scottish, Welsh and Northern Irish airports as well English airports. There are numerous references to Natural England but very few links to other UK equivalents. Some web links are provided in later sections so this should be included throughout the document.	Accepted	Text has been added to provide the appropriate links to Scottish, Welsh and Northern Ireland nature licensing agencies.
1.11	1.11 - Why not include the references to Scottish Government – a CAP applies to the UK not just England. We operate airports in Scotland.....	Accepted	See response to comment 188.
1.11 to 1.22	Please see suggested redraft of these sections in Appendix 1 of this document.	Noted	Appendix 1 has been revised. No further response required.
1.11-1.23 (and throughout)	As CAP 772 applies to all four countries of the UK, it is important that it reflects accurately the devolved nature of legislation and policy in those countries. The draft text currently fails to achieve this, and – inexplicably – focuses almost exclusively on the law and licensing system in England, with just fleeting reference to ‘the equivalent licences’ in Scotland, Wales and Northern Ireland. This renders this aspect of the guidance useless for aerodrome operators in those countries. If the relevant country agencies are not already consultees, they should be approached to provide appropriate wording to cover their country-specific requirements. Those engaged in implementing WHCMP/BCMPs need to be fully aware of their obligations under the relevant wildlife protection legislation. With regards class and general licences, it should be noted that these are subject to change – the CAA will need to ensure that the guidance continues to reflect the most up-to-date licensing strategies (e.g. through the provision of web links to the licensing authorities’ websites). It should also be noted that the relevant legislation in England and Wales is under review at present (by the Law Commission) so the CAA should be mindful that this guidance may need updating again upon arrival of new species protection legislation in these countries.	Accepted	See response to comment 116. CAA is aware of the review by the Law Commission and was invited to engage in pre-consultation discussions with the Commission. CAA does not propose to replicate any content from other relevant legislation, but merely signpost to it, noting that it is incumbent on users of this Guidance Material to understand the laws applicable to their location.
1.12	1.12 - Content in para 1.15 repeats – only needed once.	Accepted	Text has been amended.
1.13	The second sentence of this paragraph is incomplete. The applicability of ‘vicarious liability’ in Scotland is only mentioned once and in the context of this guidance it needs to be clarified and explained in detail to ensure that operators understand if and how it applies to them.	Accepted	Paragraph shall be amended to complete.
Chapter 1, 1.14	<i>1.14 – ‘Class’ licences are issued for a range of activities, including preserving air safety. Natural England is the agency responsible for the management and policy of these licences in England.</i> No mention of specific licences required for those species not covered by the class licence.	Accepted	Text has been amended.
1.14	Part of this statement is again incorrect: Natural England is responsible for the issue of licences (including Class Licences) in England, it is not responsible for policy – Defra is responsible for policy in England.	Accepted	Text has been amended.
Chapter 1 Section 1.16	In Scotland the equivalent licences may be obtained from Scottish Natural Heritage snh.gov.uk .	Accepted	References to SNH have been included.
1.16	Scottish Natural Heritage (SNH) is now responsible for species licensing in Scotland.	Accepted	See response to comment 115.
1.17	Check who now issues such licences in Wales – I think it is now all done by Natural Resources Wales.	Accepted	Reference to the appropriate licensing authority in Wales (Natural Resource Wales) has been included.
1.17	In Wales, Natural Resources Wales now issues all species licences under the Wildlife and Countryside Act 1981 and Conservation of Habitats and Species Regulations 2010 (European protected species licences).	Accepted	See response to comment 74.
1.20	It is not just NE that needs to consider the impact of licensed activity or wildlife control in relation to protected sites – each licence issuing authority has a duty to do this – NE, SNH, NRW or NIEA	Accepted	Text has been added to provide the appropriate links to Scottish, Welsh and Northern Ireland nature licensing agencies.
1.20 and 1.21	We feel it should be made clear that any sites with a statutory designation may require consultation – and state that SSSI/SPA/SCA/Natura 2000 (N2K) and RAMSAR are included in this.	Accepted	Paragraphs shall be amended.
1.21	Ramsar sites are protected under the Habitats Regulations 2010 on policy grounds. In England, this is set out in paragraph 119 of the National Planning Policy Framework. In addition, potential Ramsar sites, SACs, SPAs and	Accepted	The Paragraph has been amended, with reference to the legal framework provided.

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	<p>sites created or identified for creation as compensation for damage to SPAs/SACs are also protected as if they were fully designated sites.</p> <p>The final sentence 'However, air safety must not be compromised' needs to be explained in the context of the legal requirements - e.g. the requirements of mitigation and/or compensation measures should be mentioned in relation to any harm done to the protected sites due to the WHCMP/BCMPs.</p> <p>Also, as per previous comments, this paragraph must refer to the legal framework and statutory nature conservation bodies in Northern Ireland, Scotland and Wales.</p>		
1.21, page 7	Inconsistent with the comment on page 10 to replace the BCMP with the WHCMP	Accepted	The term BCMP and WHMP shall be formalised and made consistent throughout the document, in line with EASA phraseology.
1.21	<p>Again, the reference to NE should be to the relevant authority for the country of activity (NE/SNH/NRW or NIEA)</p> <p>Any reference to Natural England (NE) should only be in relation to England; for Wales, Scotland and Northern Ireland the appropriate country agency/statutory nature conservation body should be referred to. If colleagues in these countries haven't responded to this consultation then we suggest that contact is made with them to ensure that information given is correct.</p>	Accepted	Text shall be added to provide the appropriate links to Scottish, Welsh and Northern Irish nature licensing agencies.
1.22	If an activity is likely to impact on a protected site then the statutory authority (NE/SNH/NRW/NIEA) should be consulted.	Accepted	Text shall be added to provide the appropriate links to Scottish, Welsh and Northern Irish nature licensing agencies.
1.22	We suggest that in addition to making contact with the CAA, the relevant statutory nature conservation body should also be contacted e.g. NE, SNH, NRW and contact details should be provided to assist operators in contacting these organisations.	Accepted	Paragraph shall be amended, reference to the legal framework shall be provided.
Chapter 1, 1.22	<p><i>1.22 – Some aerodromes may not be located immediately adjacent to designated sites but may have designated sites within their 13 km bird 'safeguarding' area. Aerodrome licence holders should make contact with the CAA, as appropriate, to confirm the locations of these sites and discuss the implications of any wider wildlife management activities that may impact on any species designated at these sites.</i></p> <p>Is the consultation with the CAA? The CAA would then expect the ALH to approach the site in question or discuss with the designated bird hazard consultant employed by the ALH. Not sure of the value of confirming locations with the CAA. Surely producing the 13 km bird map and an offsite BHMP is all that the CAA would wish to see evidence of?</p>	Accepted	See comment to item 134.
1.22	1.22 - Is the CAA offering a proactive safeguarding role here? I am not quite clear what CAA is offering.	Accepted	The paragraph has been amended to make clearer the role of the CAA, as appropriate.
1.23	Again, ensure that equivalents for Northern Ireland, Scotland and Wales are provided here as there are different legal frameworks operating in each country.	Accepted	Text shall be added to provide the appropriate links to Scottish, Welsh and Northern Ireland nature licensing agencies.
2.4 - 2.11	<p>If the following text is not included in the introduction alongside the other environmental information, we feel it should be included in this chapter:</p> <p>'WHCMPs and activities carried out in accordance with them are subject to the Wildlife and Countryside Act 1981 (as amended), Countryside and Rights of Way Act 2000 and the Habitats Regulations 2010 (as amended). Airport activities carried out in accordance with WHCMPs that could impact on a Site of Special Scientific Interest (SSSI) or protected species may require assent or licensing following consultation with Natural England. The WHCMP may also require an appropriate assessment if the activities are likely to have a significant effect on a Natura 2000 site.</p> <p>Airports operating adjacent to or in proximity to nature conservation sites with international designations should discuss any revision to their WHCMP with Natural England at the earliest opportunity to ensure the WHCMP and activities carried out in accordance with the WHCMP meet the requirements of the relevant environmental legislation.'</p>	Accepted	The suggested text has been incorporated.
2.5	2.5 - I don't think it is correct to say a WHCMP is THE acceptable means of compliance within the EASA rules. Also the AMCs have not yet been finally published by EASA.	Accepted	The text has been amended.
2.6	<p>Reference is made to <i>large, flocking birds and waterfowl</i> – a minor point but waterfowl are birds, so we recommend the phrase used later in the guidance (at 4.2), <i>flocking birds and larger heavier species</i>, is used throughout as a more accurate description of hazardous birds.</p> <p>The specific reference to gull colonies and rookeries in the context of habitat types needs to be clarified.</p>	Accepted	The text has been amended.

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2.7	Add Viii) Dispersal actions during the hours of darkness where the use of accepted forms of dispersal could be perceived as unacceptable as it cannot be seen or predicted where birds may move too or where you may be dispersing birds from.	Accepted	The suggested text has been incorporated.
2.7	Part 3iii – this should also capture the need to ensure compliance with licence conditions (e.g. reporting on numbers killed/taken at the end of the licence period) and should be referenced within Part 2 to ensure that once risk assessments are carried out and measures put forward, any permissions/consents/licences required for the measures are sought.	Noted	No comment required.
2.7.1	2.7.1 - All these things do not need to be done by one person. They need to be done, but not necessarily by the same person.	Accepted	The text has been amended.
2.7, 3, ii	<i>ii) dispersal and control measures to be used to reduce wildlife activity on the aerodrome: these should include the means to ensure species, whether resident or visiting, do not habituate on the aerodrome;</i> Doesn't a resident bird species suggest that habituation has already occurred? Suggest this sentence could read: the means to ensure species do not habituate on the aerodrome;	Accepted	The text has been amended.
2.8	2.8 - Presumably the reference to Chapter 3 should be to Chapter 4 or 5?	Accepted	The text has been amended.
2.9	Should the heading read 'Implementation of Wildlife Safeguarding Systems'?	Accepted	The text has been amended.
2.9	We do not agree with the notion that safeguarding systems are employed 'in order to minimise the attraction to wildlife' beyond the boundary of the aerodrome. The aim of managing wildlife strike risk in the environment surrounding an aerodrome should be to minimise attractions to wildlife likely to present a hazard to aircraft. Action need only be targeted to particular sites and species, and may depend on the time of year. The primary aim of safeguarding is to guard against new or increased hazards caused by development and anything that does not represent an increase in hazardous species is not subject to safeguarding.	Accepted	Amended.
2.11	Monitoring data should also be shared more widely so relevant organisations can understand any issues, e.g. the local planning authority, to assist with the safeguarding policy, and/or the relevant licensing body.	Noted	No comment.
Chapter 3 Roles and Responsibilities	If the following text is not included in the introduction alongside the other environmental information, we feel it should be included in this chapter: "Airport operators who qualify as statutory undertakers within the meaning of Part V of the Airports Act 1986 are also „competent authorities“ under the Habitats Regulations 2010 (as amended). These operators have a duty to have regard to the requirements of the Habitats Directive and section 61 (appropriate assessment) of the 2010 Regulations. As statutory undertakers, airport operators are also a s28G authority under the Wildlife and Countryside Act 1981 and as such have a number of duties, including the duty to exercise functions to further conservation and enhancement. Airport operators should ensure they understand these duties and consider ways in which they can be delivered in the exercise of their functions, including bird control planning and implementation and other airport operations. When aerodromes need to consider undertaking an assessment of the impacts of the bird control program with regard to Natura 2000, they need to be aware that there may be a need to undertake additional survey effort to inform an appropriate assessment. Early engagement and consultation with the relevant nature conservation body will be extremely useful for all licensing and protected sites considerations."	Rejected	CAA does not consider the proposed text to be relevant to the purpose of this document in providing guidance to assist with implementation the means of compliance proposed by EASA to meet with the Wildlife Hazard Rules.
Chapter 3 section 3.2 Bird Control Manager / Co- ordinator	I think the BC co-ordinator has wide ranging responsibility on behalf of the aerodrome outlined in the core essential requirements however this position is not competence checked for overall understanding of the requirements of the role.	Noted	1. A footnote has been provided in Chapter 1 which explains a broad definition of 'Competent Personnel' 2. Ultimately, it's for the aerodrome operator to determine the relevant and desired competencies, and how they might be demonstrated.
3.2	Core responsibilities should also include the following text: "ensuring the preparation and implementation of the WHCMP complies with the relevant environmental legislation"	Noted	See comment above.
3.2/3.3/3.4	3.2/3.3/3.4 - The list of points in each section are similar – suggest amalgamate them into one new section.	Accepted	The list has been re-arranged and assimilated.
3.2.9	3.2.9 - Remove "demonstrate evidence" Reword to read "The core essential requirements are to:.....9 communicate information concerning the wildlife hazard within the aerodrome senior management...."	Accepted	The text has been amended.

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3/3.5/4	This paragraph states: “Recording and reporting all confirmed, unconfirmed and near-miss or suspected wildlife strikes, including suspected vortex strikes”. This is not reflected in the current reporting scheme as the Birdstrike Occurrence Form only allows for the reporting of Confirmed, Unconfirmed and Near Miss. Vortex would be a very useful category as it is responsible for many of the ‘pick ups’ on or in the vicinity of the runway.	Noted	Vortex strikes removed. However to remain consistent with internationally agreed standards, the CAA considers a Vortex strike to be considered as a strike. Ultimately however, it is obligatory for the reporter to accurately record the occurrence for trend monitoring and hazard management purposes, which is an intrinsic element of a mature SMS culture within the organisation.
3.3, page 14	Inconsistent use of the title “bird coordinator/manager” – should this read “Bird Control Manager/Coordinator”?	Accepted	The text has been amended.
3.3, para 2 page 14	Should read “ <u>and</u> long grass” not “ <u>or</u> long grass”?	Accepted	The text has been amended.
3.3	Include reference to the need for proactive engagement with applicants for planning permission where the proposed development may result in a change in risk, and the potential to design out or minimise risk through development design or operation e.g. operation and restoration of mineral extraction sites	Accepted	The text has been amended.
3 3.3	Add 12 provide the methods for staff to report and record activity and or occupancies.	Accepted	The text has been amended.
3.3	Part 7 – it is not clear what ‘game bird conservation’ is. We suggest that ‘game bird and conservation management’ is included instead. In addition, we would recommend discussions are held with local nature reserve managers/owners to assist the safeguarding process.	Accepted	The text has been amended.
3.3	3.3 - What are “the following tasks” ? Is this a sentence talking about what should be done or how to do them?	Noted	The entire section has been reworded and reorganised.
Chapter 3, 3.3	3.3 - <i>The bird coordinator/manager should ensure the following tasks are effectively fulfilled by:...</i> No mention of best practice of consulting with local pigeon fanciers through the Royal Pigeon Racing Association.	Accepted	The entire section has been reworded and reorganised.
Chapter 3, 3.3	3.3 – <i>5. regular surveys of wildlife concentrations and movements of wildlife in the local area (up to or beyond 13 km as determined by local management policies);</i> Definition of what ‘regular’ means.	Accepted	The entire section has been reworded and reorganised.
Chapter 3 Roles & responsibilities Para 3.4	Addition to sub paragraph 8 list: Aerodrome planning, development, engineering departments. Reason: Costly mistakes & decisions have been made at planning & during development stages which has caused an increased Birdstrike risk, which could have been avoided with brief consultation with the Wildlife / Bird Hazard control organisation at the early planning stage	Accepted	The entire section has been reworded and reorganised.
3.4, page 15	Should be consistent with the reference “Bird/wildlife” in the body of this new CAP document. Should this read just “Wildlife” – drop the bird?	Accepted	We will use consistent phraseology throughout the document to avoid confusion.
3.5, para 5, page 16	Should read Aerodrome licence holder as well as the accountable manager as per 4.2 on page 19?	Accepted	The text has been amended.
Chapter 3 Record keeping Para 3.6	Addition to list insert as number 11, Attraction Reason: Linked to Intelligence gathering, this will highlight any reoccurring attractions which have increases bird activity on & off the airfield, which will support rectification & other actions.	Accepted	The text has been amended.
3.6 para 1 page 17,	Should “Wildlife/Bird Control Officer” read “Wildlife/Bird Coordinator”? Also need to be consistent with the title “Wildlife coordinator” there are numerous references to “wildlife controller’s” through the document.	Accepted	We will use consistent phraseology throughout the document to avoid confusion.
3 3.7	Logging activity every 15 minutes will detract from the role with the emphasis being on recording rather than dispersal. Aerodromes should be permitted to set their own parameters in line with the Aircraft and bird activity at the airfield	Noted	CAA considers logging ‘at least’ every 30 minutes to be best practice, as advocated by the International Birdstrike Committee and described in the ‘Recommended Practices – Standards for Aerodrome Bird/Wildlife Control’. However, ultimately, is it for Aerodrome Managers to determine the frequency needs, based upon traffic levels, resources, hazard and risk; the CAA is not prescriptive in the matter.
Chap 3 para 3.7	Recommending <i>a record inputted into the log at least every 30 minutes (even if no active observations made) and as best practice should be reduced to every 15 minutes</i> -conflicts with 15 minutes before each landing each take-off. This could be considered as excessive particularly where there are very low levels of air traffic movements ie 2 rotations per day.	Noted	See above comment
3 3.8	As 3.7 above Should 15minute recording not be possible Aerodromes could be deemed to have failed in their	Noted	See above comment.

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Chapter/ Section/ Paragraph	Comment	CAA Comment	CAA Response
	obligation.		
4	Good change. Well written and easier to understand	Noted	No comment.
Chap 4 General	Risk Identification – OK covered by risk assessments and 13km surveys	Noted	No comment.
4.3	We welcome the detailed requirement of baseline information as this will assist in the determination of measures that will be required as well as measures that <i>may</i> be required, thus ensuring that a detailed assessment can be carried out. However, we would recommend that reference is made to the 13km safeguarding area within this paragraph and reference made to paragraph 4.14 where more detail is provided for the required 13km surveys.	Noted	No comment.
4.3	4.3 - "The background level that would occur in the absence of control measures should be determined" – this is not possible without withdrawing bird control and allowing operations to continue which is not good aviation safety. This is a theoretical statement...	Noted	Theoretical comment noted.
Figure 1 (page 21)	<p>We recommend that the further detail behind this matrix is provided at least in summary here. Without it, this appears to be a rather blunt tool, given that incidents of high probability and low severity are considered as great a risk as incidents of high probability and very high severity and may leave the reader unclear as to how exactly it is to be used.</p> <p>For example, risk assessment techniques need to have assigned strike frequencies to the different levels and the methodology used. As the guidance goes on to recognise in Figure 2, the average number of strikes per year for each probability category are: Very Low 0 – 0.2, Low 0.3 – 0.9, Moderate 1.0 – 2.9, High 3.0-10.0, Very High >10.0. This needs to be linked to the matrix above.</p> <p>In addition there are factors that need to be taken into account e.g. size/weight of the species and flocking behaviour (risk of multiple strikes) are combined to produce a measure of the likely severity of a strike with that species which is expressed as 'risk of damage' on the vertical axis of the risk matrix. The following also need to be also considered: behaviour on aerodromes, local population levels and distribution, including their occurrence on the airport (WeBS, ornithological surveys, bird control records, observations), flight line or other over flight activity, and birdstrike records. These factors are combined to produce an estimate of 'expected strike frequency' which is the horizontal axis in the risk assessment matrix.</p>	Noted	The basis for the techniques on risk assessment are derived from a peer-reviewed paper written by Dr John Allan, titled "A Heuristic Risk Assessment Technique for Birdstrike Management at Airports" published in 2006. The CAA currently accepts this methodology as best-practice, and advocates it use.
Figure 2 (page 22)	It is not clear what the figures in this table represent. Is it based on the average number of strikes per year (with any species) for all UK aerodromes combined? This should be clarified in the text.	Accepted	The text has been amended.
Figure 4 (page 22)	It is not clear how the 'damage percentage' is defined and determined. Does it represent the proportion of strikes involving each species which caused damage between 1991-2011? This should be clarified in the text. The table could otherwise be interpreted to imply that a lapwing causes greater damage than a woodpigeon, which would be surprising given that woodpigeons are significantly heavier birds.	Noted	CAA has clarified this, and is advised that strikes by lapwing have historically resulted in a greater number of damaging strike occurrences, largely due to their dense flocking behaviour.
4.4	4.4 (page 21 – there are two paras numbered 4.4) - This is a very general paragraph and is not strictly true. The busy airports may not need more resources. It depends on the bird presence and the flight lines and bird behaviour – this statement is too general.	Accepted	The text has been amended.
Chapter 4, Risk Identification Section 4.4, 5	<p><i>the determination of the acceptability of the level of risk by summing the probability and severity, based on a probability/severity matrix, such as that illustrated in Figure 1 (where the colours red, yellow and green depict unacceptable, marginal and acceptable risks);</i></p> <p>The use of acceptable and unacceptable risk may lead to misconceptions about the Aerodrome Operators policy or intent regarding dealing with particular bird species. E.g. if black-headed gull is assessed as 'acceptable' risk, this may suggest that the presence of this species on the airfield is acceptable.</p>	Noted	CAA is currently working on new initiatives describing new methods for determining and assessing risk. The risk assessment methodology described in this document may be subject to change in the future.
4.4.5	<p>4.4.5 (page 20) - I do not think the word "unacceptable" should be used. It is not used in the FERA/BML risk assessment we use. Given the matrix there can be species that are in the "top" category and there are not always things to do to reduce this to a level 2. The definitions used here should be the same as those most airports use in their risk assessment.</p> <p>It is not good risk assessment practise to continue operations if you have defined something as "an unacceptable risk" and hence this term does not portray the right meaning.</p>	Accepted	The text has been amended.
Chapter 4 Severity of strike Para 4.6	<p>Consider changing severity rating to very High.</p> <p>Reason: Potential when flocking to cause severe damage this species has had a history linked to fatal incidents & hull losses over the decades.</p>	Rejected	The risk assessment criterion is based upon the peer-reviewed Wildlife Hazard Risk Assessment Methodology paper, Allan 2006. The CAA accepts this as a best-practice methodology on the title subject. Details contained in the full document can be obtained from the internet; the CAA

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Chapter/ Section/ Paragraph	Comment	CAA Comment	CAA Response
Figure 4 Starling			does not intend to reproduce the text in it's entirely within the CAP.
Section 4. Figure 4	This is a main change to the risk assessment per species, which is set out very clearly in "Example list of species that could be struck and their damage Ratings". However this list is incomplete. Presumably the final document will publish a complete list?	Noted	The risk assessment criterion is based upon the peer-reviewed Wildlife Hazard Risk Assessment Methodology paper, Allan 2006. The CAA accepts this as a best-practice methodology on the title subject. Details contained in the full document can be obtained from the internet; the CAA does not intend to reproduce the text in it's entirely within the CAP.
4.7	4.7 - Just a check – is this upgrading of categories described here the same as that used by FERA/BML?	Noted	The risk assessment criterion is based upon the peer-reviewed Wildlife Hazard Risk Assessment Methodology paper, Allan 2006. The CAA accepts this as a best-practice methodology on the title subject. Details contained in the full document can be obtained from the internet; the CAA does not intend to reproduce the text in it's entirely within the CAP.
4.8	Figure 5, para 4.8 two occasions The correct title should be "moderate" not "medium".	Accepted	The text has been amended.
4.9	4.9 - We do not update the list of species and their risk categories following every occurrence. The risk assessment process was created to provide an annual report and check of longer term trends and is not used in a "real time" way. The reasons for this include managing a process in a complex shift working environment with many people involved. The bird controllers should know the risks each day and spending time altering these risk categories was not what this process was intended for.	Noted	The risk assessment criterion is based upon the peer-reviewed Wildlife Hazard Risk Assessment Methodology paper, Allan 2006. The CAA accepts this as a best-practice methodology on the title subject. Details contained in the full document can be obtained from the internet; the CAA does not intend to reproduce the text in it's entirely within the CAP.
4.11 – 4.17	The following text should be included in this section on intelligence gathering: "When aerodromes need to consider undertaking an assessment of the impacts of their WHCMP with regard to Natura 2000 sites, be aware that there may be a need to undertake additional survey effort to inform an appropriate assessment. Early engagement and consultation with Natural England will provide guidance on this."	Noted	CAA believes it is incumbent on aerodrome operators to be aware of the impacts and constraints concerning such conservation sites. The suggested text has not been incorporated.
4.11	This paragraph should emphasise the importance of objective data collection using standard methods, as information provided by local landowners and land users <i>ad hoc</i> may otherwise be of limited value.	Noted	CAA agrees with this statement.
4.14	To support objectivity, it may be more helpful to provide a standard methodology and downloadable recording form for off-airfield surveys. Guidance on the frequency with which such surveys should be undertaken would be important and should be provided, as should the inclusion of survey methodologies in personnel training programmes (covered in Chapter 8). Some of the information requires specialist surveyors and techniques e.g. flight lines to ensure accurate data is collected – this should be highlighted and strongly recommended. We also repeat the comments made on 4.11 above and again discussions with local nature reserve owners/managers should be encouraged.	Rejected	Although we concur regarding the importance of gathering intelligence, neither CAA nor EASA prescribe the method in which intelligence should be gathered, for either on or off airfield surveys. CAA believes this is for the aerodrome operator to determine and manage accordingly.
4.14	4.14 - First part "Each wildlife attractant habitat" is too onerous – there are thousands of habitats in any area. We may not assess "each" habitat but what is important is to identify those that are important.	Accepted	The text has been amended.
4.15	Welcome the encouragement of a proportionate and bespoke (and pragmatic) approach to assessments of off-aerodrome risk	Noted	No further comment.
4.16	4.16 - This para seems out of place here?	Noted	The text has been deleted.
4.17	It is our understanding that training airfields are more vulnerable to birdstrike, due to the aircraft doing more take-offs and landings and spending longer in close proximity to the airfield. We are therefore unclear why it is mentioned that a lesser safeguarding area may be applicable to these airfields.	Noted	CAA does not agree with the first part of this statement, and CAA birdstrike data does not justify the claim. Moreover, the CAA is committed to introducing a more appropriate level of regulation for general aviation (GA), in line with its statutory duties to ensure the safety of those who are involved with aviation activities. To drive its new approach to GA regulation, the CAA is consulting on an overall policy for the sector that will be used as the basis for its decision-making when regulating the GA community. Further details can be found on the CAA website: CAP 1188 - GA Policy .
4.17	4.17 – appears to be very similar to para 4.15?	Accepted	The text has been amended.
4.19	Parts 2 and 3: delete the term 'weed' and replace with 'plant'.	Accepted	The text has been amended.
4.17 & 5.110	Support the flexible approach to use of the 13km radius for safeguarding. It should be acknowledged that the 13km radius is precautionary and based on historic angles of ascent and approach rather than those of modern aircraft.	Noted	No further comment.

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Chapter/ Section/ Paragraph	Comment	CAA Comment	CAA Response
Chapter 4 Food Para 4.19	Consider removal sub paragraph 6. Reason: Small birds are inevitable within the aerodrome environment especially Skylark, meadow pipit, Linnet, wheatear, etc, especially where a good long grass policy is in place (regardless of grass species) they do not respond to scaring techniques or habitat modification well, also do not present a serious Birdstrike risk. Predators such as Peregrine Sparrow hawk are not frequent visitors to airfields or struck frequently.	Accepted	The text has been amended.
4.19 para 7 page 27	Need to add “nut bearing species”	Accepted	The text has been amended.
4.20	Small mammals are an important prey item for kestrels and owls throughout the winter.	Accepted	The text has been amended.
4.21	May be worth clarifying that few bird <i>species</i> eat grass – those that do may congregate in large numbers. Woodpigeons will eat young grass.	Accepted	The text has been amended.
4.21	4.21 - Why mention a “short grass policy”? Is CAA advocating that? I thought the major deterrent at airports for gulls and corvids has been shown to be a long grass policy – this seems to open the door for a short grass airfield??	Noted	The status of the contents of this CAP is guidance, not a requirement. It is therefore for aerodrome operators to determine their airfield ‘grass’ policies and manage them accordingly in order to optimise grass as the ultimate bird deterrent.
4.22	4.22 - This para describes off aerodrome activities – in fields “close to” an airport and thus should be in the “off aerodrome” section 4.34 onwards.	Accepted	The text has been amended.
4.26 para 2 page 28	Need to add “nut bearing species”	Accepted	The text has been amended.
Chapter 4 Landscaping Para 4.28	Consider addition of Scots Pine to the attractive to birds list. Reason: This species has now shown to afford roosting nesting for Corvids & Wood Pigeons & should be removed from future planting schemes.	Accepted	The text has been amended.
4.29	It is important to keep reiterating that the killing of wild birds and destruction of their nests and eggs can only be done under licence. Amend first sentence to say ‘...and therefore access should enable <i>licensed</i> nest removal if necessary.’	Noted	We have noted and emphasised this elsewhere in the document.
Chapter 4 Landscaping Para 4.30	Consider addition to paragraph to include Green roofs. Reason: Green roofs have gained in popularity for landscaping & SUDS schemes to enhance the “Green” credentials of a planning scheme within airports or within 13km for new or existing buildings, they are attractive to Gulls & other species as roosts, feeding & nesting sites.	Accepted	The text has been amended.
4.30 page 29	This para should have its own heading of “Buildings and structures” and should be more detailed ie large areas of green, flat and shallow pitched roof structures. Also should consider on airport and off airport structures.	Accepted	The text has been amended.
Chapter 4 Water Para 4.31	Consider addition Reed beds. Reason: Reed beds have been incorporated into drainage & waste water management schemes on aerodromes for example Fire training areas. Poor & expensive enclosure management has led to reeds growing through netting tearing it & rendering it ineffective allowing wildlife to access the site.	Accepted	The text has been amended.
4.38 page 31	No mention of “on airport waste” control as per the original CAP 772 Chapter 3 page 4, para 4.2.4 Also no mention of recycling waste plants	Accepted	The text has been amended.
Page 32	Should there be a paragraph relating to off airport ground earthworks re management and control of such projects.	Noted	The section on landscaping refers.
4.33	It is important to keep reiterating that the killing of wild birds and destruction of their nests and eggs can only be done under licence.	Noted	We have noted and emphasised this elsewhere in the document.
4.35	It would be worth clarifying what is meant in terms of ‘very stable’ – starling roost sites in particular often move around during the course of a winter.	Accepted	The text has been amended.
4.36	Not all ecologists would concur with the generality stated in the first sentence of this paragraph. Some species probably roost colonially to be safer from predators. It is the spatial distribution of food that is important rather than food abundance <i>per se</i> . And some areas with abundant food supply may not be conducive to feeding e.g. regularly disturbed or lack of sight lines. It is important to keep reiterating that the killing of wild birds and destruction of their nests and eggs can only be done under licence.	Noted	We have noted and emphasised this elsewhere in the document.

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Chap 4 para 4.37	There is limited mention of coastal environments - this paragraph could be expanded considering the large numbers that are attracted to these areas e.g. fish eating birds, otters etc (similar to para 4.41 Reservoirs, Lakes & Ponds)	Accepted	The text has been amended.
Chapter 4: Landfills for food wastes Para 4.39	Consider addition of: Exposed / non enclosed waste transfer & compost facilities. Reason: Some waste transfer & compost facilities have open air holding areas for the waster prior to disposal allowing easy access to Gulls, Corvids, possibly in the future Red kites.	Partially Accepted	The text has been amended.
4.42	Add reference to the ability to design restoration schemes for minerals sites that deliver biodiversity and amenity benefits while reducing risk, through creation of appropriate habitats. Early engagement with applicants is essential to inform scheme design.	Rejected	This subject of risk identification is covered in Chapter 5.
5	It would be good for us, and perhaps the CAA also, to create a template for birdstrike reporting as part of CAP 772. This way we can be sure that we are aligned to your reporting needs and you standardised birdstrike reports. I should imagine that due to organisations already having databases/computer programmes that produce automated birdstrike reports that they might not want to adopt your 'recommended' template due to the work required to amend their current electronic format. Cobham however, would welcome a reporting template.	Rejected	Due to new EU Occurrence reporting regulations, the CAA's online reporting system is currently under review. Nevertheless, the CAA's standard reporting template includes reporting details as prescribed by ICAO.
Chapter 5 generally	The detailed measurements are very prescriptive and leaves little margins in the application	Noted	The entire chapter has been reviewed and simplified.
Chapter 5: Habitat Management	Consider addition of a chapter relating to Grass Aerodromes. Reason: A grass height greater than 100mm on grass aerodromes will affect aircraft performance; to avoid bird concentrations on the movement areas the grass length should be uniform over the whole surface of the aerodrome. References can be found relating to grass aerodromes in past CAA publications CAP 384 / 680.	Accepted	Guidance has been provided specifically aimed at general aviation aerodromes.
Chapter 5: Potential effect of grass on Navigational and visual aids.	Consider addition of the following; Historically grass has been kept shorter in these areas (100mm), however due to the close proximity of ILS critical areas to the runway where critical stages of approach, landing, take off place; it may have the potential increase the birdstrike risk. Where a proven Birdstrike risk exists on or near to these ILS critical areas due to the short grass, consideration should be given to an appropriately controlled trial with grass at higher levels to reduce the risk. Reason: Historically grass has been kept short to avoid signal drift even in the absence of reports by aircraft or warning from the systems. Modern systems appear to be more tolerant of long grass; our systems at BRS, along with some others at major UK airports are surrounded by 200mm long grass without any issues. Some aerodromes are continuing to cut grass well below the 200mm level in the absence of any credible historical or current evidence of signal drift caused by grass at higher levels.	Noted	The revised guidance provides specific information concerning grass height in the vicinity of Communication, Navigation and Surveillance equipment.
5	Would benefit if a section on night-time operations could be added. And the benefits of maintaining an airfield clear of birds during the hours of darkness. Se 2 2.7 Above	Accepted	The text has been amended.
5.2	We welcome the recognition that 'effective habitat management is the most important activity' and that 'habitat control [or management?] should be given priority and active control [see second comment above] only relied upon to reduce risk where features of the environment can be shown not to be providing an attraction.' We note however that these statements are at times undermined in subsequent chapters (see, for example, our comment on paragraph 5.103) and urge the CAA to ensure that this message is promoted consistently throughout the guidance.	Noted	No further comment.
Chapter 5 section 5.3, 5.6	I disagree with the inclusion of specific height of 150 to 200mm because if the aerodrome falls outside this specific measurement it is not following best practise. A wider parameter would be beneficial. I think that each grass area should be managed in such a way as to maximise their bird repellent qualities. This micro-management approach is preferred to an airfield-wide approach, as there are demonstrable differences across the airfield in both soil structure, chemical composition and grass species mixes.	Noted	In 1949, the RAF was advised to permit airfield grass to grow taller by biologists tasked with devising means of controlling the increasing birdstrike hazard. By the early 1990s, an LGP had become a major element in bird hazard control policy on most civil airports throughout the UK. Many years' experience have since accrued for the mechanisms by which longer grass deters birds, how it should be maintained and problems that can arise to reduce its effectiveness; the CAA therefore endorses and accepts an LGP as a good and effective method for reducing the hazard posed by certain bird species.

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			However, ultimately, aerodrome operators are required to demonstrate that where their airfield grass regime deviates from accepted good practice that there is no detrimental effect to their bird hazard management. This would be easily identified by observations of the species of birds habituating the aerodrome and by the birdstrike records.
5.3	We acknowledge the long-standing 'long grass policy' but question whether there has been any further assessment of its effectiveness since the paper cited (from 1980), given the findings of more recent studies elsewhere e.g. http://digitalcommons.unl.edu/cgi/viewcontent.cgi?article=1130&context=hwi	Noted	See above response.
5.6	Second sentence – suggest replacing 'repel' with 'reduce the attractiveness to...'	Accepted	The text has been amended.
Ref 5.6	Recommend 250mm to allow for soil undulations.	Noted	Where soil undulations occur, ideally, grass height should remain between 150 mm-200 mm, or as determined by the aerodrome's airfield grass policy.
Ref 5.7	All nutrient deficiencies noted in the spring soil analysis should be addressed with a further soil analysis taken in the autumn in areas shown to be deficient in the spring to help ensure adequate Potash is available to the grasses during the important Autumn and winter period. Failure to have sufficient potash at this time will result in stunted root establishment and weak stems during the following spring which will restrict the development of strong important stems.	Noted	No further comment.
Chapter 5, Habitat Management Paragraph 5.9/5.10	<p>"Specialist strains of grass such as Tall Fescue" does not provide enough information. There are selected Tall Fescue strains and some information on the particular types needed to achieve growth in the UK areas, to achieve the desired effect needs to be included.</p> <p>Suggest: 5:9 ".....specialist strains of Tall Fescue, selected to ensure growth in the UK which will achieve the stiffness of sward to repel birds and will not introduce longer term maintenance issues, along with selected strains of amenity etc etc....."</p> <p>And then</p> <p>5.10 . "Airfield habitat ecology and landscape specialists who are aware of the specific requirement of airfield grasslands are able to provide advice and evidence of the correct seed mix for the area of UK, to achieve a bird repellent grass, along with advice on effective seeding etc etc"</p> <p>Note. The point here is to ensure that the tall fescue selected will grow in the airport, will have the desired effect and will not fall over, or get weaker even with correct maintenance after a couple of years. It should also be requested and required of the specialist advisor to provide proof of the selected fescues ability to grow in the area maintain the growth pattern and not produce a mid to long term issue which reduces the bird repellent effect.</p> <p>Grass seed suppliers can supply any type of tall fescue. The advisors need to provide the one suitable for the ground and also the one which will produce the best bird repellent effect, not just the ones that say Tall Fescue on the box.</p>	Accepted	The text has been amended.
Ref 5.9	This requires stating that the specialist grasses are to include rhizomatous and tufted tall fescue. The point regarding the perennial Rye Grass should be amended to include annual Rye which creates new rapid growth down to 4centigrade. Important when new growth to deter birds is required	Accepted	The text has been amended.
Ref 5.10	The referral to landscape should be removed as this could be confusing. The addition of a turf/ grassland agronomist would allow the correct advice to be obtained. Landscape is a general term which covers soils plants grasses and vegetation and is not specific to habitat grassland.	Accepted	The text has been amended.
5.12	The larvae population level at which the need to apply insecticides would be triggered should be stated.	Noted	Aerodrome Operators should establish this with their habitat/grass specialist advisors, as this may be determined by location, climatic condition, soil composition and other variables.
Ref 5.13	The percentage of tall fescue requires increasing to a minimum of 60% with at least twenty percent of this quantity in the form of rhizomatous varieties to reduce future weed invasion and increase the life span of the habitat. Requires making clear that overseeing can only be completed by killing out the existing vegetation, otherwise the	Noted	CAA has removed reference to grass species composition.

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	new seeds will not germinate.		
Ref 5.15	The majority of this paragraph taken from my specification.	Noted	No further comment.
Ref 5.16	This ref does not state the ratio between plant roots and shoots. If included in document, full info required.	Noted	This document does not propose to be detailed and prescriptive on grass matters. CAA recommends Aerodrome Operators seek the specialist advice from agronomists with regard to habitat and grass management issues.
Ref 5.17	This is true provided first cut completed prior to seed head maturing.	Noted	No further comment.
Chapter 5: Habitat Management. Example Long Grass Policy Maintenance Regime Para 5.22	Consider change to: “consideration to late spring not late summer” Reason: past experiences with silage / hay regimes cut to around 25mm even after nutrient levels have been restored with good weather has led to a weak sward which is not suitable as a deterrent. It’s better to defer the bottoming out cut to the following year or carry bottoming out in rotation so that a situation where the entire airfield is not left bottomed out.	Accepted	The text has been amended.
Ref 5.22	There is no mention on how to maintain grass heights through nutrient changes until the proposed autumn bottoming out operation takes place. Selection of grasses can extend the growing season down to 4°C.	Noted	This document does not propose to be detailed and prescriptive on grass matters. CAA recommends Aerodrome Operators seek the specialist advice from agronomists with regard to habitat and grass management issues.
Chapter 5: Habitat Management: Example Long Grass Policy Maintenance Regime. Para 5.23	Consider removal of the entire paragraph. Reason: Unless a specific species of grass has been sown that will react sufficiently to fertiliser & suitable cooler weather conditions it will very likely fail leaving poor sward height & density. It’s better to delay to the following season.	Noted	This document does not propose to be detailed and prescriptive on grass matters. CAA recommends Aerodrome Operators seek the specialist advice from agronomists with regard to habitat and grass management issues.
Ref 5.23	The nutrient formula to create rapid autumn growth is not correct. The correct nutrient at this time will create rapid root establishment and increased plant cell structure which will provide at least 60% of the upright growth without seed heads until next year’s cycle of stem growth commences.	Noted	This document does not propose to be detailed and prescriptive on grass matters. CAA recommends Aerodrome Operators seek the specialist advice from agronomists with regard to habitat and grass management issues.
5.23	5.23 - The ratio 2-1-1 needs to explain what the 3 components are that make up the ratio. It makes no sense as written.	Noted	This document does not propose to be detailed and prescriptive on grass matters. CAA recommends Aerodrome Operators seek the specialist advice from agronomists with regard to habitat and grass management issues.
Ref 5.26	The referral to a 2-1-1 is confusing and inaccurate. The level of nutrient will depend on the soil analysis and the requirement to increase the percentages of seed heads with strong stems. The key to using the new specialist breed grasses requires careful monitoring and use of specific fertilizers. Where original habitat exists, use of less nitrogen is a further benefit.	Accepted	The text has been amended.
Chapter 5 section 5.30	From experience when harrowing the collection of arisings can be extremely difficult and can lead to areas of thatch build up.	Noted	No further comment.
Ref 5.30	No mention of aerating following the initial bottoming out regular aerating will help reduce the long term build-up of the decaying matter. Above 50mm removal of decaying matter by harrowing could damage future developing grass shoots and inhibit seed heads.	Accepted	The text has been amended.
Ref 5.34	Aerate regularly to help the breakdown of decaying matter.	Accepted	The text has been amended.
Chap 5 para 5.40	Deviation from the UK long grass policy is not recommended. Suggest rewording this paragraph along the lines of: <i>Whilst a long grass policy is recommended, it is recognised that this is not always achievable at certain aerodrome locations. Therefore a suitable alternative means of control may be adopted.</i> (e.g. Barra).	Accepted	The text has been amended.
Ref 5.41	Currently the majority of grasses developed for the European climate used on airfield habitat projects have wild endophyte which enables a broad spectrum of species/cultivars to be selected for individual climate conditions.	Accepted	The text has been amended.

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	Research is continuing in Europe to develop localised species which will protect grass root development from insects which is a major issue. If referral to new Zealand is to be made on the document to avoid confusion it requires pointing out that the reduction in bird activity refers to grass eating birds such as geese and is achieved from two species which will not create the density and upright stems in the varying climate which exists in the UK.		
5 5.41	These trials as I understand are not conclusive and may have ecological side effects to other wild life and habitat. Suggest remove 5.41	Accepted	The text has been amended.
5.41	5.41 - Not "grass risk" Suggest full stop after "opportunities" or add "to deter birds" What is meant by "at times of maintaining a long grass policy" ? Re word?	Accepted	The text has been amended.
5.46	5.46 - Reword to read "The grass height should not obstruct..."	Accepted	The text has been amended.
5.48 page 42	Should this be a sub heading? Should this then have a new heading of Environmental Management?	Accepted	The text has been amended.
5.48 page 42 also point 5	Need to add "nut bearing species"	Accepted	The text has been amended.
5.50 page 43	Should be under own "Food waste" heading?	Accepted	The text has been amended.
5.50	5.50 - This isn't vegetation management – the title it is under. Does it fit better in 5.63?	Accepted	The text has been amended.
5.51	5.51 - Another option for dilapidated buildings is to knock them down. Add this ?	Accepted	The text has been amended.
5.52 para 3 page 43	Need to add "green, flat and shallow pitched roof structures"	Accepted	The text has been amended.
5.54	It is important to keep reiterating that the killing of wild birds, and destruction of their nests and eggs can only be done under licence. Amend first sentence to say 'All rooftops should be easily accessible <i>in case it becomes necessary to take licensed</i> action against nesting gulls or waders...' Any action of this nature could be open to legal challenge if a) no threat to air safety has been demonstrated and b) no alternative, non-lethal methods (eg scaring) have been attempted and shown to be either ineffective or impracticable.	Accepted	The text has been amended.
5.56	It is important to keep reiterating that the killing of wild birds and destruction of their nests and eggs can only be done under licence and therefore legal requirements must also be checked before taking action against the listed issues – amend sentence to reflect this.	Noted	This is reiterated within the guidance.
Chapter 5 Water Para 5.58 & 5.60	Consider removal entire reference to planting reed beds or Carr. Reason: This would increase potentially the birdstrike risk & possibly detrimentally affect any 13km safeguarding planning challenges to wetland projects outside the aerodrome as you have created your own! Drainage & exclusion by using culverts are the safer solution.	Accepted	The text has been amended.
5.59	Drainage may not be necessary if the vegetation is of a suitable height.	Accepted	The text has been amended.
5.60	We support the suggestion that reedbeds and wet woodlands can be used – the RSPB is well-placed to advise on the creation of such habitats. Note that once established, reedbeds are in fact quite tolerant of normal fluctuations in water level. It is important that any wires used are made visible to wildlife (as outlined in 5.61, Part 5) to reduce the risk of birds colliding with them and sustaining injury.	Noted	No further comment.
5.61	First sentence – the use of 'particularly applicable' may give the impression that the proposed controls are a requirement, rather than a suggestion. It would be more appropriate to replace 'particularly applicable' with 'may be relevant for consideration by...' Part 1: note that deep water may attract roosting gulls, geese and diving ducks. Part 2: note that certain bird species will nest on spits, and may be more likely to be flushed into the air by predators. Part 3: Reed bed creation may be most effective to prevent some species (e.g. geese, wigeon) walking in and out of the water. Part 4: again, consider reed bed creation instead of fencing.	Partially Accepted	The text has been amended.

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Chapter/ Section/ Paragraph	Comment	CAA Comment	CAA Response
5.62	5.62 - Netting might be required if a flight line between feeding/roosting sites puts the birds in conflict with the aircraft then it might be useful to net one end of the flight line. As written this para just says "net them" whereas there may be sites that do not cause birds to come into conflict with aircraft – there needs to be an "if appropriate" added to this.	Accepted	The text has been amended.
5.63	Please insert Link to Information on targets to be achieved by landfill sites on bird numbers. As it is difficult to locate. This would help with external visits to these establishments.	Accepted	The text has been amended.
5.67	5.67 - Remove "of the role" in line 3	Accepted	The text has been deleted.
Chapter 5, Risk Reduction, 5.90	<p><i>5.90 Birds of prey are often suggested as suitable for civil airport wildlife control and are widely deployed across Europe. Target wildlife tends, however, to respond by fleeing the falcon thereby resulting in a scaring activity with potential lack of control. Dogs are also extensively deployed at military bases in the USA and at several European airports where they are often used in conjunction with falconry. Any use of a programme that includes either dogs or falcons should be carefully evaluated prior to deployment.</i></p> <p>This section appears to discourage the use of dogs. Is this correct? Are dogs to be considered the same as falcons in terms of potential lack of control and effectiveness as bird control options?</p>	Noted	The text is not intended to discourage use of dogs or falconry. Aerodrome operators may utilise many types of bird deterrents, un-specified, in order to achieve meeting the EASA Aerodrome Regulations and Means of Compliance. However, where any 'unconventional' methods are to be utilised, it is incumbent on the aerodrome operator to demonstrate that the benefits outweigh the risks, this is typically achieved by way of a safety case and risk assessment.
Chapter 5, risk Reduction, 5.92	<p><i>5.91 All 'scaring' systems should be avoided, as they can only provide 'scaring' and not 'control'. It is important that all control techniques employed on the airside environment enable birds to be controlled away from critical airspace. Use of BSCs and rockets, particularly, may present a FOD hazard which should be managed accordingly.</i></p> <p><i>5.92 A new approach that has been used at some airports in both the UK and Europe is wildlife scaring lasers. The use of lasers on an aerodrome is subject to requirements specified in ICAO Annex 14 Volume 1 and CAP 736 Guide for the Operation of Lasers, Searchlights and Fireworks in UK Airspace and EASA Rules concerning the laser-free zones.</i></p> <p>5.91 states that 'scaring' systems should be avoided and then 5.92 is not clear as to whether it supports the use of lasers or not. Referring to them as 'wildlife scaring lasers' suggests that they should not be used and yet it is thought that lasers are very effective in specific scenarios and this is supported in the following sections.</p> <p>5.92 - No mention of compliance with CAA SRG Reference Point issue 21 released in 2010. This is a good checklist for ALHs to use when wishing to develop the use of lasers on their aerodrome.</p>	Accepted	CAA is aware that a small number of aerodromes have or are utilising lasers for the purpose of bird dispersal. Aerodrome operators using such equipment do not need CAA approval. The CAA previously discussed use of hand held lasers for bird dispersal in 'Reference Point 21' dated June 2010 (since withdrawn from publication – details available upon request to aerodromes@caa.co.uk).
Chapter 5, 5.95	<p><i>5.95 - Any use of lasers on or near an airfield should only involve laser systems that are mounted on a tripod to ensure no risk of directional error and only in collaboration with airport and air traffic personnel. Risk assessments should be undertaken in the same way as for firearms for use on airports and should include information on the class of laser, safety procedures in place to prevent dazzling, and programme of work intended...</i></p> <p>Only using laser on aerodrome if they are on a tripod. This negates the ability to use the laser dynamically and as the lasers have a sight on them it is far more effective to use this equipment by hand. In order to avoid directional errors the ALH should ensure a robust training programme including a laser usage map, which shows users exactly where the beam can be used without any danger to aircraft, the VCR, passengers or personnel working on the ramp.</p>	Accepted	The text has been amended.
5.95	5.95 - This is not true. Lasers do not need to be in tripods. Handheld lasers have been successfully used and risk assessed at Southampton and they are not on a tripod. This was presented at the UK Birdstrike Committee....	Accepted	The text has been amended.
Chapter 5, 5.96	<p><i>5.96 - Users of lasers should be aware of the EU safety recommendations according to International Standard IEC60825 and Accessible Emission Limit (AEL) safety recommendations for Class 3B laser products, such as those provided for bird deterrence which...</i></p> <p>No mention of the British Standard user's guide for laser safety, PD IEC TR 60825-14:2004, which recommends that a laser safety officer is appointed where class 3b lasers are used.</p>	Accepted	The text has been amended.
Chapter 5, Figure 7	<p>Insert ✓ for starling's response to pyrotechnics.</p> <p>Reason: Dispersal & control of airborne flocks is achievable using Bird scaring cartridges</p>	Noted	Figure 7 (the table) has been removed.
Fig 7 page 47	Is this table complete? The "x" and "?" marks are confusing	Noted	Figure 7 (the table) has been removed.

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Chapter/ Section/ Paragraph	Comment	CAA Comment	CAA Response
Chapter 5: Para 5.71 Distress Calls	<p>Consider the important addition: Distress calls shall not be used at night or in poor visibility as visual control over the target species cannot be achieved.</p> <p>Consideration: for a chapter on night & low visibility scaring should be given to avoid potentially dangerous situations arising using distress calls at night & in Low visibility.</p> <p>Reason: The use of Distress calls at night can attract birds especially flocks into the aerodrome from considerable distances outside the aerodrome boundary, this combined with putting birds to flight in the approaches & climb out.</p> <p>Birds cannot be seen at night or in thick fog leading to a potentially dangerous situation developing.</p>	Accepted	The text has been amended.
5 Distress calls	See 2 2.7 above	Accepted	The text has been amended.
5 Dispersal by a Pyrotechnic Bird Scaring Cartridge	See 2 2.7 above	Accepted	The text has been amended.
5.75	It is important to keep reiterating that the killing of wild birds, and destruction of their nests and eggs can only be done under licence. Amend final sentence to say '...with <i>licensed</i> lethal control.'	Accepted	This is reiterated within the document.
Chapter 5: Dispersal by pyrotechnic Bird Scaring Cartridge (BSC). Para 5.77	<p>Consider important addition:</p> <p>The use of Bird scaring cartridges shall not be used at night or in low visibility as visual control over the birds cannot be achieved.</p> <p>Consideration: for a chapter on Night & low visibility scaring should be given to avoid potentially dangerous situations arising using BSC's</p> <p>Reason: The detonation of Bird scaring cartridges can be heard over a wide area especially at night, this has the potential to put birds to flight which are out of sight especially in approaches & climb outs & within the aerodrome boundary.</p>	Accepted	The text has been amended.
Chapter 5: Dispersal by pyrotechnic Bird Scaring Cartridge (BSC). Para 5.78	<p>Consider addition:</p> <p>4. The trace should be white or slightly tinted but not sufficiently to cause confusion to aircraft or ATC.</p> <p>5. Be aware of potential FOD hazards from BSC's</p> <p>Reason: Some manufacturers are using different compositions in the construction of BSC's to maintain the performance of the BSC some have been shown to be tinted or brightly coloured on occasions.</p> <p>FOD on the form of BSG's can occur from undetonated projectiles & fallout in the form of the detonated projectile case.</p>	Accepted	The text has been amended.
Chapter 5: Dispersal by pyrotechnic Bird Scaring Cartridge (BSC). Para 5.79	<p>Consider replacing the word <i>may</i> with <i>will</i> in the first line of this paragraph.</p> <p>Reason: the Birds out of range of the initial sound made by the BSC being fired react to the trace & also can be controlled by the trace when in flight before detonation.</p>	Rejected	It cannot be guaranteed that <i>all</i> birds will respond to trace.
Chapter 5: Dispersal by pyrotechnic Bird Scaring Cartridge (BSC). Para 5.84	<p>Consider addition:</p> <p>The use of Bird scaring cartridges shall not be used at night or in low visibility where visual control over the birds cannot be maintained over the target species.</p> <p>Consideration: for a chapter on Night & low visibility scaring should be given to avoid potentially dangerous situations arising using BSC's</p> <p>Reason as stated previously.</p>	Accepted	The text has been amended.
5 5.87	Add during the hours of darkness	Accepted	The text has been amended.
5 5.94-5.95	5.94 portable lasers is contradicted by	Accepted	The text has been amended.

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	5.95 should only involve laser systems that are mounted on a tripod		
5.97	'Repellents and Passive Deterrents' appears to be formatted as a heading, of which 'lethal control' then appears – incorrectly? – to be a sub-heading	Noted	The format has been amended.
5.98	It may be useful to state in a separate paragraph that a licence is required to kill wild bird species, and some mammal species.	Accepted	This is noted elsewhere in the document.
5.100	We recommend that the first sentence is amended to reflect the legal requirements, i.e. 'Shooting wildlife <i>may</i> therefore provides an effective tool <i>provided all other measures are exhausted</i> '.	Rejected	This aspect is covered elsewhere in the document.
Subsection 'Population control', 5.101-5.106	We do not agree with either the use of the term 'population control' (the sub-heading) or the wording in the opening sentence of 5.101, which describes 'the implementation of lethal control to reduce or eliminate the presence of populations of wildlife on or around an airport' (emphasis added). For wild birds, the law permits (under licence) lethal control to treat particular problems in the absence of other satisfactory solutions (and only if the lethal control will solve that particular problem), not population reduction <i>per se</i> . Furthermore, we question whether a strategy involving lethal control methods and designed to reduce or eliminate wildlife populations can be successful in reducing wildlife strike risk in anything other than exceptional circumstances. In most situations, whatever is attracting wildlife to an aerodrome will cause others to take the place of those removed. A strategy focussing on lethal control without having introduced, for example, appropriate habitat management or exclusion devices is unlikely to succeed.	Noted	Sub heading has been removed, however the text remains unchanged. We believe it accurately describes the activity being discussed, i.e. to control bird populations, using lethal means, within the scope of the laws provided under the 1981 Wildlife & Countryside Act, as amended.
5.103	Further to our comments above, we do not agree that active lethal control is an 'essential part' of active wildlife control operations. Though we accept that it may be necessary in certain circumstances, the law requires that it is a measure of last resort, and it is not permissible if a) no threat to air safety has been demonstrated and b) no alternative, non-lethal methods (e.g. habitat modification, scaring) have been attempted and shown to be either ineffective or impracticable. Furthermore, this statement contradicts and undermines the welcome guidance provided earlier in the chapter (paragraph 5.2) that 'effective habitat management is the most important activity available.'	Partially Accepted	The text has been amended; however, the above CAA response applies. Use of lethal methods to control birds is an essential tool that aerodrome operators need to be able to utilise in order to preserve air safety. The CAA is supportive of the facility provided by the General & Class licenses issued by the relevant conservation agencies.
Chapter 5, 5.104	<i>5.104 - "under exceptional circumstances" deploy the use of rifles.</i> This should very much depend on the avian population to be controlled and the topography of the aerodrome as to whether this method should be employed. We would remove the "under exceptional circumstances" and replace with "as the local risk assessment and strike history dictates.	Accepted	The text has been amended.
5.105	The legal/licensing requirements necessary to capture wild birds should be outlined here if capture is to be recommended as a form of removal.	Accepted	However, the legal requirements are noted elsewhere in the document.
Safeguarding	We suggest that the recommendation for contact with local landowners is repeated here so that operators are aware of and able to discuss possible proposals before submitted to the local planning authority, especially any local nature reserves.	Rejected	CAA believes it is the responsibility of developers to contact airport operators submitting planning applications. Overarching this are the Safeguarding procedures outlined in CAP 738 and the Government's Circular ' Safeguarding Aerodromes, Technical Sites and Military Explosives Storage Areas '.
5.109 page 59	Should the following be added after '..... Have no specific power to override a planning decision'. <i>'However, should the relevant Planning Authority be minded to grant planning permission or planning permission subject to conditions contrary to the advice of the aerodrome operator, the planning authority must notify the CAA and the aerodrome operator as explained in the aerodrome safeguarding circular 01/2003' (11).</i>	Accepted	The text has been amended.
5.110, footnote 11	The requirement in Northern Ireland needs to be included as this guidance covers the UK.	Accepted	Relevant text has been provided showing the devolved Government and conservation agencies.
5.111	As 5.113 recognises, pre-submission discussions are always helpful. We would add that operators should ask the local planning authority to include them in any pre-consultation requirements to ensure that they are notified before the application is actually submitted, e.g. if surveys are required – highlighting particular data requirements (as set out in 5.112) before those surveys start ensures no unnecessary delays are caused.	Rejected	CAA believes it is the responsibility of developers to contact airport operators submitting planning applications. Overarching this are the Safeguarding procedures outlined in CAP 738 and the Government's Circular ' Safeguarding aerodromes, technical sites '.

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			and military explosives storage areas '.
5.113	Support early engagement with applicants. In the case of minerals sites this helps inform design of restoration schemes for minerals sites and deliver biodiversity and amenity benefits while reducing risk, through creation of appropriate habitats. However it should also be recognised that options may be limited due to practical issues or planning policies, and so expectations should be realistic and deliverable..	Noted	The point is agreed, however, no further comment is provided.
5.114	It should be acknowledged that, in the case of operational or restored minerals sites, the WHCMP should be the back-up means of ensuring safety, with the principle method being the careful design of the scheme to reduce risk. Care must be taken to ensure that the plans, and planning conditions, do not include unreasonable requirements that cannot be enforced or monitored eg absolute numbers of birds of a given species.	Noted	The point is agreed, however, no further comment is provided.
5.116 page 61	This should read "After planning permission has been granted, the aerodrome operator should regularly monitor the development for compliance with any planning conditions <u>relevant to them</u> and report any alleged breach or non-compliance to the local planning authority."	Accepted	The text has been amended.
5.117	We recommend that this paragraph is expanded to explain matters further, as follows (insertions in italics): 'Although the <i>notification</i> , designation, and classification <i>and listing</i> of national, <i>European</i> and internationally protected sites, such as Sites of Special Scientific Interest (SSSIs), <i>European Sites (SACs and SPAs) and Ramsar Sites</i> do not require planning permission, the creation of new conservation sites <i>do</i> . <i>This may be due to them being part of a development planning permission or in their own right. In addition these new conservation sites may ultimately become protected sites. Therefore</i> commonly involves a number of different habitats and is usually associated with other developments that require planning permission and, as applicable, safeguarding consultation <i>is required</i> . Many nature reserves are created to protect particular flora or invertebrate communities, which do not represent a potential to increase the wildlife strike risk; however, others, such as <i>those created on estuaries, may lead to an increase in hazardous bird species and therefore bird strike risk due to the species they are designed to attract or likely to be attracted even if they are not the species for which the new habitat is being created.</i> may be major wildlife sites. It is essential that the aerodrome operator establishes contact and works closely with <i>the local planning authority, local representatives of the statutory nature conservation bodies (NE, SNH, NRW etc) as well as nature reserve owners and managers</i> agencies charged with the management of sites, such as the RSPB etc, <i>as a simple change in design may easily prevent these hazardous species using the new area.</i> ' Again we would recommend that pre-submission consultation should be required from the local planning authority to ensure that the operator is made aware of any new conservation sites before applications are submitted.	Partially accepted	This document is not intended to be the definitive source for these requirements. CAA advocates that Aerodrome Operators liaise and work with the relevant developer and planning agencies, as is standard as part of safeguarding procedures outlined in CAP 738.
Chapter 6 Species identification	Consider: modification of text. Suitable gloves including the use of cut resistant gloves (if cut risk exists) should always be used to collect any sample. Reason: Wildlife species carry a wide range of serious Zoonotic diseases which can be passed onto humans.	Accepted	The text has been amended.
Chapter 6	We support thorough and consistent reporting of wildlife strike incidents (recognising that many small birds are killed by jet wash and turbulent air without contact with the aircraft).	Noted	No further comment.
Page 64 – 6.3 birdstrike definitions	Table 1 – A. Confirmed Strike: <i>Any reported collision between a bird/wildlife and an aircraft for which evidence, in the form of a carcass, or other remains, is found on the ground; or damage and/or other evidence is found on the aircraft. Bird/wildlife remains or complete carcass found on an aerodrome where there is no other obvious cause of death should be treated as a confirmed strike and reported as such accordingly.</i> <i>A bird carcass is found within the vicinity of the runway where there is no other evidence of death should be recorded as a confirmed strike, because it is a dead bird caused by an aircraft and was in close proximity to that aircraft. Such reports should be included within a wildlife management risk assessment process.</i> Suggest an amendment to this description which contains some duplication: Any reported collision between a bird/wildlife and an aircraft for which evidence, in the form of a carcass, or other remains, is found on the ground; or damage and/or other evidence is found on the aircraft. Bird/wildlife remains or complete carcass found on an aerodrome where there is no other obvious cause of death should be treated as a confirmed strike and reported as such* accordingly .	Accepted	The text has been amended.

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	<p>*A bird carcass is found within the vicinity of the runway where there is no other evidence of death should be recorded as a confirmed strike, because it is a dead bird caused by an aircraft and was in such close proximity to that an aircraft to be considered a safety hazard. Such incidents reports incidents should be included within a wildlife management risk assessment process.</p>		
Chapter 6, 6.3	<p>6.3 No mention of birds subject to the effects of wake vortex. The CAA needs to define clearly the reporting mechanism for this occurrence. As it is not a physical strike on an aircraft as the bird has been subject to the wake behind the aircraft. Should it be reportable as a near miss/significant occurrence or a birdstrike? Reporting this as a near miss/significant occurrence would ensure that the data is captured at a CAA level as well as internally within the individual airports to enable any species specific trend analysis. The aerodrome could ensure that staff are competent to distinguish between a vortex event and a birdstrike with particular focus on carcass damage and location as well as strike evidence on the aircraft. Please confirm the CAA position on categorization of this specific type of incident.</p>	Accepted	The text has been amended.
6/Page 64/Table 1	<p>Wildlife Strike Definitions – Type of Strike.</p> <p>Confirmed Strike A – This is very confusing and does not (in our mind) provide an accurate assessment of occurrences and given the potentially litigious environment in which we operate we would not be comfortable in reporting 'confirmed strikes' where there is clearly no evidence of wildlife and aircraft having made contact. The first paragraph is exactly what we would expect:</p> <p><i>“Any reported collision between a bird/wildlife and an aircraft for which evidence, in the form of a carcass, or other remains, is found on the ground; or damage and/or other evidence is found on the aircraft.”</i></p> <p>I would go further to say that where the flight deck can 'confirm' an actual strike even in the absence of physical remains that it should be recorded/reported as a confirmed strike as this sometimes happens.</p> <p>It is the next two paragraphs that are the most challenging and the most confusing:</p> <p><i>“Bird/wildlife remains or complete carcass found on an aerodrome where there is no other obvious cause of death should be treated as a confirmed strike and reported as such accordingly”.</i></p> <p>There can be any number of reasons for the above and to what purpose would we confirm a strike where there is no legitimate reason to believe that one has occurred.</p> <p><i>“A bird carcass is found within the vicinity of the runway where there is no other evidence of death should be recorded as a confirmed strike, because it is a dead bird caused by an aircraft and was in close proximity to that aircraft. Such reports should be included within a wildlife management risk assessment process”.</i></p> <p>If it was in the 'vicinity' of the runway or more specifically within the jet blast/vortex profile of the largest operating aircraft then we could reasonably conclude that vortex was responsible which would be more in keeping with a near miss. Recording it this way would create a more accurate picture and would possibly provide useful information on seasonal variations in bird activity by species. A Wildlife Controller will have no difficulty in determining between an actual strike and a strike that is more likely to be vortex related. This is an important point as the flight deck, particularly on departure, would benefit from knowing the condition of any remains found where they have reported bird activity on takeoff and or an actual strike and may be the difference in deciding whether to return for inspection or not.</p> <p>B Unconfirmed Strike:</p> <p><i>“Any reported collision between a bird/wildlife and an aircraft for which no physical evidence is found (i.e. no damage to the aircraft is evident upon inspection, and no bird remains, carcass or blood smears are evident on the airframe).</i></p> <p>It could also be concluded that any carcass/remains recovered from the runway that in the opinion of the Wildlife Controller, and in the absence of a wildlife strike report, has been physically struck would constitute an unconfirmed strike.</p>	Noted	<p>The comment is noted and although not accepted, some minor amendment to the text has been provided with the aim of adding clarity.</p> <p>However, CAA is currently working on the implementation of Regulation (EU) No. 376/2014 'The reporting, analysis and follow-up of occurrences in civil aviation'.</p> <p>It is anticipated that the implementation of the regulation shall significantly impact on the current requirements and procedures concerning the reporting of Birdstrike occurrences.</p> <p>It is estimated that during Q3-4 2015 the guidance set out in CAP 772 shall require revision. This shall be discussed and announced further via CAA Information Notice in due course.</p>
6.4 Reporting	Suggest that reports may be submitted by e mail to a generic CAA address in addition to the other listed methods.	Noted	See above comment response.
6.6 to 6.8	<p>It is expected that specific airlines are not identified as part of CAA birdstrike reporting as there has been negative interpretation by the media in the past. There is the same risk to airports of adverse publicity due to manipulation of data and uninformed or incorrect analysis of strike data.</p>	Noted	<p>The Civil Aviation Authority is an open organisation that endeavours to make available as much information as it can.</p> <p>Where the release of data and information is controlled by legislation and</p>

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	Suggest that published data is dis-identified when presented for public consumption.		standards, the CAA will comply with those standards and manage the release of data accordingly. The CAA currently requires written requests for data to be released, which may incur payment if the associated data retrieval and processing takes more than 18 hrs, and or if the data is to be used for commercial purposes. Currently, formal requests for the release of birdstrike data are considered in accordance with Section 6, Part 2, Regulation 9, of the Civil Aviation Authority Regulations 1991. The CAA's view is that the volume of bird strikes reported at a particular airport does not necessarily imply greater hazard, or risk. In complying with the previously mentioned regulation, the CAA does not redact the strike location from any birdstrike data release requests.
6.9	6.9 – Why should aerodrome's share wildlife strikes locally? What does this mean? This information is for the aerodrome to use to plan its policy on strike prevention and has little use 'locally' unless the aerodrome approaches a stakeholder to discuss bird hazard management on their land. However this is purely a decision for the aerodrome.	Noted	In this context, CAA advocates that aerodrome operators routinely share birdstrike data with the airlines operating at that location, typically this can be achieved via airside safety committees or flight operations safety for example.
6.10 Species Identification	Please could CAA include a section aimed at flight crew to emphasise the importance of species identification. There are many reports from crew during flight where the description of the bird is understandably vague. This is often something like a large white bird or small brown bird but on some occasions the description is more specific e.g. geese-like or gull-like. In these cases it would be most helpful to learn more about what was seen in order to attempt to be more precise.	Noted	CAA agrees with this comment. In this context, the same guidance applies to aerodrome operators as it does to airlines. However, few airline operators have the required mechanisms in place to arrange identification of bird species following a strike occurrence, and so they rely on the practices in place from the aerodrome operators to satisfy. CAA advocates formal arrangements are agreed between both parties in such circumstances.
6.12	6.12 - Is "crud" a new CAA term?	Noted	Phrase changed to "Snarge" (using US phraseology)
7	Very sparse information in relation to other wildlife commonly seen on or around airfields such as Squirrel and a Specific section on deer, deer control methods, controlling authorities around the country, and contact information. Would be a helpful addition with what is becoming a high risk and all species are specifically protected by law?	Accepted	Guidance with regard to "other" wildlife has now been provided. It should be noted however, that less than 1% of strike data held by CAA relates to wildlife and even fewer occurrences where a strike had led to damage of the aircraft. CAA considers the eventuality of strikes by wildlife to be very low probability vs low severity, as wildlife strikes occur whilst the aircraft is on the ground.
Chapter 7	We note that the term 'wildlife' has been used on a number of occasions to replace 'birds' or 'species'. This is presumably to coincide with the broader remit of the revised guidance, but its use appears incongruous and we recommend reverting to the use of bird or species, e.g. 7.10 – first sentence – '...by migratory <i>birds</i> ...' 7.15 – first sentence – '...is primarily a coastal <i>species</i> but...' 7.22 – second sentence – '...are large <i>birds</i> ...' 7.43 – first sentence – '...much larger <i>bird</i> ...' 7.44 – final sentence – '...this is a scavenging <i>species</i> ...'	Accepted	The text has been amended.
Chapter 7 Aerodrome Ornithology Chapter 7.4	Useful addition: The RSPB also website provides useful identification & species information which is free. http://www.rspb.org.uk/wildlife/birdidentifier/	Accepted	The text has been amended.
7.3 Wildlife Identification	2. <i>Field guides that illustrate birds with photographs or paintings of birds in varied poses should be avoided, because they probably will not include all the plumage variations within a species that may be encountered, making identification more difficult;</i> Photographs are often very helpful in identification of species. Some drawings may be misleading or not comprehensive but in the absence of a viable alternative to these visual guides it is felt that these guides are	Accepted	The text has been amended.

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	helpful. Having read points 3, 4, 5 and 6, perhaps this comment should be placed at the end of this section and the point about different poses be made more obvious.		
Figure 13 (7.7)	Suggest this table is renamed as 'Checklist of Species which may occur on Airfields', as white-tailed eagle could not be considered common. Paragraph 5.48 refers to the attractiveness of berry-bearing plants, yet no thrushes appear in the table. Should the various deer species be on this list? Bats?	Accepted	The text has been amended to include some of those species mentioned.
Ch 7, Figure 13 Checklist of Common Airfield Species	In the Raptors section Peregrine is listed as Common and Red kite as Occasional. Suggest that this is in fact the other way around at many aerodromes. At the least, Peregrines are not that common.	Accepted	The table has been deleted
Ch 7, Figure 13 Checklist of Common Airfield Species	Figure 13 – add Greylag goose.	Noted	The table has been deleted.
7.8	<i>7.8 Airport wildlife control personnel would be expected to be able to competently identify all the commonly occurring species on UK aerodromes.</i> Suggest: 7.8 Airport wildlife control personnel should be able to competently identify all the commonly occurring species on UK aerodromes.	Accepted	The text has been amended.
7.9	Reference should be made in this paragraph to the decline in many gull species – all seven breeding species are birds of conservation concern (the herring gull being red-listed and others amber-listed for varying reasons).	Rejected	Conservation issues are deemed to be beyond the scope and objective of this guidance material.
7.16	The paragraph on curlew needs to be reworded as it is incorrect and misleading to suggest the species occurs and nests throughout Britain and Ireland. The most recent trend information for curlew shows a 66% decline in breeding numbers between 1970-2010 http://www.rspb.org.uk/Images/SUKB_2012_tcm9-328339.pdf .	Accepted	The text has been amended.
7.18	We question why the size of the population of rooks is provided, as this has not been provided for any other species featured in the document. We suggest it is not necessary to provide this information – it is not clear what purpose it serves.	Accepted	The text has been amended.
7.25	The legal/licensing requirements necessary to capture wild birds should be outlined here if capture is to be recommended as a form of removal.	Accepted	The text has been deleted.
7.35, 7.44	We query the use of the rather vague term 'good housekeeping' – suggest clarifying what is meant by this term.	Accepted	The text has been amended.
7.43	Should the first sentence say „the buzzard is a much larger species? ...“ rather than „a much larger wildlife...“	Accepted	The text has been amended.
7.43	'...increasingly involved in wildlife strikes' – is this statement backed by the bird strike record? If so, there should be a clear reference to this.	Noted	CAA birdstrike data trend monitoring justifies this statement.
7.44	Again it states that red kite is a scavenging wildlife, whereas using the word „species“ (rather than „wildlife“) would read much better.	Accepted	The text has been amended.
7.44	Again, illustrate with figures from the birdstrike record, if this statement is supported.	Noted	CAA birdstrike data trend monitoring justifies this statement.
7.45	Final sentence – we request clarification on what is meant by 'removal', and – if the implication is lethal control – challenge the assertion that this will be required 'in many cases' concerning birds of prey. Where is the evidence for this? It is inappropriate for this guidance to imply that lethal control will likely be necessary if birds of prey are present. As stated previously, the law requires that it is a measure of last resort, so aerodromes could be open to legal challenge if a) no threat to air safety has been demonstrated and b) no alternative, non-lethal methods (eg scaring) have been attempted and shown to be either ineffective or impracticable. These licensing tests should be stated in this paragraph (or cross-reference made to the licensing principles suggested for inclusion in paragraph 1.11).	Accepted	The text has been amended.

CAP 772 Birdstrike Risk Management for Aerodromes
External Consultation – Comment Log

Chapter/ Section/ Paragraph	Comment	CAA Comment	CAA Response
7.46 and 7.47	These sections relate to pheasant and red/grey partridge and the latter paragraph states that these species cannot be lethally controlled – they can. They can be shot in the open season for these species. Can be driven to boundary and shot at fence – as per a game drive	Accepted	The text has been amended.
7.47	The CAA should check whether or not the final sentence is applicable to pheasants too and, if so, it may be appropriate to describe the legal status of gamebirds (as a suite of species) in a separate paragraph.	Accepted	The text has been amended.
8.2	8.2 - Where has this 2 years – biennial – training come from? This is not an EASA requirement. We do annual checks – are checks every 2 years better than every year?	Accepted	The text has been amended.
Chapter 8 section 8.2, 8.3	What does the competency or proficiency check syllabus entail and what constitutes adequately qualified and experienced instructor for the implementation of the training programme, greater understanding required.	Noted	Whilst there are currently no standards that exist to prescribe the technical competencies of trainers, we have provided a broad definition of 'competency'. However, CAA, together with stakeholders, will be considering further work in order to develop this issue.
8.4 and 8.5	8.4 and 8.5 - Repeats content of 8.2	Accepted	The text has been amended.
8.7	8.7 - Repeats content of 8.3	Accepted	The text has been amended.
8.9 -1.iii	Initial training should include knowledge of the law with regards to control of species, not just that for rare and endangered species.	Accepted	The text has been amended.
8, 8.10, 3	States: <i>“Wildlife control staff need to maintain competence in the role. This could be achieved either by regular refresher training or another system of monitoring, acceptable to the appropriate authority. The maintenance of competence should include the areas in (a) and (b) above, and also include”.</i> As an observation there is no (a) or (b) above as they are all numerical.	Accepted	The text has been amended.
8.11	8.11 - First sentence repeats previous paras content.	Accepted	The text has been amended.
8.12	8.12 - Repeats 8.7?	Accepted	The text has been amended.
8.27 page 89	Need to be clear on what annual refresher training means - should this be a “competency based assessment/ training?”	Accepted	The text has been amended.
9	No Comment	Noted	No further comment.
Chap 9 General	The implication is that CAA is recommending the use of avian radar.	Noted	CAA is aware of the benefits that the use of Avian radar can bring to address bird hazard issues. The text merely recognises the capabilities, background and development of such systems. CAA is aware of a number of aerodromes in the UK, EU and particularly North America where use of Avian radar has demonstrated increased awareness of bird flight lines and provided added intelligence on birds in the vicinity and within flight paths of aircraft.
Chapter 9	Chapter 9 Why is there a section on Radar? The text is commentary or a historical summary. Para 1.6 states this CAP is “good practise” or “Guidance material” but is this section what CAA considers to be good practise or its latest guidance? So should all airports have a radar system? I don't think this text is guidance and in my view radar is not advanced enough for use on many aerodromes in practical terms. Therefore the draft is over-stating the role radar can play. Issues of sightlines, numbers of radars, range, speed and accuracy of detection and the big question of how a BCU should respond if a radar tells you there are birds at XYZ are not considered and I do not believe the radar industry is mature enough for inclusion in this CAP.	Noted	See above response.
Chapter 9 Avian Radar	A whole chapter on this subject is excessive. It is not listed as a major element of birdstrike risk management in CAP 772 and does not need this level of explanation or support. This chapter is not needed. By all means mention Avian Radar along with the other methods of bird hazard management but a few references would be sufficient to allow readers of CAP 772 to learn more if they wish.	Noted	See above response.