

Comment Response Document

Summary

- 1 This document contains responses to those comments received in respect of the CAP 168 Amendment 10 consultation which ran for the duration 2 January 2013 to 27 February 2013. It contains responses to all sections of the consultation.
- 2 Comments were received from:
 1. Belfast City Airport
 2. Belfast International Airport
 3. Bristol Airport
 4. CAA
 5. Farnborough Airport
 6. Glasgow Airport
 7. Glasgow Prestwick Airport
 8. Heathrow Airport Ltd
 9. Kubu Australia Pty Ltd
 10. Leeds International Airport
 11. London Luton Airport
 12. NATS
 13. Newcastle International Airport
 14. Oban Airport
 15. Stobart Air, Carlisle Airport
 16. Tailor Made Systems

The CAA thanks contributors for their comments and input to this consultation.

No.	[Chapter/Section/Para etc] Reference	Comment	CAA Comment	CAA Response
1	General	<p>Questions: We would welcome the views of those persons and aerodromes affected by the changes below:</p> <p>Question 1: A significant change to clearway definition has been included in this revision to Chapter 3 (Para 9.4.2-9.4.3). This has been done in order to align with the draft proposed Aerodrome rules recently published by EASA. Aerodrome Licence Holders are therefore requested to assess the impact of the change on their clearways and inform the CAA should there be a necessity to review the aerodrome licence conditions. Aerodrome Licence Holders should use the comment form provided for advising the CAA of their impact assessment.</p>	Noted	<p>The CAA is currently working on the impact of the European Aviation Safety Agency (EASA) rules concerning a number differences or variations compared with CAP 168. These shall be communicated with Aerodrome stakeholders during the transition process.</p>
2	Chapter 2, para 4.3	Agree with the changes made.	Noted	Nil.
3	Chapter 2, para 4.3	Clarity on when the Aerodrome Manual should be presented to the Aerodrome Inspector prior to any planned audit.	Accepted	<p>The CAA will review its procedures to address this comment. However, this is not within the scope of this amendment. EASA transition and future aerodrome audit and oversight arrangements will be communicated to aerodromes in due course.</p>
4	Chapter 2, para 4.3	<p>‘Consideration should be given to the currency of the Aerodrome Manual related to any CAA planned audit so to provide both the Auditors and the Aerodrome staff, reasonably sufficient time to be adequately prepared.’ Chapter 6, para 1.3.</p> <p>Perhaps the CAA could consider giving more notice to the airport of the Audit Programme, as it takes time to do a full review of the Manual, as well as giving the CAA time to digest it.</p>	Accepted	<p>The CAA will review its procedures to address this comment. However, this is not within the scope of this amendment. EASA transition and future aerodrome audit and oversight arrangements will be communicated to aerodromes in due course.</p>
5	Chapter 2, Appendix 2B, para 1.3	Who is responsible for the safeguarding process?	Noted	The Aerodrome Licence Holder/Operator (see para 3.2)
6	Chapter 2 Appendix B, para 1.4	<p>‘Low visibility procedures are the actions carried out by ATC in respect of aircraft operations and vehicle movements.’</p> <p>LVPs do not only concern actions carried out by ATC. There are actions carried out by all airside users, e.g. suspension of some manoeuvring area driving, suspension of works in progress, closing of some specific airfield routes etc.</p>	Noted	Chapter 2, Appendix 2B, paragraph amended.

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7	Chapter 2, Appendix 2B, para 1.4	At most aerodromes there is also an involvement by airport operations regarding the low visibility procedures, i.e. inspections of gates, barriers and lights.	Accepted	Chapter 2, Appendix 2B, paragraph amended.
8	Chapter 2, Appendix 2B, para 4.1	<p>'It is essential that all LVP measures be <u>verified</u> as in place before LVPs are declared to be in force by ATC. Similarly, LVPs should be <u>declared as cancelled</u> before the aerodrome operator withdraws any measures.'</p> <p>Suggest better wording "LVP measures confirmed as in place between ATC and AD before ATC declare them in force" Does this refer to communications between ATC and the AD operator or does it refer to the more complex communications between AD operator and airside users and between ATC and Pilots? There are potentially significant operational impacts associated with this wording which would prevent XXXXX from 'verifying' with all stakeholders before implementing LVPs. Suggest this statement clearly states that verification is between aerodrome operator and ATC. Other methods of promulgation of LVP status are utilised to ensure that all other airside users are aware. This does not include any verification.</p>	Accepted	Chapter 2, Appendix 2B, paragraph amended.
9	Chapter 2, Appendix 2B, para 5.1	<p>The requirement for LVPs to be fully implemented with a cloud ceiling of 200' would cause considerable operating difficulties for XXXXX. As the airfield operates at CAT 1 only, but allows take offs with an RVR < 400m, we are required to implement LVPs to facilitate this, however, based on a safety survey carried out by ATC in 2011, operators to XXXXX are content with the current status quo, i.e. LVPs when RVR < 600m, but not triggered by cloud base. To comply with various aspects of EAPPRI, XXXXX have a system of reduced movement in LVPs, which results in only 1 aircraft within 10 NM of the aerodrome – whether on the manoeuvring area or flying an approach. Thus implementation of LVPs with a cloud ceiling of 200' would severely limit the operation. As the CAT 1 minima is 200', pilots felt that this criteria is not required for a CAT 1 approach, as they are required to visually assess the approach at or before 200', so protection when the cloud is below this is largely irrelevant. Additionally, for departures, the criteria was felt unnecessary as by the time the aircraft reaches the cloud ceiling, it is in flight, and the aerodrome would be below minima for a CAT 1 return. In the event that low cloud causes reducing visibility at ground level, LVPs would be triggered by the existing criteria. We would request that the criteria for LVPs is split, so that for arrivals of lower than CAT 1 conditions, LVPs are triggered by cloud ceiling, but for departures and/or CAT 1 only approaches, the cloud ceiling criteria is not required.</p>	Accepted	Chapter 2, Appendix 2B, paragraph amended.

No.	[Chapter/Section/Para etc] Reference	Comment	CAA Comment	CAA Response
10	Chapter 2, Appendix 2B, para 5.6	<p>'Where physical closure is not practicable, for example between aircraft maintenance areas and manoeuvring areas, entry points should be manned and where the opening is too wide for visual surveillance, then it should be fitted with intruder detection equipment suitable for operation in low visibility conditions.'</p> <p>Suggest this is deleted. This is too onerous and too prescriptive, it is the Aerodrome Operator's responsibility to manage this and the use of intruder detection equipment may not necessarily be the solution.</p>	Noted	This comment is captured in a later paragraph.
11	Chapter 2, Appendix 2B, para 5.8	<p>The requirement for all vehicles operating on the manoeuvring area to be equipped with R/T area and drivers being in R/T contact with ATC is overly restrictive. This would prevent essential maintenance being carried out in periods of LVPs by non airfield staff. The current thought at XXXXX is "work not essential to the continued operation of the aerodrome" is ceased, and likewise with vehicles, however, there are times that vehicles that are not R/T equipped may require to operate with an airfield operations vehicle escort, which would appear to be prohibited by this paragraph. Examples may be a coach load of passengers that are security/customs cleared and so cannot leave the aerodrome, but where their aircraft is parked north of the main runway, which would require a crossing of the taxiway and runway, or an external contractor escorted by airport engineering staff to carry out essential repairs to runway/taxiways/CNS equipment. We would request that the requirement is lessened to "vehicles must be equipped with R/T and the driver in contact with ATC or escorted by a vehicle equipped with R/T, whose driver is in contact with ATC at all times".</p>	Accepted	Chapter 2, Appendix 2B, paragraph amended.
12	Chapter 2, Appendix 2B, para 5.8	<p>States all vehicles on the manoeuvring area should be equipped with R/T. CAA definitions of manoeuvring area and movement are specific but after these definitions is an added 'Note: Manoeuvring Area and Movement Area are generic terms intended to describe the 'airside' part of an aerodrome, rather than just those pavements or surfaces on which aircraft movements take place.' My question is that if we accept the note literally then are we not accepting all areas 'airside' be encapsulated within the statement and this would include all airside roads however clear of manoeuvring area.</p>	Noted	The requirement for vehicles to be equipped with R/T is for the manoeuvring area only.
13	Chapter 2, Appendix 2B, para 5.8 -	<p>'All non-essential vehicles and personnel, e.g. works contractors and maintenance parties and their equipment, must be withdrawn from the manoeuvring area.'</p> <p>Agreed, this is the norm at our airports.</p>	Noted	Nil.

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14	Chapter 2, Appendix 2B, para 5.8 -	<p>‘All such vehicles should be equipped with an airfield chart <u>permanently displayed</u> in the driver’s cab clearly showing all taxiways, runways, holding points and vehicle routes marked with their appropriate designation. The chart should be <u>accompanied by written instructions</u> clearly detailing the action that the driver should take in the event that the vehicle should break down or that the driver should become unsure of his position on the airfield.’</p> <p>Displaying the chart is impractical and it is preferable that an airfield chart <u>be available</u> in every vehicle. To suggest that current instructions be available in the cab of every vehicle used airside is also impractical. There may be several thousands of vehicles, each used by different people in different weather conditions etc. There would be difficulty in maintaining an up to date version of the documentation and in identifying who is responsible for maintaining this requirement. To expect there to be a written instruction in each cab is not practicable. Suggest: “The drivers should know the actions they should take in the event.....”</p>	Accepted	Chapter 2, Appendix 2B, paragraph amended.
15	Chapter 2, Appendix 2B, para 5.8	<p>‘When LVPs are in force, only vehicles essential to the aerodrome operation and driven by formally tested and authorised drivers should be allowed onto the <u>movement area</u>.’</p> <p>The Movement area includes aircraft stands and aprons, this should be the Manoeuvring Area. (Unless under escort, all drivers on the movement area are formally tested and authorised as per the ADP scheme.)</p>	Accepted	Chapter 2, Appendix 2B, paragraph amended.
16	Chapter 2, Appendix 2B, para 5.9	<p>‘Processes should ensure that the potential for such misunderstandings is minimised and that there is a single point from which definitive information about the current status of LVPs can be confirmed.’</p> <p>Agree that a single point has to make the decision to go into LVP but in an environment as complex as XXXXX it is not practical for there to be a single point of contact for this information to be confirmed. It is important that the definitive information about the current state of LVPs has a single source but confirmation can be sought from various other sources.</p>	Accepted	Chapter 2, Appendix 2B, paragraph amended.
17	Chapter 2, Appendix 2B, para 5.9	<p>‘The final measures, which are wholly within the control of ATC’</p> <p>This is not correct. Final measures may be carried out or completed by ATC but the Aerodrome Operator is responsible for the LVPs and ‘control’ of all of the measures remains with them.</p>	Noted	Chapter 2, Appendix 2B, paragraph amended.

No.	[Chapter/Section/Para etc] Reference	Comment	CAA Comment	CAA Response
18	Chapter 2, Appendix 2B, para 5.11	<p>‘Similarly, because congregations of birds are difficult for both ATS staff or pilots to observe in poor weather conditions, bird hazard control operations should not be restricted during LVPs.’</p> <p>Has this advice been presented to FERA? There is no definitive advice on what to do about bird activity during LVPs or at night. Apart from the difficulty in observing bird congregations, it is also difficult to observe where birds are dispersed to. Dispersing birds during LVPs or at night may lead to them becoming more of a hazard than leaving them where they are on the ground. The only location where birds must be dispersed if discovered, during poor visibility or otherwise, is on the runway itself. In our opinion more detailed advice is needed on this topic before making such statements.</p>	Noted	Advice received by the CAA indicates that bird control should continue during low visibility conditions.
19	Chapter 2, Appendix 2B, para 6.8 Visibility Condition 4	We are unsure what the rationale for introducing a 4 th LVP condition is; what additional benefits or restrictions would introducing LVP Condition 4 pose to airport ground operations?	Noted	New text aligns with ICAO Eur doc 013 - European Guidance Material on Aerodrome Operations Under Limited Visibility Conditions.
20	Chapter 2, Appendix 2B, para 6.8 Visibility Condition 4	Could there be further clarification of how pilots may taxi within this condition (i.e. what guidance would they use)?	Accepted	Chapter 2, Appendix 2B, additional paragraph included.
21	Chapter 2, Appendix 2B, para 7.1	Does this paragraph introduce the requirement for a CAT 1 localiser to be fully safeguarded for take-offs below 400m RVR, even if the equipment is only certified to CAT 1 minima standards?	Noted	Where the ILS localiser guidance is used for guided take-offs, the ILS localiser critical and sensitive areas should be kept clear while an aircraft is conducting a guided take-off until it has overflowed the ILS localiser antenna. A subsequent departing aircraft should not be cleared for take-off until the preceding departure has overflowed the ILS localiser antenna.
22	Chapter 3, para 13.5	New diagrams don't marry up with existing published in CAP 168 in terms of measurement of intersection departures declared distance from RETs.	Accepted.	Revised text will be added to add further clarification to the new diagrams.
23	Chapter 3, para 3.1	Should this also include ATC to develop and maintain procedures? The aerodrome operator can not complete this in isolation.	Noted	This is subject to local arrangements and management procedures.

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24	Chapter 3, para 3.5	Difficult to understand, further explanation required.	Noted	Text used is a direct copy of Annex 14 and the draft Certification Specification (CS) recently published by EASA. An illustrative example will be included in the EASA CS guidance material.
25	Chapter 3, para 3.5.1	Our only comment relates to paragraph 3.5.1. The language used might be understandable by an engineer, but difficult for a person on an airfield. 3.5.1 Undulations or appreciable changes in slopes located close together along a runway should be avoided. The distance between the points of intersection of two successive curves should not be less than: a) the sum of the absolute numerical values of the corresponding slope changes multiplied by the appropriate value as follows: (i) 30,000 m where the code number is 4; (ii) 15,000 m where the code number is 3; and (iii) 5,000 m where the code number is 1 or 2; or b) 45 m; whichever is greater.	Noted	As above.
26	Chapter 3, para 5	The difference between the minimum required RESA (90m) and the recommendation of 240m RESA is considerable all be it being based on regular risk assessment when changes occur to the aerodrome conditions. Enforcement of this recommendation could make many airfields unviable and have huge cost implications. No definitive guidance is given as to any addition to RESA required when the runway is reduced in length for any reason which automatically increases the risk even though the minimum requirement (90m) is always used as a minimum. Similarly additional RESA is not provided where declared distances are used from intersection departures. Additional guidance could be provided by the addition of a paragraph stating where a runway is reduced in length additional RESA must be provided proportionate to the reduction in the length of the runway. Example Runway length reduced by 10% additional RESA provided above the minimum (10% of 90m = 9m addition provided)	Noted	ICAO and EASA requirements recommend the provision of 240m for RESA, this being justified by overrun evidence from across the world. The CAA recognises that not all aerodromes can easily achieve this distance; therefore the risk assessment is intended so that aerodromes can assess the risk arising from their RESA provision, as well as consider whether there are actions it could take that could reduce both the likelihood and impact of an overrun. The CAA does not see that additional RESA should be provided for shorter runways as the length of runway required impacts on aircraft performance, which the length of RESA does not - aircraft performance calculations will determine the length of runway required.

No.	[Chapter/Section/Para etc] Reference	Comment	CAA Comment	CAA Response
27	Chapter 3, para 5.12	<p>Your proposed text "... abrupt changes of slope or a slope reversal should be removed ..." can force a situation which is not good practice by the banning of slope reversals. I think it is the sudden slope reversals that are the problem, rather than slope reversals in general. For a runway on flat ground, it can be good practice to have a slope reversal in a RESA. This occurs where the RESA slopes downwards for part of the distance to drain water away from the runway and then slopes up again for the rest of the distance to meet natural ground level. The slope reversal is not abrupt. The dish so formed can be part of the overall airport drainage and I consider that this is good engineering practice. My proposal is to use the ICAO Annex 14 words to replace your text: "... and abrupt changes or sudden reversals of slopes avoided."</p>	Accepted	Paragraph 5.12 amended.
28	Chapter 3, para 5.14 and 5.19	<p>Your text in paragraphs 5.15 to 5.19 makes frequent reference to the Engineered Material Arresting System (EMAS). This is a specific form of Soft Ground Arresting System (see the FAA reference below), and I believe that this should be explicitly mentioned as such to avoid international confusion. An EMAS is of course intended to be located in the RESA. Your proposed text in Paragraph 5.19 states: "Soft ground arrester beds are not intended to replace RESA and, therefore, should not be located within the minimum RESA distance." I presume that this is meant to refer to another type of arresting system such as the Lytag ones at Manchester, Southampton and Southend airports. Reading from the Lytag Technical Manual - Section 11 Lytag Vehicle Arrestors, I suggest that this type be called "vehicle-type arrester beds of non-compactable aggregate" or "arrester beds of non-compactable aggregate" to distinguish them from EMAS. My proposal is to reword paragraph 5.14 as follows: "Research programmes, as well as evaluation of actual aircraft overruns into <u>Soft Ground Arresting Systems</u>, have demonstrated that the performance of some arresting systems is predictable and effective in arresting aircraft overruns..." And that paragraph 5.19 be amended: "<u>Vehicle-type arrester beds of non-compactable aggregate</u> are not intended to replace RESA and, therefore, should not be located within the minimum RESA distance." Reference: Report DOT/FAA/CT-93/80 Soft Ground Arresting System (1993), available on request from me or downloadable at http://www.dtic.mil/cgi-bin/GetTRDoc?AD=ADA277645.</p>	Noted	Paragraph 5.14 amended.

No.	[Chapter/Section/Para etc] Reference	Comment	CAA Comment	CAA Response
29	Chapter 3, para 5.17	<p>This is quite complex because it implies that there has been a reduction in declared distances, that the 240m RESA is mandatory and not just recommended (contrary to paragraphs 5.4 and 5.5), and undershoot protection is not adequately addressed. I presume the situation arises because the airport did not have 90m available beyond the runway strip end for a RESA, so the declared distances were reduced (temporarily) to provide the required RESA length. Now in order to increase the declared distances, the airport must install a full length EMAS. EMAS is typically 450 feet length (140m) for a Boeing 757 with 75 foot setback, or 128m with a 35 foot setback (from FAA AC150/5220_22b). With the EMAS starting 35 feet from the runway end, the EMAS end will be 128m – 60m = 68m from the RESA start. However it falls 22m short of providing the undershoot protection which is implicit in the minimum requirement for 90m for all code 3 and 4 runways. My proposal is to reword paragraph 5.17 as follows: <u>The CAA will permit an increase in runway declared distances that can be achieved from the installation of EMAS only where a full length EMAS for the design size aircraft has been installed and the RESA minimum requirement of paragraph 5.4 is met.</u></p>	Not accepted	<p>The CAA does not agree with the assumption made in the comment; the 240m distance is not mandatory. Additionally, where an EMAS is being considered, the CAA seeks to ensure that the maximum possible benefit is realised, so that an aerodrome may not increase declared distances unless the EMAS provides the equivalent of a 240m RESA.</p>
30	Chapter 3, para 5.18,	<p>‘Soft ground arrester beds are not intended to replace RESA and, therefore, should not be located within the minimum RESA distance.’</p> <p>The costs associated with removal of the arrester bed are significant. Some arrester beds were specifically installed to mitigate a RESA which is shorter than the recommended 240m and the installation has been cited as acceptable mitigation in a series of risk assessments by recognised 3rd party experts. Does this new wording mean that arrester beds already installed within RESAs should be removed? If not, please re-word this section. We are not able to suggest alternative wording as we are not clear about the CAA’s meaning.</p>	Partially accepted	Existing arrester beds do not need to be removed.
31	Chapter 3, para 7.2.3	Add the letter n after the a before outer	Accepted	The text will be amended.
32	Chapter 3, Appendix 3D	<p>The need to send a snow closed notice for an event of a snow closure without giving a time it will be closed for will result in needless paperwork or invalid information being sent as a lot of the time a runway may only be closed for a short period to clear deposits of snow off a runway. Suggest 6.5 If the aerodrome is snow closed for more than ‘one hour or a pre determined time’, a NOTAM in addition to the SNOWTAM must be sent. for NOTAM action promulgation as per AIC Y 086/2009 (GUIDANCE FOR THE DISTRIBUTION AND COMPLETION OF SNOWTAM FORM (CA 1272) which can located via the NATS AIS website.</p>	Noted	<p>Appendix 3D has been withdrawn and is currently being considered for subsequent revision. At the time of publication, Information Notice IN-2013/181 (Winter Operations) refers.</p>

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33	Chapter 3, Appendix 3D, para 6 Notification Procedures 6.3	<p>‘...OPMET Broadcast system of disseminating information, every half hour in the following format: runway designator, type, extent and depth of deposit; and braking action if on compacted snow and ice.’</p> <p>It is very unlikely that any UK airports will operate on compacted snow and ice. Suggest this is deleted.</p>	Noted	Appendix 3D has been withdrawn and is currently being considered for subsequent revision. At the time of publication Information Notice IN-2013/181 (Winter Operations) refers.
34	Chapter 3, Appendix 3D, para 6.5	Why a NOTAM as well as a SNOWTAM? This is duplication of work and all the info is already contained in the SNOWTAM. Does CAA require the creation of both documents, is this necessary?	Noted	Appendix 3D has been withdrawn and is currently being considered for subsequent revision. At the time of publication Information Notice IN-2013/181 (Winter Operations) refers.
35	Chapter 3, Appendix 3I,	<p>Rationale: New Appendix to provide guidance to those aerodrome operators wishing to assess the effectiveness of their RESA.</p> <p>No definitive guidance is given as to any addition to RESA required when the runway is reduced in length for any reason which automatically increases the risk even though the minimum requirement (90m) is always used as a minimum. Additional guidance could be provided by the addition of a paragraph stating where a runway is reduced in length additional RESA must be provided proportionate to the reduction in the length of the runway. Example Runway length reduced by 10% additional RESA provided above the minimum (10% of 90m = 9m addition provided).</p>	Noted	The CAA does not anticipate an increase in RESA being required as RESA is not part of any aircraft performance calculation.
36	Chapter 3, Appendix 3I	<p>The intention is to achieve good wet weather braking. Experience with the wet weather accidents at George, South Africa in 2009 and Bristol in 2006 have shown us that runway surface friction measurements can be misleading. Your proposed text places too much reliance on runway surface friction: “Runway surface friction and drainage characteristics, which may affect aeroplane braking action if degraded by the presence of contaminants or the accumulation of rubber deposits;”. I propose that it should specifically mention all the engineering elements of good wet weather braking and not just friction. The misleading nature of some friction measurements can be seen from the George interim accident report: On 9 December 2009, two days after the accident, the service of the same service provider was obtained to perform another friction test on the runway. The tests were conducted at 65 kph and at the same runway intervals as the previous test of 6 November 2009. The friction test results reflect an average value of 0.77, which met the design objective level of 0.74.” And also from the Bristol accident report: On the afternoon of 17 November 2006, when the runway surface was ‘wet, wet, wet’,</p>	Accepted	Appendix 3I, Paragraph 9 amended

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		<p>the crew of a landing Embraer 145 reported that braking action in the middle section of the runway was 'poor'. The Mandatory Occurrence Report (MOR) submitted by the crew described a 'total loss of braking action' for about 3 seconds. That evening, a Mu-meter run was recorded in the ATC watch log as showing 'good braking action', and the runway surface was assessed as 'damp, wet, wet'. The flight crew of a Fokker 100 aircraft which landed soon after the assessment reported that 'some of the middle bits of the runway have definitely not got good braking action'. To achieve good wet weather braking, I therefore suggest that paragraph 9f be split in two – one to address the engineering elements of good wet weather braking (and not just friction) and the other to address runway surface contamination. The engineering elements provided in ICAO Annex 14 to ensure good wet weather braking are runway surface texture depth and transverse runway slope for rapid drainage. In addition the runway shall be without irregularities that would result in a loss of friction and the surface shall be constructed to provide good friction characteristics when the runway is wet. My proposal is to reword paragraph 9f into two paragraphs as follows: 9f-A1) "Runway surface texture depth, transverse slope and drainage, irregularities that would result in a loss of friction, and the general friction characteristics when the runway is wet;" 9f-2) "Degradation of runway surface friction which may affect aeroplane braking action due to the presence of contaminants or the accumulation of rubber deposits;".</p>		
37	Chapter 3, Appendix 3I, para 7	<p>Paragraph 7 presents a number of factors. My proposal is to add "frequency" to this list, since risk is comprised of scenarios, frequency and consequence. I see that frequency is also addressed in paragraph 9 but I think that it needs this additional emphasis. My proposal is to reword paragraph 7 as follows: "The risk of an aeroplane undershooting or overrunning a runway involves a large number of variable factors. These factors include prevailing weather conditions, the type of aeroplane (e.g. large jet aircraft, business jet, turboprop), the landing aids available, <u>frequency of use</u>, runway characteristics, the surrounding environment and pilot performance."</p>	Accepted	Appendix 3I, Paragraph 7 amended

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38	Chapter 3, Appendix 3I, para 16	<p>This is an important point, and forms a key part of the risk assessment. I note that a number of the recent overrun accidents have been on short runways (George runway is 2000m long, Bristol is 2011m, Congonhas is 1940m, Chicago Midway is 1988m). We know that a Boeing 737 operating on a 1800m long runway is more of an overrun risk than a Dash 8 on a 3500m long runway. My proposal is to include two drawings so that the risk of using a short runway will be more easily considered. These drawings enable the risk and probability of an event to be almost instantaneously assessed. They are: insert drawings here These drawings came from my paper: Emery, S (2009) Risk analysis study on the need for a runway surface friction layer. 2nd European Airport Pavement Workshop, 13-14 May 2009, Amsterdam. Which is available from http://www.profemery.info/papers/Risk_friction_layer_AMS_2009.pdf This paper may be freely copied and quoted, and the drawings extracted and used. The original work of these figures was not mine and came from Kirkland et al. (2004) and the work in the 1997 CAA report.</p>	Noted	Diagrams not included in the CAP as they are available as indicated.
39	Chapter 3, Appendix 3I, para 21	<p>There is a legal precedent which gives an approach to risk mitigation, and this may be worth including because my experience is that this neatly forces reluctant airports into action. I quote from one of my reports: "...the dictum of the former Chief Justice of the High Court of Australia, the Hon. Justice Gibbs, who in determining negligence on the handling of risk stated: "Where it is possible to guard against a foreseeable risk which, though not perhaps great, nevertheless cannot be called remote or fanciful, by adopting a means which involves little difficulty or expense, the failure to adopt such means will in general be negligent." From: Turner v. The State of South Australia (1982) (High Court of Australia before Gibbs CJ, Murphy, Brennan, Deane and Dawson JJ).</p>	Noted	The CAA believes that the intent of the comment is already included in the text.
40	Chapter 3, Appendix 3I, para 22a	<p>Following my discussion on paragraph 9f above, I suggest that paragraph 22a be split into two - the first to address the runway surface and the second to address contamination. I believe that it is reasonable to include runway re-surfacing and reshaping as a mitigation measure. It is better for the runway to help the aircraft stop in time than for a RESA to mitigate the accident. I note that after the George accident in South Africa, there have been several runway resurfacing projects in that country in which the runway crossfall was increased to improve drainage, as well as a friction treatment provided on the surfacing. Inadequate crossfall has been found to be a particular issue with ex-military airports in that country. My proposal is to reword paragraph 22a into two paragraphs as follows: 22a-1) "Resurface and if needed reshape the runway</p>	Accepted	Chapter 3, Appendix 3I, paragraph 22 amended.

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		to improve runway surface texture depth, increase transverse runway slope for rapid drainage, and remove any irregularities that would result in a loss of friction. The new surface shall be constructed to provide good friction characteristics when the runway is wet, and this would include grooving or providing a specific surface friction layer. 22a-2) “Improve the friction characteristics of runway surfaces and/or limit the lowest friction values by the removal of contamination or rubber deposits to increase the chances of an aeroplane stopping on the paved surface especially when wet or contaminated.		
41	Chapter 3, Appendix 3I, para 26	Remove the wording ‘on a regular basis and’. If the RESA is accepted initially by the CAA then a regular review is onerous and unnecessary and will only be required in the event of a significant change.	Accepted	Chapter 3, Appendix 3I, paragraph 26 amended.
42	Chapter 3, Appendix 3I, para 26	As part of the aerodrome’s SMS, licence holders should review their RESA risk assessment on a regular basis. Should this be the Runway Excursion Risk Assessment (ref Safety Notice SN–2012/004 - <i>the risk of a runway excursion should now be assessed on a regular basis</i>)?	Accepted	Chapter 3, Appendix 3I, paragraph 26 amended.
43	Chapter 3, GENERAL COMMENT	Suggest the use of ‘Aircraft’ or ‘Aeroplane’ rather than both throughout this Chapter.	Accepted	Amendment will be made throughout the document.
44	Chapter 5, para 2	Will there be any guidance on what phraseology is to be used when a Birdstrike occurs? If the word birdstrike is to disappear and be replaced by “Wildlife” then a further question by controllers would be to ascertain what type of wildlife has been hit.	Noted	Whilst ICAO and EASA, in the general sense refer to ‘Wildlife’, the UK CAA will continue to refer to actual occurrences as ‘Birdstrike’.
45	Chapter 6, para 1.3	“Both strategies result in the possibility of entering LVPs with the installation operating below the required serviceability levels.” (Should LVPs be LVO?)	Noted	We are unable to match this comment with the reference provided and the NPA.
46	Chapter 6, para 1.4	Is there a difference between large and major? How is this defined by the number of movements or the length of the runway? What is meant by a weekly survey as this is not defined?	Noted	We are unable to match this comment with the reference provided and the NPA.

No.	[Chapter/Section/Para etc] Reference	Comment	CAA Comment	CAA Response
47	Chapter 6, para 2.5 check attachments. The correct reference is Ch 6 para 12.3.5 (a)	<p>Traditional paint markings of AGL and other asset locations quickly wear out so airports are increasingly turning to RFID tagging for asset identification. When used as part of an integrated asset management system RFID tagging will help an airport to electronically:</p> <ul style="list-style-type: none"> • Locate and Identify assets by RFID Tag read or GPS <input type="checkbox"/> • Record all faults seen <input type="checkbox"/> • Record all maintenance actions performed <input type="checkbox"/> • Runway Visual Inspection without the need to stop <input type="checkbox"/> • Import of faulty lights from MALMS photometric testing <input type="checkbox"/> • Remote Inspection of Approach lighting <input type="checkbox"/> • Inspection of Signs, Obstruction Lights, PAPI's <input type="checkbox"/> • Full Reporting Package providing complete audit trail use as part of a digital inspection and maintenance regime. We therefore propose that the wording of para 2.5 be amended to allow this alternative method of location marking. 	Noted	Pre-existing wording not changed in this revision. New technologies or other methods are not excluded by the guidance in this paragraph.
48	Chapter 6, para 2.11 - Correct reference should be Ch 6 para 12.3.11	Over the past 5 years XXXXX has developed and tested the MALMS AGL Cleaner to be used as part of an airports preventative maintenance regime. This cleaner uses a mixture of sodium bicarbonate (mild alkaline levels) and air to clean fittings. This cleaning powder has been tested over several years and we have found no evidence of significant corrosion. We would therefore ask that a definition of “high alkaline property” cleaning fluids be provided to clearly differentiate between our tested MALMS Cleaning medium and any other products that may be damaging to AGL. I attach ‘Cleaning Powder’ data-sheet and MALMS Cleaner specification for your information.	Noted	The existing wording stems from issues with cleaning fluids used at some aerodromes and remains valid. Persons conducting cleaning processes on AGL fittings should always assure themselves that any product is appropriate, safe and not injurious to the materials being cleaned. Referring to a particular product would not be even handed.
49	Chapter 6, para 10.3	Taking out of the 2 hour time limit – very pleased to see this change.	Noted	Nil action
50	Chapter 6, para 10.4	As above, very pleased to see this change.	Noted	Nil action
51	Chapter 6, Appendix 6E, para 2.5 - The correct reference is Ch 6 para 12.3.5 (a)	Whilst agree with the principle, the methodology of marking for (a) should be left to the airfield, as historically painted markings have faded or become illegible, and during winter months cannot be replaced due surface conditions or de-icer contamination effecting the paints ability to adhere to the surface. Therefore alternate method used i.e. stamping the pot ring.	Noted	Pre-existing wording not changed in this revision. New technologies or other methods are not excluded by the guidance in this paragraph.

No.	[Chapter/Section/Para etc] Reference	Comment	CAA Comment	CAA Response
52	Chapter 8 Para 2.4	(revert to the text in the current version of CAP 168 for this paragraph). Insert the following. 2.10 It is acknowledged that flights may take place that would not normally require the use of a licensed aerodrome or, the occupancy of the aircraft, due to the purpose of the flight, is low. Examples include cargo only flights, training flights, positioning flights, end of aircraft life flights. In such circumstances it would be reasonable to determine an appropriate level of RFFS provision by risk assessment through the aerodromes SMS. 2.11 The use of a Nominated Diversion Aerodrome (NDA) with RFFS one category below the aeroplane category is allowed subject to an agreement between the aerodrome licence holder and each affected aircraft operator. Prior to implementing any RFFS reduction for NDA purposes, or the purposes outlined in Para 2.10 above, the aerodrome licence holder should: a) ensure that, as part of their SMSs, the aircraft operator and the aerodrome Accountable Manager have identified the risks, appropriate mitigation measures and the ownership of the residual risks; b) ensure that any agreement is implemented between the aircraft operator and the aerodrome licence holder, covering RFFS provision and any other operating issues deemed necessary; c) ensure that a review of resources and tactics is carried out; d) review the impact as part of local community emergency planning arrangements; e) implement a recording procedure for reduced RFFS category operations;	Accepted	The wording will be amended to make clear the application.
53	Chapter 8	Having reviewed the CAP 168 NPA I would like to make the following comments/suggestions: - Table 8A.4 and Table 8B.4 appear to duplicate the word 'aerodrome' in relation to minimum supervisory level. Appendix 8D para 2.2: Delete the sentence "However, it must be achieved within the regulation relative to each Member State" This is not relevant in the context of CAP 168, Appendix 8D para 5: Add sub-paragraphs as follows - 5.2 Local authority emergency service stakeholders should be invited to contribute to the development of the TRA. 5.3 The TRA and its conclusions should be signed off by the Aerodrome Accountable Manager	Partially accepted	First point - accepted. Second point - accepted. Third point - accepted. Fourth point - not accepted; the TRA is already required to be referenced in the Aerodrome Manual, which is signed off by the Accountable Manager.
54	Chapter 8, para 2.10	There is a great deal of confusion as to the reduction in RFFS Category and it is not clear.	Noted	It is anticipated that this addition will clarify the issue.
55	Chapter 8, para 2.10	Is there to be a difference in Category between Cargo Only Flights and Cargo flights with Dangerous Goods? (Is there a need for a Category 2 Aircraft carrying ordinary parcels etc. no dangerous goods to be Cat 3?) Life Risk?	Accepted	There is a difference and this will be made clear.

No.	[Chapter/Section/Para etc] Reference	Comment	CAA Comment	CAA Response
56	Chapter 8, para 2.10	As an RFFS Cat 2 Aerodrome, we apply remission to Cat 3. Can remission be applied to Cargo Aircraft with dangerous goods as described in CAP 789? (reference below table in proposed amendment)	Noted	Remission can only be applied down to Cat 3 for cargo aircraft carrying Dangerous Goods.
57	Chapter 8, para 2.10	If Cargo Only Flights can be reduced by 2 categories, does that mean that a Category 5 aeroplane can land at a Category 3 Aerodrome (contradicts CAP 789)?	Noted	CAP 789 Chapter 8 refers to Dangerous Goods cargo Guidance on the level of protection for all-cargo aeroplane operations can be found in the ICAO Airport Services Manual, Part 1. For information on cargo aircraft carrying dangerous goods see CAP 789, Requirements and Guidance Material for Operators.
58	Chapter 8, para 2.10	Changes required to reflect latest guidance on reductions of RFFS Greater clarity is required in respect to the reduction of RFFS provision under certain conditions. Low Occupancy Flights are a feature at many aerodromes and given that normal assessment of categorisation is determined by Table 8.1 bringing the occupancy in to the assessment may be subjective. Focussing on the example of “Business Jets” what is a definition of Low Occupancy?	Partially accepted.	A risk assessment will be subjective. A definition of 'Low Occupancy' flights will be provided.
59	Chapter 8, para 2.10 f	Inappropriate wording. Looks like a return to Temporary Depletion.	Not accepted	Similar wording is currently used. Temporary depletion was an arbitrary method of reduction. Contingency planning assumes a level of assessment and ownership of risk.
60	Chapter 8, para 2.11	The points noted (A – F) appear to be a direct lift from the existing CAP 168 (2.10) dated April 2011 and reflect the process for managing Nominated Diversions; Is the Authority satisfied that the bullet points are suitable for the proposed changes outlined above?	Not accepted	The CAA is satisfied that they are suitable.
61	Chapter 8, para 6.2	After level of staffing insert <i>and qualification.</i>	Accepted	The wording will be added.
62	Chapter 8, para 6.4q (pg 47)	Passenger evacuation management needs to highlight this is in additional role support to help the airline aircraft crew who are trained in evacuation of their pax who they are have responsibility for	Partially accepted	The Passenger Evacuation Management will not necessarily be provided by or resourced from the RFFS. The wording will be amended.
63	Chapter 8, para 9.1	Replace 'helicopter' with 'aircraft' to avoid confusion. The paragraph applies to a wider scope than helicopter.	Noted	Nil.

No.	[Chapter/Section/Para etc] Reference	Comment	CAA Comment	CAA Response
64	Chapter 8, para 27.1	Should be highlighted as an example template – Amounts of agent used needs to be clear on RFFS & FRS approximate use - Change RFFS (AFS) FRS (LAFRS) – Vehicle accident/incidents change or clarify to Vehicle/structures involved at & during incident	Accepted	The wording will be amended
65	Chapter 8, para 27.1 (pg 45)	numbering sequence appears incorrect	Not accepted	The table is not numbered.
66	Chapter 8, Appendix 8B, Table 8B.4 (pg 49)	Table 8B.4 Aerodrome supervisor clarify RFFS terminology or airport	Accepted	The wording will be amended.
67	Chapter 8, Appendix 8D	Should include completed T&RA should be agreed with the CAA	Not accepted	Chapter 8, Para. 6.5 already says the staffing and supervisory levels should be detailed in the Aerodrome Manual and submitted to the CAA for acceptance.
68	Chapter 8, Appendix 8D, para 1.1 (pg 52)	Appendix 8D 1.1 Last part of para possibly needs to include secondary duties/first aid response 2.2 Member state needs clarification. Human factors – bold heading little input to industry on training/awareness, needs more input on ATP CAA approved courses at all role levels	Partially accepted	The attendance at other incidents is a matter for the aerodrome operator. 2.2 - The wording will be amended. Human Factors training will be raised with ATPs.
69	Chapter 8, Appendix 8D, para 14.5 (pg 58)	14.5 point 2 Time – minutes & seconds is this not in the extreme, all times are for ideal conditions and are best approximate based on training as is the time expressed for response times. (15.7 same issues on timing)	Not accepted	It is appropriate to record the times precisely.
70	Chapter 8, Appendix 8D, para 15	See Table 1 should read see <i>Table 8D:1</i>	Noted	Numbering will be checked.
71	Chapter 8, Appendix 8D, para 15.2	Supervisors -: Should this not relate to Competence rather than job title -: i.e. Supervisor – 1 = A1, Crew Commander – 3 = B1, C1 & D1.	Accepted	The wording will be amended.
72	Chapter 8, Appendix 8D, para 15.4	Should be clear that this table is a worked example, if you follow the process through from paragraph 13.1 onwards, it looks like you are advocating a minimum overall compliment of 14 men for a CAT 9 aircraft. The note on the dispatcher not being part of the minimum should be removed.	Accepted	The wording will be amended.
73	Chapter 8, Appendix 8D, para 15.6	Table 8D.2 -: Within the table as a whole, it would be prudent to remove the reference to the aircraft type, again for the reasons stated above. B1,C1 & D1 are all referred to as Crew Managers previously (15.2) but are now referred to as Supervisors? Competence or Job title?	Partially accepted	It will be made clear that this is an example.

No.	[Chapter/Section/Para etc] Reference	Comment	CAA Comment	CAA Response
74	Chapter 8, Appendix 8D, para 15.6 Table 8D.2: Task and Resource Analysis	In relation to the table supplied as a guidance document and the suggestion that the RFFS TRA prepares a time line in conjunction with the activities to assist in the general guidance. The guidance as far as time is currently benchmarked is completed in conjunction with the RFFS Response Time Objective as stipulated within CAP 168 and is periodically and effectively assessed, then reviewed within each individual aerodromes response capabilities. The added introduction of a timeline to a TRA may in fact place undue pressure upon the Incident Commander to delegate resource to meet a timeline based on a hypothetical scenario, this can expose Fire Service personnel to risks not correctly assessed due pressures placed on meeting this timeline. In turn failure to meet this timeline can have consequences in Law either Criminal or Civil cases, an example being next of kin holding RFFS responsible to failing to meet stated objectives which may have resulted in loss of life - liability may fall onto a licensee if used in a court room. Stating this "was only a guidance document" would not stand up in UK Law (In my opinion) if challenged after an incident – if its relevant to your crewing levels and deployment plans its relevant and a key document in any legal actions. If this is to be progressed a definitive legal position should be sought by the Regulator – CAA and this advice promulgated to all Airport Licensees.	Partially accepted	It will be made clear that this is an example and the CAA provides guidance to assist with the development of specific operating procedures which it is considered would be used in any formal review. For guidance on determining the minimum numbers of RFFS personnel including Supervisory see ICAO Airport Services Manual and CAA Information Notice IN-2013/149 and Information Paper IP-4 Task & Resource Analysis.
75	Chapter 8, Appendix 8D, para 8.1	<u>Level of supervision for each operational crew.</u> This should either be changed to each operational watch or a definition as to "Operational Crew" be made to clearly indicate that this relates either to the total number of personnel on duty, or the number of personnel on each individual appliance.	Accepted	The wording has been amended. Response to comment #75 refers.
76	Chapter 8, Overall comment on Appendix 8D	Whilst I understand the requirement to provide guidance to aerodromes on the methodology around building a Task and Resource Analysis, my concern revolves around potential issues following an aircraft accident at an aerodrome that does not mirror or closely represent the worked example within Appendix 8D. This concern falls from a previous Fire Service incident, although not related to aviation, where reference to a piece of guidance was made in relation to being best practice and as such should have been the minimum standard adopted. If you are advocating the model in table 8D1, then why not make it mandatory.	Noted	See response to comment #75
77	Glossary	Document glossary of terms needs expanding for abbreviations e.g. PEMS, pinch points	Accepted	The Glossary shall be amended to include.