Aerodrome Standards Department

Notice of Proposed Amendment 02/2009

Amendment to CAP 168

Licensing of Aerodromes

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This ***Notice of Proposed Amendment*** (NPA) is made up of the following parts:

A. EXPLANATORY NOTE

1. General
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5. Discussion Of The Proposals

B. THE PROPOSALS

This includes the proposed amendments to *Civil Aviation Publication (CAP) 168 Licensing of Aerodromes* by chapter. In some cases, existing appendices have been replaced entirely, whereas, in most cases, the changes relate to a specific section or paragraph. A number of minor corrections have also been made, and these are not included in the consultation. Likewise, the amendment to CAP 168 will also incorporate a number of *Notice to Aerodrome Licence Holders (NOTALs)* which will subsequently be withdrawn; these are:

- 2009/07 Rescue and Fire Fighting Service (RFFS) Category Required at a Nominated Diversion Aerodrome (NDA)
- 2008/14 Runway Declared Distances - Use of Starter Extensions
- 2008/12 CAA Aerodrome Standards Department 'On Notice' Procedure
- 2008/10 Runway Declared Distances - Intersection Take-Off
- 2008/04 RFFS Category Special Aerodromes, Initial Emergency Responder
- 2008/03 Aerodrome Boundaries
- 2003/02 Requirements for Code F Facilities and the Introduction of A380 Aircraft Operations

PART A – EXPLANATORY NOTE

1. General

The purpose of this amendment to *Civil Aviation Publication* (CAP) *168 Licensing of Aerodromes* is to propose changes to the requirements for licensed aerodromes and to provide further guidance and explanatory material.

The format of the NPA and Consultation process is consistent with the style used by ICAO (when proposing changes to Annexes via State Letters) which is also adopted by the European Aviation Safety Agency (EASA) for their NPA process. The format is intended to make it easier for recipients to review the document, by including only proposed amendments, new guidance and new or revised requirements.

There are a number of factors that have determined the need for and timing of this amendment:

- Changes to ICAO Standards and Recommended Practices (SARPs) that are due to become effective in November 2009 and November 2010, as outlined in State Letter AN 4/1.2.23-09/30 (Amendment 10 to Annex 14 Vol 1);
- NOTALs due to be incorporated into CAP 168, which are set out in Para B of these proposals;
- Developments in runway incursion prevention;
- Additional technological and procedural developments.

Incorporating these amendments will ensure that CAP 168 remains current in the run-up to EASA undertaking rulemaking for applicable aerodromes for countries in the EU, which takes effect in 2014.

2. Consultation

In order to reach a wide audience and collect relevant comments, the text of this NPA is submitted for consultation to all aerodrome licence holders and other interested parties via the CAA consultations page on the CAA website.

A comment form is included with the consultation details on the web page, for completion and submission to ASD via consultation.asd@caa.co.uk.

In accordance with recommendations from the Better Regulation Executive, a 12-week consultation period is offered. The CAA must receive comments back by **20 February 2010**. Comments that are not submitted on the appropriate form provided or which are received after this date, may not be considered.

3. Comment Response Document

The comments will be reviewed by ASD unless they are of such nature that they necessitate the establishment of a working group. All comments received will be responded to and incorporated in a Comment Response Document (CRD), which will also be posted on the CAA consultations page. The CRD may contain a list of all persons and/or organisations that have provided comments. The CRD will be available four weeks after the consultation has closed.

4. Preliminary Impact Assessment

Intent

The intent of this amendment to *CAP 168 Licensing of Aerodromes* is to ensure that the requirements for licensed aerodromes remain current. All licensed aerodromes may be affected by these proposals.

Options

There is no alternative option. To do nothing would mean that the UK CAA has neither adopted nor implemented changes arising from ICAO State letters, and that requirements and guidance for aerodromes would not be current.

Impacts

Safety: The intended changes are expected to have a positive impact on safety.

Economic: The proposed changes bring into CAP 168 requirements that are already in place, by incorporating NOTALs and changes arising from amendments to ICAO Annex 14 or European regulations (EU-Ops) that will not create an economic impact on licenced aerodromes.

However, some of the proposals may impact on the design and operating requirements for some aerodromes.

Conclusion of the Preliminary Impact Assessment

The majority of the proposals of this NPA are considered as having a positive safety impact and a limited economic impact. Therefore the progress of the proposals is justified.

5. Discussion of the Proposals

a) Administrative changes

The following changes have been incorporated throughout this amendment to CAP 168. They are mainly administrative, thus will not be outlined or consulted upon in part B The Proposals.

i) Typographical errors have been corrected.
ii) References to other documents have been updated.

b) Other changes

All other changes are outlined in Part B to this NPA. For each chapter, only the amended paragraphs are shown, in tabular format, providing the rationale for the change, the previous text (if applicable) and the proposed amendment. Shading denotes new or amended text, whereas text to be deleted is shown with a line through it. Tables and diagrams are also shown in their entirety.

PART B – PROPOSED CHANGES

CAP 168 Introduction

Paragraph 12	Rationale: The applicability for adopting changes from Annex 14.
Previous Text: Paragraph 12 to be revised – proposed new text highlighted.	
Proposed Text: Where it is necessary for an aerodrome operator to apply an ICAO SARP that has not been implemented in CAP 168, then this shall be assessed on a case-by-case basis. The relevant Annex 14 SARP will form the basis of this assessment. The need for any subsequent amendment to CAP 168 to include the relevant SARP shall also be considered and actioned as appropriate. The standards and best practice against which the application for a licence will be assessed are those laid out in ICAO Annex 14 Volume 1, and where applicable also Annex 14 Volume 2. Where a definition is not provided in the Glossary of Terms, the definition provided in ICAO Annex 14 Volume 1, Aerodrome Design and Operations, will apply. ~~unless otherwise stated.~~	

CAP 168 Glossary of Terms

Paragraph N/A	Rationale: To accord CAP 168 with the ICAO Annex 14 definition, as proposed in State Letter 09/30.
Previous Text: As shown – proposed text highlighted.	

Proposed Text:

Precision Approach Instrument Runway

Category II (Cat II) operation

A precision instrument approach and landing with a decision height lower than 200 ft (60 m) but not lower than 100 ft, and a runway visual range not less than ~~350m~~ 300 m.

Category IIIA (Cat IIIA) operation

A precision instrument approach and landing with either a decision height lower than 100 ft (30 m), or with no decision height and a runway visual range not less than ~~200m~~ 175 m.

Category IIIB (Cat IIIB) operation

A precision instrument approach and landing with either, a decision height lower than 50 ft (15 m), or with no decision height and a runway visual range less than ~~200m~~ 175 m but not less than ~~75~~ 50 m. **See Editorial Note**

Note: The definitions for Category I, II and III are derived from the Standards and Recommended Practices detailed in ICAO Annex 14, as described in Amendment 10 (State Letter 09/30) and are intended to cater for the full range of operations that might reasonably be expected at a particular aerodrome, however, they should not be confused with the minimum requirements for specific aeroplane operations as described in EU-OPS (Subpart E).

Paragraph N/A	Rationale: To introduce into CAP 168 approach definitions included in EASA EU-OPS.
Previous Text: All proposed new text.	

Proposed Text:

Lower than Standard Category I Operation: A Category I Instrument Approach and Landing Operation using a Category I Decision height, with an RVR lower than would normally be associated with the applicable Decision height.

Other than Standard Category II Operation: A Category II Instrument Approach and Landing Operation to a runway where some or all of the elements of the ICAO Annex 14 Precision Approach Category II lighting system are not available.

Editorial Note – 2/12/2009: Subsequent to publication of this NPA it was noted that the distance stated of 75 m had been inserted in error, the correct distance being 50 m.

Chapter 1 (Licensing Process)

Paragraph 7.3	Rationale: To re-emphasise the licensing condition regarding aerodrome development procedures.
New Paragraph.	
Proposed Text: 7.3. Aerodrome licence holders should develop procedures that describe the processes by which changes to the physical characteristics, including the erection of new buildings and alterations to existing buildings or to visual aids, are managed to comply with licence Conditions 3 and 4.	

Paragraph 11	Rationale: To assimilate the content of NOTAL 2008/12 (On Notice) and additional information on aerodromes requiring 'Special Attention'.
Proposed Text: All new.	
Oversight and Licence Action 11.1 There may be occasions where aerodromes require greater regulatory oversight, for instance where large or complex aerodrome developments are being undertaken, where significant operational changes have taken place or in order to achieve a satisfactory standard of compliance. Additionally, there may be occasions where concerns have been raised about the safety of the aerodrome, its facilities, equipment or organisational structure in meeting CAA licensing requirements. In these circumstances the aerodrome may be identified as requiring 'Special Attention'. 11.2 Whilst the great majority of licence holders maintain high safety standards, there are occasions when the CAA detects unchecked trends in some operations that indicate standards are deteriorating. If left unchecked this could lead to a situation whereby the CAA is no longer satisfied as to a licence holder's competence to secure that the aerodrome is safe for use by aircraft. 11.3 With such aerodromes the CAA will take action in a consistent manner that makes it clear to the licence holder what it must do to recover the situation. It must also be made clear what the consequences are, should it fail to adhere to an agreed recovery plan. In the event that the CAA has observed an adverse trend, which, if unchecked, would lead it to cease to be satisfied as to the competence of the licence holder, the CAA will contact the licence holder to set out the CAA's concerns. This may result in the aerodrome being placed 'On Notice', which may attract a greater level of regulatory oversight by the CAA. The CAA will make it clear that unless the trend is checked the CAA may cease to be satisfied as to the competence of the licence holder.	

11.4 It is important to recognise that every case needs to be judged on the individual circumstances. Examples of what could prompt action include:

a) Level 1 Audit Findings;
b) Repetitive Level 2 Audit Findings, including a failure to identify root causes of findings or a 'sticking plaster' approach to findings;
c) Significant incidents, together with a failure to investigate properly and deal with the root causes;
d) An increasing number of incidents, indicating an underlying systemic failure;
e) Poor management attitude to compliance;
f) A management that prefers solutions that simply address the detail of the finding and that is unwilling or unable to put measures in place that address the root cause of non-compliances;
g) Unstable/ineffective management. Instability can be caused by changes in structure, personnel, or both.

11.5 The CAA will set out its concerns and request a recovery plan from the licence holder to address the causes of the adverse trend. The recovery plan should provide deliverables that can be measured, including specific timescales. The recovery plan should set out clearly the "who, what, where and how". The need for, and adherence to, agreed timescales is particularly important.

11.6 The licence holder will be informed that a failure to deliver, either in terms of quality and/or time, will result in firm regulatory action. This action may include the suspension of an aerodrome licence.

11.7 Where the licence holder completes the agreed actions in the recovery plan to the satisfaction of the CAA so that it has checked the adverse trend observed by the CAA, the licence holder will be informed in writing that they are no longer 'On Notice'.

Chapter 2 Aerodrome Manual

Paragraph 6.1.4	Rationale: To include details of the licensing condition regarding aerodrome development procedures.
New Sub Paragraph.	
Proposed Text: (w) Procedures for the management of on-aerodrome development and changes to physical characteristics.	

Paragraph 7.1.2	Rationale: To introduce the request to provide an aerodrome plan in paper format.
Previous Text: As shown – proposed text highlighted.	
Proposed Text: 7.1.2 The aerodrome manual, emergency orders~~,~~ and details of the safety management system, if contained in a separate document(s), ~~and a map illustrating the licensed area,~~ should be submitted in electronic form. In order to facilitate assessments of aerodrome developments and the treatment of obstacles, the aerodrome plan should be provided in paper form.	

Chapter 2 - Appendix 2A – Runway Visual Range (RVR) Assessment using Human Observers

Paragraph 6.2.5 Partial Power Loss	Rationale: It is not considered safe for operations to continue during LVPs when partial power loss has resulted in an outage of 50% of the Aeronautical Ground Lighting.
Previous Text: As shown – deleted paragraph.	
Proposed Deleted Text: ~~6.2.5 **Partial power failure**~~ ~~At some aerodromes a partial electrical power failure can result in every second light being extinguished. If special conversion tables appropriate to these circumstances are not available, the observer should double the number of lights that can be seen then subtract one. This number can then be used with the normal conversion table to establish an RVR. The record in the RVR log should be annotated accordingly.~~	

Chapter 2 - Appendix 2B – Low Visibility Operations

Paragraphs 9.4 & 9.5	Rationale: Improved guidance – link to proposed amendment to Glossary.
Proposed New Text.	
9.4 At aerodromes suitable for either Lower than Standard Category 1 or Other than Standard Category 2 approach operations, LVPs commensurate with the actual RVR limits allowed using either of these new approach operations should be in place. 9.5 At aerodromes suitable for aircraft utilizing Enhanced Vision Systems, LVPs commensurate with the actual RVR limits allowed for aircraft using these systems should be in place.	

Chapter 2 - Appendix 2C – Aerodrome Safety Management System

Paragraph 1	Rationale: ICAO has published *Doc 9859 ICAO Safety Management Manual*. This appendix reflects that guidance for application in the UK.
Previous Text: Deleted – New Appendix.	

1. **Introduction**

1.1 An effective Safety Management System (SMS) forms the primary safety oversight covering the way an aerodrome manages safety. An aerodrome SMS should demonstrate an identifiable and easily audited systematic control of the management of safety at an aerodrome. It should be able to display to the aerodrome organisation and prove to the CAA that all activities result in continuous compliance with the safety requirements and, by applying lessons learned, aim to make improvements to the overall level of safety.

1.2. The implementation of an aerodrome SMS should be commensurate with the size of the aerodrome and the complexity of the services provided.

1.3 The CAA publishes advice and guidance on SMS in CAP 642, CAP 726, CAP 728 and CAP 760, which is consistent with that contained in the *ICAO Document 9859 Safety Management Manual (SMM).*

1.4 The ICAO SMS framework consists of four components and twelve elements, and where possible, aerodrome licence holders should include or refer to the ICAO SMS elements below.

2. SMS Framework

2.1 Safety policy and objectives.

2.2 Management commitment and responsibility.

An effective safety policy, endorsed by the Accountable Manager, sets a clear direction for the aerodrome to follow and contributes to all aspects of business and safety performance. The safety policy should include a statement about the provision of adequate resources and show the commitment of senior management to manage safety effectively.

2.3 Safety accountability.

The aerodrome should identify an Accountable Manager who is accountable for ensuring that all operational activities can be financed and carried out to the standard required

2.4 Appointment of key personnel.

The aerodrome should identify a manager to be the responsible individual and focal point for the implementation and day-to-day maintenance of an effective SMS.

2.5 Coordination of emergency response planning.

The aerodrome should ensure that an emergency response plan provides for the orderly and efficient transition from normal to emergency operations and the return to normal operations. The plan should be properly coordinated with the emergency response plans of those organisations it must interface with during the provision of its services.

2.6 SMS documentation.

The aerodrome should develop and maintain documentation describing the safety policy and objectives, the SMS processes and procedures, the accountabilities and responsibilities for the processes and procedures and the SMS outputs. As part of the SMS documentation, the aerodrome should develop and maintain a safety management systems manual. For smaller and less complex aerodromes this may be integrated into the aerodrome manual.

2.7 Safety Risk Management.

2.7.1 Hazard identification.

The aerodrome should develop and maintain a formal process to identify safety hazards affecting the operation. Hazard identification should be based on a combination of proactive, predictive and reactive methods of safety data collection.

2.8 Safety risk assessment and mitigation.

The aerodrome should develop and maintain a formal process that ensures analysis and assessment of the safety risks in aerodrome operations and should implement remedial action necessary to maintain an acceptable level of safety. This process should be reviewed regularly, and in any case when changes occur that may affect the safety hazards or the associated risks.

2.9 Safety Assurance.

2.9.1 Safety performance monitoring and measurement.

The aerodrome should ensure that safety performance is measured and compared to agreed safety levels and safety objectives to reveal when and where improvement is needed. Self-monitoring such as safety inspections is a part of this process.

2.10 Management of change.

The aerodrome should assess the safety impact of any safety significant changes upon other procedures and processes, individuals and the operation and organisation as a whole. This should be done in the planning stages of any project, and updated as required.

2.11 Continuous improvement of the SMS.

The aerodrome should develop and maintain a formal process to identify the causes of substandard performance of the SMS, determine the implications of substandard performance of the SMS in operation, and eliminate or mitigate such causes.

2.12 Safety Promotion.

2.12.1 Training and education.

The aerodrome should develop and maintain a safety training programme that ensures personnel are trained and competent to perform their duties. The scope of the safety training should be appropriate to each individual's role.

2.13 Safety communication.

The aerodrome should develop and maintain safety communication mechanisms that ensure all personnel are fully aware of the SMS, convey safety critical information, explain why particular safety actions are taken and why safety procedures are introduced or changed.

2.14 Guidance for those nominated as an aerodrome Accountable Manager.

2.14.1 This guidance aims to provide an indication of the level of knowledge and understanding expected of an Accountable Manager by the CAA. The Accountable Manager is a senior manager within an aerodrome operator who is accountable for ensuring that all operations activities can be financed and carried out to the standard required.

2.14.2 Though the nominee will often be the Chief Executive, CEO, President, Managing Director, General Manager or similar title, it is not necessary for him/her to be the "controlling mind" of the organisation. It is possible for an Accountable Manager to be answerable to and directed by another person or persons, and still retain the appropriate level of authority to ensure that activities are financed adequately and carried out to an acceptable standard. The organisational title of this post is at the licence holder's discretion; however, the person named to the post must be advised to CAA Aerodrome Standards as the Accountable Manager.

2.15 The Accountable Manager will:

a) ensure that all necessary resources are available to operate the aerodrome in accordance with the Aerodrome Manual. Where a reduction in the level of resources or abnormal circumstances which may affect aircraft safety occur, the Accountable Manager will ensure that a corresponding reduction in the level of operations at the aerodrome is implemented as required;

b) establish, implement and promote the safety policy; and

c) ensure compliance with relevant regulations, licensing criteria and the organisation's Safety Management System.

2.16 The Accountable Manager should have:

a) appropriate seniority within the organisation;

b) autonomy in financing operations to the required standards;

c) knowledge and understanding of the documents that prescribe relevant aerodrome safety standards;

d) understanding of the requirements for competence of aerodrome management personnel so as to ensure that competent persons are in place;

e) knowledge and understanding of Safety Management Systems related principles and practices, and how these are applied within his/her own organisation, and the role of the Accountable Manager; and

f) knowledge and understanding of the key issues of risk management within the airport operator's organisation, the aerodrome and key stakeholders.

2.17 The level of technical knowledge and understanding expected of an Accountable Manager is essentially high level, with particular reference to his/her own role in ensuring that standards are maintained.

2.18 Procedures should make clear who deputises for this person in the case of lengthy absence.

Chapter 2 - Appendix 2D – Runway Incursion Awareness

Paragraph 1.3	Rationale: To raise awareness of additional causal factors for runway incursions.
Previous text unchanged - additional bullet points to be added.	
Proposed new text.	

1.3

- confusing or inadequate aerodrome signage;
- taxiway layout;

Paragraph 2.2	Rationale: To provide new guidance on additional measures that may be utilised in order to address runway incursion prevention
Proposed new text. Subsequent paragraphs to be renumbered.	

2.2 When reviewing visual aids additional measures should be considered whenever it has been shown that further runway incursion prevention mitigation measures are required. The use of additional measures will depend on the specific circumstances but could include the following:

a) The use of enhanced stop-bars where the light fittings making up a stop-bar are spaced equally across the taxiway in a line perpendicular to the taxiway centreline at reduced intervals.
b) The use of stop-bars 24 hours a day in all lighting conditions should be considered as runway incursions are not limited to low visibility conditions.
c) The use of inset Runway Guard Lights (Chapter 6, paragraph 6.5.4).
d) The use of Runway Guard Lights 24 hours a day in all lighting conditions.
e) The use of a Runway Ahead Marking (as shown in Figure 2D.1 & 2D.2) in addition to the Mandatory Instruction Marking (Chapter 7, paragraph 4.7 and Figure 7.30). If used, the Runway Ahead Marking should be located before the mandatory marking as illustrated below and collocated with the CAT II / III holding position marking (pattern B) where applicable.
f) The use of Enhanced Taxiway Centreline Marking as shown in Chapter 7 para 4.6.7 (Fig 7.29).

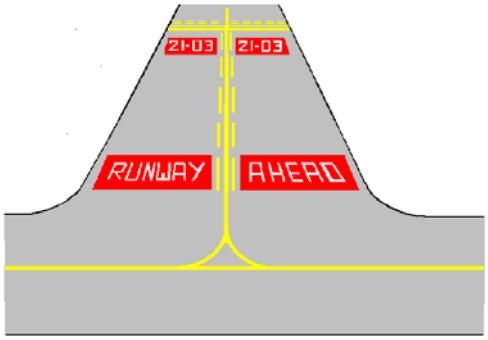

Fig 2D.1

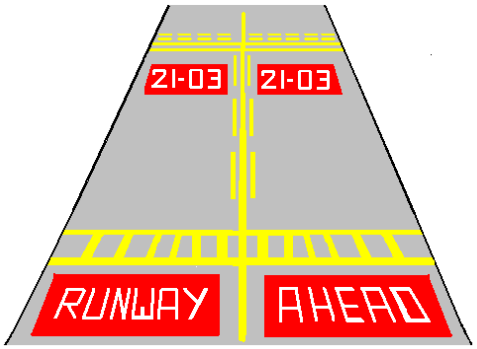

Fig 2D.2

Chapter 3 - Aerodrome Physical Characteristics

Paragraph 3.6.2	Rationale: As a result of improved guidance in CAP 683, to remove reference to a Porous Friction Course (PFC) and make the guidance more objective.
Previous Text: As shown, new text highlighted.	
Proposed Text: 3.6.2 The transverse slope on either side of the crown should be symmetrical and ideally should be 1.5% (1:66) where the code letter is C, D, E or F; and 2% (1:50) where the code letter is A or B; but in any event should not exceed 1.5% or 2% as applicable, nor be less than 1% except at runway or taxiway intersections where flatter slopes may be necessary. A 1.5% slope should be provided on a straight cross-fall. In the case of a cambered runway when a transverse slope of only 1% exists, it is recommended that the surface of that runway ~~be of a Porous Friction Course (PFC) or grooved finish.~~ demonstrates an ability to drain water effectively.	

Paragraph 3.7.3	Rationale: Revised guidance reflecting operating and certification experience.
Previous Text: As shown, new text highlighted.	
3.7.3 Runway shoulders should extend symmetrically on both sides of the runway so that the overall width of runway plus shoulders is not less than 60 m where the code letter is D or E, and 75 m where the code letter is F. Shoulders for runways where the code letter is E or F normally should be paved.	

Paragraph 7.7.1	Rationale: Alignment with Annex 14.
Previous Text: As shown – proposed text highlighted.	
Replaces existing, which is renumbered to 7.7.2: Para 7.7.1 A taxi-holding position or positions should be established on the taxiway, at the intersection of a taxiway and a runway. At grass aerodromes where taxiways are not provided aircraft should hold no closer to the runway than the runway-holding position sign.	

Paragraph 7.7.2	Rationale: Alignment with Annex 14 and consistency of holding positions.
Previous Text: N/A.	
New text taken from existing 7.7.1, with new requirements for road holding positions: Replaces existing: Para 7.7.2 A taxiway holding position, ~~or~~ holding bay, or road-holding position is not to be located closer to the runway centreline than the edge of the relative cleared and graded area of the runway. On precision instrument approach runways this distance may need to be increased to avoid: a) interference with radio aids; b) penetration of the Obstacle Free Zone by a holding aeroplane; or c) a holding aeroplane being accountable in the calculation of Obstacle Clearance Altitude/Height (OCA/H). **Table 3.3** Minimum distance from runway centreline to holding bay, ~~or~~ taxi-holding position or road-holding position.	

Paragraph 11.3.1.2	Rationale: To remove reference to a specific vehicle, and make the guidance more objective.
Previous Text: As shown, new text highlighted.	
Proposed Text: 11.3.1.2 A simple method of assessing the evenness of a natural surface is to drive over it in a ~~Land Rover or similar vehicle at 30 mph~~ suitable vehicle. The surface should not display undue signs (e.g. wheel ruts) of the vehicle passage and, ~~If~~ if the surface is acceptably even, this test should be accomplished without discomfort to the vehicle occupants.	

Chapter 4 – The Assessment and Treatment of Obstacles

Table 4.2	Rationale: The approach slope is specified in *ICAO Annex 14*, Table 4.2. Where obstacles arise they should be surveyed, promulgated and addressed. It is CAA policy not to increase the slope of the approach surface when glidepaths of steeper than 3° are used.
Previous Text: As shown	
Delete Table 4.2 Note 2: ~~The slopes of an approach surface may be increased at the discretion of the CAA. When glidepaths of steeper than 3° are used.~~	

Paragraph 9.3.1	Rationale: To allow for the assessment of an aeronautical study to be considered by the CAA where mobile and fixed obstacle clearance is below the figures provided in *Annex 14 Volume 1*, *Supplementary Guidance*, Paragraph 11.3.2.
Previous Text: Nil.	
Proposed Text: In guidance material in *ICAO Annex 14 Volume 1*, all roads are considered to be obstacles extending to 4.8 m above the crown of the road. Similarly, railways, regardless of the amount of traffic, are considered to be obstacles extending 5.4 m above the top of the rails. On receipt of an acceptable safety assessment that considers the maximum possible height of the obstacle and has assessed, as far as practicable, future development of the surrounding infrastructure, the CAA may use its discretion in accepting lower values for mobile and fixed obstacles.	

Chapter 6 - Aeronautical Ground Lighting

Paragraph 1.1.3	Rationale: To provide guidance on illuminated wind sleeves in Chapter 7 only; removes reference to where scheduled public transport operations take place. Guidance on wind sleeves will all be contained in Chapter 7 para 2.3.4.
Previous Text: As shown – deleted paragraph.	
Proposed Text: ~~1.1.3 At least one wind illuminated sleeve conforming to the requirements of Chapter 7, paragraph 2.3 , should be provided where scheduled public transport operations take place at night.~~	

Paragraph 5.7.1	Rationale: To clarify lighting requirements where the end of TORA/ASDA does not coincide with the runway end.
Previous Text: As shown, new text highlighted.	
Proposed Text: 5.7 **Runway Centreline Lights** 5.7.1 White runway centreline lights are required for take-off in RVR below 400 m and for precision instrument approach runways Category II and III. They extend from the threshold of the runway to 900 m from the upwind runway end, then the following 600 m should be alternate white and red lights, and the final 300 m to the runway end ~~of TORA/LDA~~, all red lights. Where the end of TORA/LDA does not coincide with the runway end, the section of red lights should be extended to the runway end. The circuits for the white and red lights should be arranged so as to preserve the colour coding in the event of a circuit failure. The spacing between centreline lights should be 30 m except that for Category III operations and for take-off in RVR below 400 m, the spacing should be 15 m. The layout of runway centreline lights is illustrated at Figure 6.9.	

Chapter 7 - Signals, Signs and Markings

Paragraph 2.3.4	Rationale: A) To provide revised requirements for the provision of illuminated wind sleeves to provide objective based requirements that are more easily adopted and practicable. B) To remove prescriptive specifications for the illumination of wind sleeves resulting from technological improvements.
Previous Text: As shown – proposed text highlighted.	

Old Text:

~~2.3.4 At least one wind sleeve conforming to the requirements of paragraph 2.3.3 above should be illuminated. An acceptable example is shown in the manner prescribed at Appendix 7D paragraph 1b).~~

New Text:

2.3.4 An illuminated wind sleeve is intended to provide flight crew, at night, both in the air and on the ground with a clear indication of wind speed and direction. Aerodromes licensed for the landing and take-off of aircraft at night should provide at least one illuminated wind sleeve. The illuminated wind sleeve shall be lighted by methods so that it is fit for purpose, ensuring that it is conspicuous by day and by night from the landing and take-off threshold and ensuring that from an observer's standing position on ground level there is no glare at a range of 25 m or more.

Chapter 8 – Rescue and Fire Fighting Service (RFFS)

Paragraph 6.9	Rationale: To provide enhanced visibility for RFFS personnel so as to aid command and control.
Previous Text: As shown, new text highlighted.	
Proposed Text: 6.9 RFFS personnel should be identified by markings in accordance with the National Incident Command System. The Officer in Charge of the aerodrome RFFS should wear a conspicuous coloured tunic or tabard so as to be distinguishable from the Local Authority Fire Officer.	