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Title	(B.III) Authority, Organisation and Operations Requirements for Aerodromes - CS-ADR Book 1 and 2
NPA Number	NPA 2011-20 (B.III)

UK CAA (European.Affairs@caa.co.uk) has placed **80** unique comments on this NPA:

Cmt	Segment description	Pag	Comment	Attachm
1265	CS-ADR - Book 1 - CS-ADR-DSN.A.001 — Applicability	4 - 9	**Page No:** Various (example page 6) **Paragraph No:** For example - CS-ADR-DSN.A.002 Definitions Instrument Runway (c) **Comment:** Where a height is quoted that relates to an aircraft operation it should be predominately **feet followed by metres**, if metres are required at all. **Justification:** EU-OPS does not quote these heights in metres. It avoids confusion with visibility measurements and therefore provides a level of consistency between flight operations and aerodrome operations. **Proposed Text:** 200 ft (60m) or just 200ft	
1266	CS-ADR - Book 1 - CS-ADR-DSN.A.005 — Aerodrome reference code	10	**Page No:** 10 **Paragraph No:** CS.ADR.DSN.A.005 (c) (Table A-1) **Comment:** The UK supports the use of the greater of TODA or ASDA when selecting the aerodrome reference code. **Justification:** Current aircraft performance calculations for all aircraft except the early-post-war 'unclassified' types, use ASDR (accelerate-stop distance required) and TODR (take-off distance required) in a similar context to this. At maximum weight, either the most limiting of these is compared to its ASDA/TODA counterpart (for Class A & B aircraft) or, the TODR is reduced artificially to ASDA (for Class C aircraft). Coding runways using the longer of an aerodrome's ASDA/TODA will produce the more limiting OLS etc and thus offer the better protection.	
1267	CS-ADR - Book 1 - CS-ADR-DSN.A.005 — Aerodrome reference code	10	**Page No:** 10 **Paragraph No:** CS.ADR.DSN.A.005 **Comment:** The aerodrome reference code as published does not provide the necessary flexibility for those parts of an aerodrome which do not comply with the design aircraft. **Justification:** Not all areas of the aerodrome correspond to the critical aircraft that determines the	

			aerodrome reference code, and those areas also need to be categorised in a manner consistent with the aerodrome reference code. The text suggested below provides the additional flexibility. **Proposed Text:** Add new text: CS.ADR.DSN.A.005 "**(e) It is recognised that not all areas of the aerodrome will need to correspond to the critical aircraft that determines the aerodrome reference code. Elements of the aerodrome infrastructure that do not meet the requirements of the aerodrome reference code for the design aircraft should be designated with an appropriate code letter for its dimensions. Limitations shall be identified in terms of aircraft size permitted or operating restrictions."**	
1268	CS-ADR - Book 1 - CS-ADR-DSN.B.015 — Number, siting and orientation of runways	11	**Page No:** 11 **Paragraph No:** CS.ADR.DSN B.030 (f) **Comment:** This is repeated in B.045b (runway width). **Justification:** We suggest that it is deleted here as this paragraph refers to threshold not runway width. **Proposed Text:** Delete B.030 (f)	
1269	CS-ADR - Book 1 - CS-ADR-DSN.B.015 — Number, siting and orientation of runways	11	**Page No:** 11 **Paragraph No:** CS.ADR.DSN B.030 (g) **Comment:** The UK supports this location. **Justification:** The UK has confirmed this with ICAO and it will promote accuracy in surveys management and declared distances.	
1271	CS-ADR - Book 1 - CS-ADR-DSN.B.015 — Number, siting and orientation of runways	11	**Page No:** 11 **Paragraph No:** CS.ADR.DSN B.035 **Comment:** Requirements should indicate the points from which to calculate declared distances from runway intersections. Guidance is provided in UK CAP 168, Chapter 3, paragraph 13.5. **Justification:** The UK has confirmed this with ICAO and it will promote accuracy on surveys management and declared distances. **Proposed Text:** Take text and diagrams from UK CAP 168, Chapter 3, paragraph 13.5.	
1273	CS-ADR - Book 1 - CS-ADR-DSN.B.085 — Runway strength	14	**Page No:** 14 **Paragraph No:** CS-ADR-DSN.B.085 **Comment:** The prevention of damage to the runway is outside the scope of EASA. **Justification:** Runway maintenance processes and procedures measure and mitigate any damage to the	

			runway, which is unpreventable during normal operations. **Proposed Text:** "The runway should be of sufficient strength to support normal operations of the most critical aeroplane without risk of damage to the aeroplane".	
1277	CS-ADR - Book 1 - CS-ADR-DSN.B.095 — Runway turn pads	15 - 16	**Page No:** 15 **Paragraph No:** CS-ADR-DSN.B.095 **Comment:** The statements in paragraph (b) and (c) should be merged to reflect the ICAO text. **Justification:** ICAO text is clear and simple to understand; reference to the most demanding aircraft has already been made using "...the aeroplane for which the turn pad is intended...". **Proposed Text:** "The design of a runway turn pad shall be such that, when the cockpit of the aeroplane for which the turn pad is intended remains over the turn pad marking, the clearance distance between any wheel of the aeroplane landing gear and the edge of the turn pad **shall be not less than that given by the following tabulation:"** **And DELETE (c)**	
1281	CS-ADR - Book 1 - CS-ADR-DSN.B.165 — Objects on runway strips	18	**Page No:** 18 **Paragraph No:** CS-ADR-DSN.B.165 **Comment:** The description of the protection of buried objects within the Cleared & Graded should be moved from the GM [GM-ADR-DSN.B.610 (a)] to the CS. **Justification:** Protection for an aircraft within the cleared and graded area should extend to buried objects to ensure undercarriage is not unduly damaged. Without the existence of a ramp over buried objects, damage likely to injure persons could result from an runway excursion. **Proposed Text:** NEW CS FROM EXISTING GM: **"(c) Within the general area of the strip adjacent to the runway, measures should be taken to prevent an aeroplane's wheel, when sinking into the ground, from striking a hard vertical face. Special problems may arise for runway light fittings or other objects mounted in the strip or at the intersection with a taxiway or another runway. In the case of construction, such as runways or taxiways, where the surface must also be flush with the strip surface, a vertical face can be eliminated by chamfering from the top of the construction to not less than 30 cm below the strip surface level. Other objects, the functions of which do not require them to be at surface level, should be buried to a depth of not less than 30 cm. Where this is not feasible, to eliminate a buried vertical surface, a slope should be provided which extends from the top of the construction to not less than 0.3 m below ground level. The slope**	

			should be no greater than 1:10. Newly constructed features which are not required to be at ground level should be buried to a depth of not less than 0.45 m".	
1283	CS-ADR - Book 1 - CS-ADR-DSN.B.165 — Objects on runway strips	18	**Page No:** 18 **Paragraph No:** CS.ADR.DSN.B.165 "Objects on runway strips" **Comment:** Essentials navigation aids, such as ILS glidepath aerials, need to be sited in the runway strip, so allowance must be made for them. The text as shown does not include design requirements for permitted equipment. **Justification:** Safety – all navigation aids and other equipment should be as light and frangible as their function permits. **Proposed Text:** New "(c): Aids to air navigation that need to be sited on the runway strip should be made as light and frangible as design and function will permit, and the height of such objects should be kept to a minimum for the particular site and function of the equipment. Objects which may impact the consequences of a ground swing, should be sited outside the graded area of the runway strip and positioned so that they do not penetrate a limiting surface sloping upward and outward from the runway centreline at a slope of 1:10".	
1298	CS-ADR - Book 1 - CS-ADR-DSN.B.175 — Grading of runway strips	19	**Page No:** 19 **Paragraph No:** CS.ADR.DSN.B.175 "Grading of runway strips" **Comment:** There is a minimum width requirement, but neither the CS nor the associated guidance material reflect fully the material in Annex 14, Attachment A, Section 8.3. This recommends a wider graded area of 105m either side of the runway centreline for a code 3 or 4 precision approach runway. **Justification:** Consistency with ICAO and reduction of hazard in the event of a runway excursion, which is one of the work streams for the European Commercial Aviation Safety Team (ECAST). **Proposed Text:** New (e): **For a precision approach runway the width of the area to be cleared and graded should be increased to 105m from the centreline.**	
1300	CS-ADR - Book 1 - CS-ADR-DSN.B.195 — Clearways	20 - 21	**Page No:** 20 **Paragraph No:** CS.ADR.DSN B.195 (c) **Comment:** The length of a clearway should not exceed half the length of the take-off run available (TORA). **Justification:** Consistency with Annex 14, (paragraph 3.6.2, which includes this limitation). **Proposed Text:** The length of a clearway should be	

			defined and published**, and should not exceed half the length of the take-off run available.**	
1302	CS-ADR - Book 1 - CS-ADR-DSN.B.205 — Radio altimeter operating area	21	**Page No:** 21 **Paragraph No:** CS-ADR-DSN.B.205 **Comment:** The CS should include when a radio altimeter operating area should be established. **Justification:** As the area is only needed on a precision approach runway, this should be identified in the CS rather than GM. This would be consistent with runway turn pads, runway shoulders etc. **Proposed Text:** New (c): **A radio altimeter operating area should be established in the pre-threshold area of a precision approach runway.**	
1307	CS-ADR - Book 1 - CS-ADR-DSN.C.210 — Runway End Safety Areas	22	**Page No:** 22 **Paragraph No:** CS.ADR.DSN.C.210 “Runway End Safety Area” **Comment:** The UK supports the requirements introduced for runway end safety areas. **Justification:** Their inclusion is consistent and compliant with the requirements in ICAO Annex 14, and supports the prevention and mitigation of runway excursions, which is part of the European Aviation Safety Plan.	
1309	CS-ADR - Book 1 - CS-ADR-DSN.C.210 — Runway End Safety Areas	22	**Page No:** 22 **Paragraph No:** CS.ADR.DSN.C.210 (a) (2) **Comment:** RESA needs to be considered for non-instrument Code 1 and 2 runways when jets or higher weight aircraft involved. **Justification:** Agreed by ICAO ADWG and already implemented in the UK so as to reduce the potential risks from a runway excursion at smaller aerodromes. **Proposed Text:** New (b): **A runway end safety area should be considered for non-instrument runways where the code number is 1 or 2, particularly where there are movements by jet aircraft not using public transport performance factors, or a high proportion of runway-limited movements at the higher weights.**	
1313	CS-ADR - Book 1 - CS-ADR-DSN.C.215 — Dimensions of runway end safety areas	22	**Page No:** 22 **Paragraph No:** CS.ADR.DSN.C.215 “Dimensions of runway end safety areas” **Comment:** There is no minimum width requirement. **Justification:** Minimum width is included in Annex 14 (paragraph 3.5.4). **Proposed Text:** “The width of a runway end safety area	

			should, wherever practicable, be equal to that of the graded portion of the runway strip**, and should be at least twice that of the associated runway"**.	
1323	CS-ADR - Book 1 - CS-ADR-DSN.D.260 — Taxiway minimum separation distance	25 - 26	**Page No:** 25 **Paragraph No:** CS.ADR.DSN.D.260 **Comment:** In table (column 7, code letter B), the distance between taxiway centre line and runway centreline for Code 2 non-instrument runway should read 52m instead of 42m as currently written. **Justification:** ICAO Annex 14, Table 3-1 specifies 52m **Proposed Text:** Change from 42m to 52m (column 7, code letter B)	
1330	CS-ADR - Book 1 - CS-ADR-DSN.D.260 — Taxiway minimum separation distance	25 - 26	**Page No:** 25 **Paragraph No:** CS.ADR.DSN.D.260 **Comment:** Additional text is required to highlight that, as a result of an aeronautical study, operational limitations may result. **Justification:** The text infers that, having performed an aeronautical study, the practice studied can continue as planned, whereas this might not be the case. An additional sentence is required to clarify this. **Proposed Text:** New final sentence: "**This may also result in operating limitations."**	
1338	CS-ADR - Book 1 - CS-ADR-DSN.D.305 — Taxiway shoulders	28 - 29	**Page No:** 28 **Paragraph No:** CS-ADR-DSN.D.305 **Comment:** The term 'Taxiway Shoulder' is inappropriate for use in the EU. There is a general misunderstanding between what constitutes a taxiway shoulder and the taxiway graded area. Both contain the same intent and cover the same distances from the taxiway centreline. This misunderstanding is also reflected in the ICAO SARPs. EASA should take the initiative to clarify what the area should be called and what specifications apply to it. **Justification:** There is a widespread misconception that a taxiway needs a shoulder, graded area and strip to balance those requirements attributed to a runway. However, there is a significant difference between the justification for a shoulder attached to a runway and that required for a taxiway. Aircraft operations on a runway involve high speeds and a greater potential for loss of directional control. The area adjacent to the runway is also subjected to greater jet blast from the higher power demands during take-off and reverse thrust during landing. Therefore, the graded area adjoining the runway is subjected to different conditions than that adjoining a taxiway.	

			To manage those differences, the graded area adjoining the runway has an additional protection area adjoining the runway known as the shoulder. The role of the runway shoulder is to allow an aircraft to run off the side of the runway without causing structural damage (and preferable not compound the direction control problems experience by the flight crew) and provide erosion and ingestion protection from/for aircraft engines. This requirement for a runway shoulder effectively divides the runway graded area in two with different specifications attributed to both areas. In the case of the taxiway graded area and shoulder, both areas are of identical specifications and intent. The decision, therefore, is what the area should be known as. Whereas the runway requires the graded area to be divided and puts greater protection on the shoulder area, the taxiway, due to the lower speeds, greater directional control and reduced jet blast exposure, does not need an area with greater protection than the graded area already provided. Therefore, the UK proposal is to remove the term 'shoulder' from the taxiway requirements. **Proposed Text:** DELETE CS-ADR-DSN.D.305	
1341	CS-ADR - Book 1 - CS-ADR-DSN.E.360 Slopes on aprons	32	**Page No:** 32 **Paragraph No:** CS-ADR-DSN.E.360 **Comment:** New text is needed to explain that the apron should preferably be laterally level to help reduce the hazard of ULDs rolling out of the aircraft when the locks are released during removal of cargo. This is particularly important on nose-in/push-back stands. **Justification:** Experience has shown that cargo can move under its own weight once the locks are removed and aircraft that tilt slightly towards the door can cause a hazard to safety when the ULDs move towards the exit. This hazard can be removed by ensuring and slopes on the apron run longitudinally only and that any lateral slope is either level or sloping towards the port side of the aircraft. **Proposed Text:** New text**: (c) On nose-in/pushback stands, any lateral slope should preferably be 0% or slope towards the port side of the stand.**	
1342	CS-ADR - Book 1 - CS-ADR-DSN.H.445 — Obstacle Free Zone	43	**Page No:** 43 **Paragraph No:** CS.ADR.DSN.H.445 **Comment:** This paragraph could usefully include additional material describing the purpose and limits of the Obstacle Free Zone **Justification:** Greater clarity and understanding about the purpose and characteristics **Proposed Text:** New H.445 (c): "**It is designed to protect an aeroplane with a wingspan of up to 60**	

			m which has descended below a height of 100 ft, and has been correctly aligned with the runway at that height by visual reference to the runway or approach lighting. The length of runway enclosed is based on an assumption that a go-around is initiated not later than the end of the touchdown zone and that a further 900 m distance is sufficient for the pilot to make any necessary changes of the aircraft configuration and to achieve a positive rate of climb of at least 3.33% with a deviation from track contained within a 10% splay either side of centreline. When an aeroplane's wingspan is greater than 60 m or its performance is worse than the basis used in defining the surfaces, the OFZ will need to be redesigned or operations for the particular aeroplane restricted. Conversely a narrower OFZ may be acceptable if the wingspan of aeroplanes at a particular aerodrome are limited to less than 60 m. **For the OFZ where the code number is 1 or 2 the rationale is similar to that detailed in above except that the maximum wingspan is reduced to 30 m, the rate of climb on missed approach increased to 4%, and the origin of the baulked landing surface is at the upwind end of the runway strip."**	
1343	CS-ADR - Book 1 - CS-ADR-DSN.J.475 — Non-precision approach runways	45 - 46	**Page No:** 46 **Paragraph No:** CS-ADR-DSN.J.475 – Non-precision approach runways (f), **Comment:** The term 'shielding' is referred to in all the noted sections; this should be defined in the definitions section and noted as being different from the term 'shadowing'. **Justification:** To clarify the use of 'shielding' and differentiate this from 'shadowing' to avoid confusion and mis-interpretation of use.	
1348	CS-ADR - Book 1 - CS-ADR-DSN.J.480 — Precision approach runways	46 - 47	**Page No:** 47 **Paragraph No:** CS-ADR-DSN.J.480 – Precision approach runways (i), **Comment:** The term 'shielding' is referred to in all the noted sections; this should be defined in the definitions section and noted as being different from the term 'shadowing'. **Justification:** To clarify the use of 'shielding' and differentiate this from 'shadowing' to avoid confusion and mis-interpretation of use.	
1376	CS-ADR - Book 1 - CS-ADR-DSN.J.485 —	47 - 48	**Page No:** 47 **Paragraph No:** CS-ADR-DSN.J.485 – Runways meant for	

	Runways meant for take-off		take-off (d) **Comment:** The term 'shielding' is referred to in all the noted sections; this should be defined in the definitions section and noted as being different from the term 'shadowing'. **Justification:** To clarify the use of 'shielding' and differentiate this from 'shadowing' to avoid confusion and mis-interpretation of use.	
1379	CS-ADR - Book 1 - Table J-2 Dimensions and slopes of obstacle limitation surfaces	49	**Page No:** 49 **Paragraph No:** Table J-2 Dimensions and slopes of obstacle limitation surfaces **Comment:** Final width (TOCS) for code number 1 runway should be **380m** not 280m **Justification:** ICAO Annex 14 requires a final width of 380m. **Proposed Text:** Final width – **380m**	
1380	CS-ADR - Book 1 - Table J-2 Dimensions and slopes of obstacle limitation surfaces	49	**Page No:** 49 **Paragraph No:** Table J-2 Dimensions and slopes of obstacle limitation surfaces **Comment:** The length of inner edge runway codes 1 or 2 needs to be widened to 150m if a clearway is provided. **Justification:** Aircraft that would need to take advantage of a clearway are higher performance than would normally be operated from such a runway and additional protection is required. **Proposed Text:** Length of Inner Edge code numbers 1 and 2 – **Add a footnote to each: "where clearway is provided the length of the inner edge should be 150m."**	
1382	CS-ADR - Book 1 - CS-ADR-DSN.K.490 — Wind direction indicator	50	**Page No:** 50 **Paragraph No:** CS.ADR.DSN.K.490(a) Wind Direction Indicator **Comment:** The UK supports the greater flexibility in provision.	
1386	CS-ADR - Book 1 - CS-ADR-DSN.K.495 — Landing direction indicator	50 - 51	**Page No:** 50 **Paragraph No:** CS-ADR-DSN.K.495 **Comment:** Is it necessary to have this specification for an in-scope aerodrome? **Justification:** The rules are focussed on the requirements for a large aerodrome with instrument procedures, therefore, by design, the above specification is redundant. Therefore it should be deleted.	

			Proposed Text: DELETE CS-ADR-DSN.K.495	
1389	CS-ADR - Book 1 - CS-ADR-DSN.K.500 — Signalling lamp	51	**Page No:** 51 **Paragraph No:** CS-ADR-DSN.K.500 **Comment:** Is it necessary to have this specification for an in-scope aerodrome? **Justification:** The rules are focussed on the requirements for a large aerodrome with instrument procedures, therefore, by design, the above specification is redundant. Therefore it should be deleted. **Proposed Text:** DELETE CS-ADR-DSN.K.500	
1391	CS-ADR - Book 1 - CS-ADR-DSN.K.505 — Signal panels and signal area	51	**Page No:** 51 **Paragraph No:** CS-ADR-DSN.K.505 **Comment:** Is it necessary to have this specification for an in-scope aerodrome? **Justification:** The rules are focussed on the requirements for a large aerodrome with instrument procedures, therefore, by design, the above specification is redundant. Therefore it should be deleted. **Proposed Text:** DELETE CS-ADR-DSN.K.505	
1396	CS-ADR - Book 1 - CS-ADR-DSN.L.575 — Runway-holding position marking	66 - 67	**Page No:** 67 **Paragraph No:** CS-ADR-DSN.L.575 (a)(1) **Comment:** The paragraph should refer to Figure L-7 not L-9 **Justification:** Figure L-9 refers to an increased conspicuity marking, not the normal marking. The normal marking is shown in Figure L-7. **Proposed Text:** (a)(1) At an intersection of a taxiway and a non-instrument, non-precision approach or take-off runway, the runway-holding position marking should be as shown in Figure **L-7**, pattern A.	
1399	CS-ADR - Book 1 - CS-ADR-DSN.L.575 — Runway-holding position marking	66 - 67	**Page No:** 67 **Paragraph No:** CS-ADR-DSN.L.575 (a)(2) **Comment:** The paragraph should refer to Figure L-7 not L-9 **Justification:** Figure L-9 refers to an increased conspicuity marking, not the normal marking. The normal marking is shown in Figure L-7. **Proposed Text:** (a)(2) Where a single runway-holding position is provided at an intersection of a taxiway and a precision approach category I, II or III runway, the runway-holding position marking should be as shown in Figure **L-7**, pattern A.	

1401	CS-ADR - Book 1 - CS-ADR-DSN.L.575 — Runway-holding position marking	66 - 67	**Page No:** 67 **Paragraph No:** CS-ADR-DSN.L.575 (a)(4) **Comment:** This is a repetition of paras (a)(1) & (a)(2) **Justification:** Suggest delete para (a)(4) **Proposed Text:** DELETE (a)(4)	
1403	CS-ADR - Book 1 - CS-ADR-DSN.L.575 — Runway-holding position marking	66 - 67	**Page No:** 67 **Paragraph No:** CS-ADR-DSN.L.575 (a)(6) **Comment:** To reduce the runway incursion risk, the UK requires the aerodrome to limit the width of taxiways at holding points. We suggest therefore that, rather than displaying extra markings as warnings, it is better to reduce the width of the area concerned. The CAA is also concerned at the terminology used as we believe that the important message is to emphasise to aircrew that they are about to enter the runway. Therefore we use the term RUNWAY AHEAD at the Pattern B hold bar **Justification:** This promotes accurate taxiing by aircraft and ensures consistency and standardisation of runway access, as well as signifying that it is protecting the runway. It also removes the need to provide additional markings. This has been proven to be successful in the UK. **Proposed Text:** (a)(6) Where a pattern B runway-holding position marking is located on an area where it would exceed 60 m in length, **measures should be taken to reduce the width of the area.** However, if it is deemed that reduction in width is not feasible, a pattern B runway-holding position marking is located on an area where it would exceed 60 m in length, the term 'CAT II' or 'CAT III' or RUNWAY AHEAD as appropriate.....	
1408	CS-ADR - Book 1 - CS-ADR-DSN.L.580 Intermediate holding position marking	68 - 69	**Page No:** 68/69 **Paragraph No:** CS.ADR.DSN.L.580 (b)(2) **Comment:** The distance between an intermediate holding position marking at the exit of a remote de-icing/anti-icing facility and the centreline of the adjoining taxiway for code letter F is shown as 57.5m. This does not coincide with Table D-1, column 11 (code letter F = 55m) **Justification:** The text should be consistent. **Proposed Text:** Change code letter F to read **55m.**	
1410	CS-ADR - Book 1 - CS-ADR-DSN.L.600 — Road-holding position	71	**Page No:** 71 **Paragraph No:** CS.ADR.DSN.L.600 **Comment:** The CSs for road-holding position marking should also include unpaved roads that access runways,	

	marking		information that is currently included only as guidance material. The GM. ADR.DSN.L.600 should be deleted and included in this CS. **Justification:** Consistent application of road access onto runways, which helps to minimise runway incursion risk. **Proposed Text:** (a) A road-holding position marking **may be provided, as far as practicable, at all road entrances to a runway, whether paved or unpaved.** New text: **(b) (3) Where a road that accesses a runway is unpaved, it may not be possible to install markings. In such cases, a road-holding position signs and/or lights should be installed, combined with appropriate instructions on how the driver of a vehicle should proceed.** All other text unchanged.	
1416	CS-ADR - Book 1 - CS-ADR-DSN.L.610 — Information marking	77	**Page No:** 77 **Paragraph No:** CS-ADR-DSN.L.610 **Comment:** The description of the location of the information marking should be moved from the GM [GM-ADR-DSN.L.610 (b)(1)] to the CS. **Justification:** To be consistent with other CSs that describes the location of the markings and to enhance the safety perspective. **Proposed Text:** New text: **An information (location/direction) marking should be displayed prior to and following complex taxiway intersections and where operational experience has indicated the addition of a taxiway location marking could assist flight crew ground navigation and on the pavement surface at regular intervals along taxiways of great length.**	
1708	CS-ADR - Book 1 - CS-ADR-DSN.M.620 — Aeronautical beacons	79 - 80	**Page No:** 79 **Paragraph No:** CS.ADR.DSN.M.620(b)(3)(i) **Comment:** ICAO permits the aerodrome beacon to have either coloured flashes alternating with white flashes, or white flashes only. **Justification:** Consistency with ICAO Annex 14 **Proposed Text:** The aerodrome beacon should show either coloured flashes alternating with white flashes, **or white flashes only**.	
1709	CS-ADR - Book 1 - CS-ADR-DSN.M.625 — Approach lighting	80 - 82	**Page No:** 82 **Paragraph No:** CS.ADR.DSN.M.625 (f) (1) & (2) **Comment:** Distance between runway lights incorrect.	

	systems, general and applicability		**Justification:** Annex 14 5.3.12.5 and CAP168 Ch 6 paragraph 5.7.1 states 30m spacing or 15m spacing **Proposed Text:** Change 60m to 30m, and 30m to 15m.	
1710	CS-ADR - Book 1 - CS-ADR-DSN.M.635 — Precision approach category II and III lighting system	87 - 88	**Page No:** 87 **Paragraph No:** CS.ADR.DSN.M.635 (f) **Comment:** Wording permits crossbars all to be the same width so that the outer ends lie on two parallel lines. **Justification:** The UK designed Calvert coded centreline system specifies a decrease in cross bar width to form lines converging at the centreline 300m from the threshold. **Proposed Text:** delete "...either are parallel to the centreline or..."	
1711	CS-ADR - Book 1 - CS-ADR-DSN.M.640 — Visual approach slope indicator systems: general	91	**Page No:** 91 **Paragraph No:** CS.ADR.DSN.M.640 **Comment:** The CS would be easier to understand if it included drawings. **Justification:** UK CAP 168 Chapter 6 Appendix 6B includes useful drawings which help to explain the certification specification. **Proposed Text:** Include text and drawings from UK CAP 168	
1712	CS-ADR - Book 1 - CS-ADR-DSN.M.670 — Runway threshold identification lights	100 - 101	**Page No:** 101 **Paragraph No:** CS.ADR.DSN.M.670(a)(1) and (2) **Comment:** This requirement should also apply to non-instrument runways. **Justification:** Improved identification of runway threshold for all categories of runway. **Proposed Text:** "Runway threshold identification lights should be installed: (1) at the threshold of a non-precision approach runway when additional threshold conspicuity is necessary or where it is not practicable to provide other approach lighting aids; **(2) at the threshold of a non-instrument runway when additional threshold conspicuity is necessary or where it is not practicable to provide other approach lighting aids; and** **(3)** where a runway threshold is permanently displaced from the runway extremity or temporarily displaced from the normal position and additional threshold conspicuity is necessary."	

1713	CS-ADR - Book 1 - CS-ADR-DSN.M.675 — Runway edge lights	101 - 102	**Page No:** 101 **Paragraph No:** CS.ADR.DSN.M.675(b)(2) **Comment:** There should not be a tolerance of 3m (which allows runway edge lights to be placed up to 3m from the edge of the runway. The lights should be located along the edges of the area declared for use as the runway. **Justification:** Lights should be located along the edge of the area declared for use as this does not promote the use of non-load bearing or unsuitable surface. Where a runway is not provided with shoulders this could indicate that unpaved surface is available as runway. **Proposed Text:** "Runway edge lights should be placed along the edges of the area declared for use as the runway." DELETE "or outside edges of the area at a distance of not more than 3 m."	
1714	CS-ADR - Book 1 - CS-ADR-DSN.M.675 — Runway edge lights	101 - 102	**Page No:** 101 **Paragraph No:** CS.ADR.DSN.M675 (c) (1) (ii) **Comment:** Text doesn't make it clear that if a centreline is subsequently provided the yellow edge lights should be changed to white. **Justification:** Leaving the yellows would create the possibility for confusion as to the status of the runway. **Proposed Text:** Add "**If centreline lights are installed subsequently, the yellow caution zone lights should be replaced with white lights."**	
1715	CS-ADR - Book 1 - CS-ADR-DSN.M.680 — Runway threshold and wing bar lights	102 - 103	**Page No:** 102 **Paragraph No:** CS.ADR.DSN.M680 (b) (1) **Comment:** UK does not permit 3m tolerance. **Justification:** At night or in low visibility, crews might think there was more pavement available for turning than there actually is. **Proposed Text:** Delete "...and in any case, not more than 3m outside the extremity."	
1716	CS-ADR - Book 1 - CS-ADR-DSN.M.685 — Runway end lights	103 - 104	**Page No:** 103 **Paragraph No:** CS.ADR.DSN. M.685(b)(i) **Comment:** There should not be a tolerance of 3m (which allows runway end lights to be placed up to 3m beyond the end of the runway. The lights should be located along the end of the area declared for use as the runway. **Justification:** Lights should be located at the edge of the area declared for use as this does not promote the use of a non-load bearing or unsuitable surface.	

			Proposed Text: "Runway end lights should be placed on a line at right angles to the runway axis as near **as possible to the runway end**." DELETE " and, in any case, not more than 3 m outside the end."	
1717	CS-ADR - CS-ADR-DSN.M.690 — Runway centre line lights	107	**Page No:** 107 **Paragraph No:** CS.ADR.DSN.M690 (b) (1) **Comment:** There is some ambiguity with the word "threshold" in the last sentence. **Justification:** Where there is a displaced threshold and the runway in front of this is available for takeoff (whether above or below 400m) centreline lighting if provided should commence at the start of the runway as per (Annex 14 5.3.12.6.), therefore the two should cross-refer to each other. **Proposed Text:** The lights should be located from the **beginning of a runway available for the manoeuvring of aircraft** to the end at a spacing of approximately 15m.	
1721	CS-ADR - CS-ADR-DSN.M.690 — Runway centre line lights	107	**Page No:** 107 **Paragraph No:** CS.ADR.DSN.M.690 (c) (1) and Figure M-9 (page 106) **Comment:** The NPA specifies that Red/White colour coded runway centre line lights are provided 900m from runway end. **Justification:** Text is required to identify what to do if the end of the declared distances does not coincide with runway end. UK CAP168, Ch6, Para 5.7.1 provides such guidance. **Proposed Text:** Additional sentence: "**Where the end of TORA/LDA does not coincide with the runway end the section of red lights should be extended to the runway."**	
1724	CS-ADR - CS-ADR-DSN.M.690 — Runway centre line lights	107	**Page No:** 107 **Paragraph No:** CS.ADR.DSN.M690 (c) (2) **Comment:** The wording "chromaticity and characteristics" is not needed in this case. **Justification:** The extra words add nothing and impose artificial limitations. **Proposed Text:** Delete "...chromaticity and characteristics..."	
1725	CS-ADR - CS-ADR-DSN.M.690 — Runway centre line	107	**Page No:** 107 **Paragraph No:** CS.ADR.DSN.M690 (d) (2)	

	lights		**Comment:** (a) (4) refers to takeoffs with an RVR in the order of 400m requiring centreline lights to support CAT II/III operations but a spacing of only 30m is indicated. Furthermore, at (b) (1) 15m spacing is required beyond the threshold. Additional text is required to cover the gap between the start of the runway and a displaced threshold **Justification:** Low visibility takeoffs from the start of runway where the threshold is displaced using 30m spacing would be non compliant. **Proposed Text:** (d)(2)(i) runway centreline lights; (d)(2)(ii) Where the threshold of a runway does not coincide with the start of runway available for takeoff, arrangements for the provision of inset centreline lights at 15m spacing should be agreed in advance with the competent authority.	
1727	CS-ADR - Book 1 - CS-ADR-DSN.M.705 — Stopway lights	109	**Page No:** 109 **Paragraph No:** CS.ADR.DSN. M.705(b) **Comment:** There should not be a tolerance of 3m (which allows stopway lights to be placed up to 3m beyond the end of the stopway. The lights should be located along the end of the area declared for use as the stopway. **Justification:** Lights should be located at the edge of the area declared for use as this does not promote the use of non-load bearing or unsuitable surface. **Proposed Text:** DELETE text "... and, in any case, not more than 3 m outside the end."	
1728	CS-ADR - Book 1 - CS-ADR-DSN.M.710 — Taxiway centre line lights	110 - 111	**Page No:** 110 **Paragraph No:** CS.ADR.DSN. M.710(a)(4) **Comment:** If aircraft taxi routes utilise part of a runway, guidance is supplied by the runway marking and lighting. Taxiway lighting should only be provided if the runway centreline lighting is not considered adequate. **Justification:** Additional cost is not outweighed by a safety benefit. **Proposed Text: Where the runway centreline lighting is not provided or is not considered adequate**, taxiway centreline lights should be provided in all visibility conditions on a runway forming part of a standard taxi-route where specified as components of an advanced surface movement guidance and control system.	
1729	CS-ADR - Book 1 - CS-ADR-DSN.M.715 — Taxiway centre line lights on taxiways, runways, rapid exit	111 - 113	**Page No:** 111 **Paragraph No:** CS.ADR.DSN.M715 (c) (1) **Comment:** The CS apportions differing lengths of taxiway lights on runways etc. depending on whether the runway is code 1&2 or 3&4. **Justification:** To provide lengths of lead-in taxiway lights	

	taxiways or on other exit taxiways		compatible with the use of the taxiway –rapid exit taxiways 60m; other taxiways (slower speed) 30m. **Proposed Text:** c(1) Taxiway centreline lights on taxiways other than rapid exit taxiways should commence **30m before the point**.....	
1730	CS-ADR - Book 1 - CS-ADR-DSN.M.720 — Taxiway edge lights	115	**Page No:** 115 **Paragraph No:** CS.ADR.DSN. M.720(b)(4) **Comment:** There should not be a tolerance of 3m (which allows taxiway edge lights to be placed up to 3m from the edge of the taxiway). **Justification:** Lights should be located along the edge of the area declared for use as the taxiway, as this does not promote the use of non-load bearing or unsuitable surface. **Proposed Text:** The lights should be located as near as practicable to the edges of the taxiway, runway turn pad, holding bay, de-icing/anti-icing facility, apron or runway. DELETE text "... etc. or outside the edges at a distance of not more than 3 m."	
1731	CS-ADR - Book 1 - CS-ADR-DSN.M.730 — Stop bar lights	116 - 117	**Page No:** 116 **Paragraph No:** CS-ADR-DSN.M.730 **Comment:** Para. (a) (1) is difficult to understand. **Justification:** Stop bar operation is very important to the safety of runway operations. The CS should clearly describe those conditions that warrant their use as well as the conditions that may lead to exceptions. **Proposed Text:** a) Applicability: (1) A stop bar should be provided at every runway-holding position serving a runway when it is intended that the runway will be used in runway visual range conditions less than a value of 350 m. **[DELETE text "... and values between 350 m and 550 m except where:" and MOVE text in (i) and (ii) to item (2) below]** ADD NEW TEXT: (2) A stop bar should be provided at every runway-holding position serving a runway when it is intended that the runway will be used in runway visual range conditions between values of 350 m and 550 m except where: (i) appropriate aids and procedures are available to assist in preventing inadvertent incursions of aircraft and vehicles onto the runway; or	

			(ii) operational procedures exist to limit, in runway visual range conditions less than a value of 550 m, the number of: (A) aircraft on the manoeuvring area to one at a time; and (B) vehicles on the manoeuvring area to the essential minimum.	
1732	CS-ADR - Book 1 - CS-ADR-DSN.M.730 — Stop bar lights	116 - 117	**Page No:** 116 **Paragraph No:** CS-ADR-DSN.M.730 (c) (1) **Comment:** ICAO has agreed to spacing of stop bar lights up to 3m, so the EASA text should read the same as ICAO. **Justification:** Paragraph needs altering to reflect latest ICAO requirements. Also, at runway-taxi holding positions where there is an increased risk of runway incursion placing the lights closer together increases conspicuity. This has been proved in service in the UK and has been adopted by ICAO. **Proposed Text:** (1) "Stop bars should consist of lights spaced at intervals of **no greater than** 3m across the taxiway, showing red in the intended direction(s) of approach to the intersection or runway holding position."	
1735	CS-ADR - Book 1 - CS-ADR-DSN.M.745 — Runway guard lights	118 - 120	**Page No:** 119 **Paragraph No:** CS-ADR-DSN.M.745 (b) (1) **Comment:** This requirement links the operation of the runway guard lights with visibility. It should be linked to the runway being active. Text should be reworded and items (i) & (ii) deleted. **Justification:** To demonstrate to drivers and pilots that the runway is active, runway guard lights should be operational throughout the active period of the runway being in use. **Proposed Text:** Runway guard lights, Configuration A, should be provided at each taxiway/runway intersection associated with a runway **and illuminated when the runway is active**. DELETE items (i) & (ii).	
1736	CS-ADR - Book 1 - CS-ADR-DSN.M.745 — Runway guard lights	118 - 120	**Page No:** 119 **Paragraph No:** CS-ADR-DSN.M.745 (b) (2) **Comment:** Text is unclear whether the runway guards lights Configuration A & B should be co-located. **Justification:** Configuration B is operational during the day but extinguished in hours of darkness or during low visibility operations when the stop bars are in use. In these circumstances, protection for the taxiway/runway intersection is left to Configuration A. Therefore, it would	

			be prudent to supplement Configuration A with Configuration B, when applicable, rather than replace Configuration A. **Proposed Text:** Runway guard lights, **Configuration B**, should be provided at each taxiway/runway intersection **in conjunction with CS-ADR-DSN.M.745 (b) (1)** where enhanced conspicuity of the taxiway/runway intersection is needed, such as on a wide-throat taxiway, except that Configuration B should not be **co-located** with a stop bar.	
1738	CS-ADR - Book 1 - CS-ADR-DSN.M.745 — Runway guard lights	118 - 120	**Page No:** 119 **Paragraph No:** CS-ADR-DSN.M.745 (c) (1) **Comment:** Configuration B should not be included in the para. Suggest delete Configuration B. **Justification:** The paragraph relates to the location of Configuration A not Configuration B (which runs across the taxiway and is not at the sides). **Proposed Text:** Runway guard lights, **Configuration A,** should be located at each side of the taxiway and at the same distance as the runway holding position marking.	
1739	CS-ADR - Book 1 - CS-ADR-DSN.M.750 — Apron floodlighting	120 - 121	**Page No:** 120 **Paragraph No:** CS.ADR.DSN.M750 (c) (1) & (2) **Comment:** There could be other ways to ensure an apron is lit to a satisfactory standard. **Justification:** If placed in an AMC it would allow for states to innovate. **Proposed Text:** Nil – suggest inclusion as an AMC.	
1740	CS-ADR - Book 1 - CS-ADR-DSN.M.755 — Visual docking guidance system	121	**Page No:** 121 **Paragraph No:** CS.ADR.DSN.M.755 (c) **Comment:** Text is not complete. Paragraph (c) needs to be completed and additional requirements in Annex 14 relating to the azimuth guidance unit and stopping position indicator have been omitted. **Justification:** Text is not complete. Also, needs to be consistent with ICAO Annex 14. **Proposed Text:** Additional text to replace existing (c) with: **(c) Azimuth guidance unit** **(1) Location** The azimuth guidance unit should be located on or close to the extension of the stand centre line ahead of the aircraft so that its signals are visible from the cockpit of an aircraft throughout the docking manoeuvre and aligned for use at least by the pilot occupying the left seat, although it is	

			preferable for it to be aligned for use by the pilots occupying both the left and right seats. **(2) Characteristics** (i) The azimuth guidance unit should provide unambiguous left/right guidance which enables the pilot to acquire and maintain the lead-in line without over-controlling. (ii) When azimuth guidance is indicated by colour change, green should be used to identify the centre line and red for deviations from the centre line. **(d) Stopping position indicator** **(1) Location** (i) The stopping position indicator should be located in conjunction with, or sufficiently close to, the azimuth guidance unit so that a pilot can observe both the azimuth and stop signals without turning the head. (ii) The stopping position indicator should be usable at least by the pilot occupying the left seat, although it is preferable for it to be usable by the pilots occupying both the left and right seats. **(2) Characteristics** (i) The stopping position information provided by the indicator for a particular aircraft type should account for the anticipated range of variations in pilot eye height and/or viewing angle. (ii) The stopping position indicator should show the stopping position for the aircraft for which guidance is being provided and should provide closing rate information to enable the pilot to gradually decelerate the aircraft to a full stop at the intended stopping position. (iii) The stopping position indicator should provide closing rate information over a distance of at least 10 m. (iv) When stopping guidance is indicated by colour change, green should be used to show that the aircraft can proceed and red to show that the stop point has been reached, except that for a short distance prior to the stop point a third colour may be used to warn that the stopping point is close.	
1741	CS-ADR - Book 1 - CS-ADR-DSN.M.770 — Road-holding position light	125	**Page No:** 125 **Paragraph No:** CS-ADR-DSN.M.770 (a) (1) **Comment:** The road-holding position lights should be in operation whenever the runway is active, regardless of runway visual range. **Justification:** To be consistent with the UK proposed requirement at CS-ADR-DSN.M.745 (b) (1) the road-	

			holding position light should be in operation whenever the runway is active. This provides a consistent message to the drivers as to when the runway is in operation. **Proposed Text:** (1) A road-holding position light should be provided at each road-holding position serving a runway **and should be illuminated when the runway is active**.	
1743	CS-ADR - Book 1 - CS-ADR-DSN.N.775 — General	126 - 127	**Page No:** 126 **Paragraph No:** CS.ADR.DSN.N.775 (c) (5) **Comment:** The mode of illumination is not specified, yet it can greatly affect the visibility of a sign. **Justification:** All signs used in low visibility conditions should be internally illuminated. Reference should also be made to Annex 14, Appendix 4. **Proposed Text**: New N.775(c)(6) **All signs used in low visibility conditions should be internally illuminated.** Subsequent paragraphs to be renumbered	
1745	CS-ADR - Book 1 - CS-ADR-DSN.N.785 — Information signs	130 - 133	**Page No:** 132 **Paragraph No:** CS.ADR.DSN.N.785.(c)(2) **Comment:** This creates an inconsistency that will not readily be apparent to aircrew – all location signs, whether stand along or collocated, should have the same characteristics. **Justification:** Consistency, standardisation and interoperability. **Proposed Text:** A location sign should consist of **an inscription on yellow on a black background and should have a yellow border**.	
1751	CS-ADR - Book 1 - CS-ADR-DSN.N.800 — Road-holding position sign	143	**Page No:** 143 **Paragraph No:** CS-ADR-DSN.N.800 (d) (3) **Comment:** Repetition of a requirement. Suggest delete (3). **Justification:** The requirement described at para (3) is repeated at the end of para (4). To maintain clarity we suggest deletion of para (3). **Proposed Text:** DELETE para (3)	
1752	CS-ADR - Book 1 - CS-ADR-DSN.P.835 — Unpaved taxiway edge markers	145	**Page No:** 145 **Paragraph No:** CS.ADR.DSN.P.835.(b)2 **Comment:** The specification to have conical shaped markers only is too rigid. Their purpose is to delineate, not to delimit, the taxiway. **Justification:** The purpose of the markers is to delineate	

			the taxiway and other shapes have proved to be effective. In the UK, cylindrical markers (known as linlaners) have been widely and successfully used. As written, the CS is too restrictive. **Proposed Text:** Replace existing (b)(2) with: "**Where there are no lights, suitable markers should be placed so as to clearly delineate the taxiway."**	
1753	CS-ADR - Book 1 - CS-ADR-DSN.Q.845 — Marking of objects	147 - 148	**Page No:** 147 **Paragraph No:** CS.ADR.DSN.Q.845(b)(3) **Comment:** The dimensions for the marking band widths are provided in Table 6-1 in the guidance material. Reference to this should be included in the CS. **Justification:** Ease of reference and consistency **Proposed Text:** Additional sentence – "**The dimensions of the marking band widths are shown in Table 6-1.**"	
1754	CS-ADR - Book 1 - CS-ADR-DSN.Q.845 — Marking of objects	147 - 148	**Page No:** 147 **Paragraph No:** CS.ADR.DSN.Q.845(c)(2) **Comment:** The purpose of such markers is conspicuity. To facilitate this, other shapes should be permitted where deemed to be better. **Justification:** Conspicuity of overhead wires/cables. **Proposed Text:** "Markers displayed on an overhead wire, cable etc., should be **conspicuous** and have a diameter of not less than 60cm."	
1755	CS-ADR - Book 1 - CS-ADR-DSN.S.880 — Electrical power supply systems for visual aids	160 - 161	**Page No:** 160 **Paragraph No: :** CS.ADR.DSN.S.880(d) **Comment:** Such an aerodrome would not be in scope. Suggest that this paragraph is deleted. **Justification:** The scope requires an instrument approach procedure. This would apply to the primary runway, therefore the aerodrome mentioned in this CS would not be in scope. **Proposed Text:** DELETE CS.ADR.DSN.S.880(d)	
1757	CS-ADR - Book 1 - CS-ADR-DSN.S.890 — Monitoring	161	**Page No:** 161 **Paragraph No:** CS.ADR.DSN.S.890 (d) **Comment:** The intent of this paragraph is unattainable. **Justification:** The CS infers that individual lights require to be monitored. No system exists to provide automatic monitoring of individual lamp photometric performance. Photometric testing at present is achieved using a mobile device operated at intervals to suit the activity levels on the runway.	

Proposed Text: DELETE CS.ADR.DSN.S.890 (d)

1759 CS-ADR - Book 1 - CS-ADR-DSN.S.895 — Serviceability levels

161 - 163

Page No: 162

Paragraph No: CS.ADR.DSN.S.895(c)

Comment: This paragraph splits the requirements for the different sorts of lights and these would be better presented in a tabular form. Additionally, it does not address serviceability requirements for CAT I operations.

Justification: Ease of reference and completeness.

Proposed Text: Insert Table to replace subparagraph (1) to (4):

Table .... Minimum Percentage of Serviceable Light Fittings

AGL	Landing		Take-off	
	CAT I	CAT II/III	RVR <800m	RVR >800m
App beyond 450 m	85%	85%	-	-
App inner 450	85%	95%	-	-
Rwy threshold	85%	95%	-	-
Rwy end	85%	85%	85%	75%
Rwy edge	85%	95%	95%	85%
Rwy C/L where fitted	85%	95%	95%	85%
TDZ where fitted	85%	90%	-	85%

1761 CS-ADR - Book 1 - CS-ADR-DSN.T.900 — Emergency access and service roads

167

Page No: 167

Paragraph No: CS.ADR.DSN.T.900

Comment: All emergency access and service roads should be equipped with runway holding positions.

Justification: Prevention of runway incursions and consistency

Proposed Text: REPLACE text with "**All emergency access and service roads should be equipped with road holding positions."**

1762 CS-ADR - Book 1 - CS-ADR-DSN.T.915 — Siting of equipment and

167 - 169

Page No: 167

Paragraph No: CS-ADR-DSN.T.915

Comment: The text is confusing and mixes different requirements from Annex 14. Suggest a re-write of the

installations on operational areas

total CS to align with Annex 14 and clearly define the requirements.

Justification: The CS is proposing specifications that do not align with Annex 14. This could lead to confusion and inability of the aerodromes to meet the specifications.

Proposed Text:

(a) Equipment and installations should be sited as far away from the runway and taxiway centre lines as practicable.

(b) Unless its function requires it to be there for air navigation or for aircraft safety purposes, no equipment or installation endangering an aircraft should be located:

(1) on a runway strip, a runway end safety area **or a taxiway strip.**

(2) on a clearway if it would endanger an aircraft in the air.

(c) Any equipment or installation required for air navigation or for aircraft safety purposes should be frangible and mounted as low as possible, if located:

(1) on that portion of a runway strip within;

(i) 75 m of the runway centre line where the code number is 3 or 4 (77.5m where the code number is 4 and the code letter is F);

(ii) 45 m of the runway centre line where the code number is 1 or 2.

and in no circumstances located no closer than 15m from the edge of the runway.

(2) within 240 m from the end of the runway strip and:

(i) within 60 m of the extended runway centre line where the code number is 3 or 4;

(ii) within 45 m of the extended runway centre line where the code number is 1 or 2.

(3) on a runway end safety area;

(4) on a taxiway strip **(see (7)) below;**

(5) on a clearway endangering an aircraft in the air;

(6) in a way which penetrates the inner approach surface, the inner transitional surface or the baulked landing surface;

(7) within the following distances:

	Taxiway and apron taxiway	Aircraft stand taxi-

Code Letter	centreline to object in metres (see note)	lane centreline to object in metres (see note)
A	16.25	12
B	21.5	16.5
C	26	24.5
D	40.5	36
E	47.5	42.5
F	55	50.5

Note: These distances may have to be increased on taxiway curves to accommodate the wing sweep of the critical aeroplane.

Objects essential to the use of a taxiway system which are required to be sited closer than shown in the table above should not exceed a height of 0.36 m* above the taxiway level within the following distances from the edge of the taxiway:

(i) 22 m where the code letter is F;

(ii) 18 m where the code letter is D or E;

(iii) 11 m where the code letter is C;

(iv) 7.5 m where the code letter is A or B.

Between the distances above and those shown in the table, objects should not exceed 1.5 m in height above the taxiway level.

*** In the case of runway guard lights, they should not exceed a height above which their presence may endanger aircraft and should be frangible.**

(d) Any equipment or installation required for air navigation or for aircraft safety purposes that are an obstacle of operational significance in accordance with CS-ADR-DSN.J.470, CS-ADR-DSN.J.475, CS-ADR-DSN.J.480 or CS-ADR-DSN.J.485 should be frangible and mounted as low as possible.

1763	CS-ADR - Book 2 - GM-ADR-DSN.B.035 — Actual length of the runway and declared distances	209 - 210	**Page No:** 209 **Paragraph No:** GM.ADR.DSN.B.035 **Comment:** No guidance is provided on the origin and measurement of declared distances from intersections. **Justification:** Guidance material should be provided to aid with consistency. **Proposed Text:** Additional guidance material should be added, as can be found in UK CAP 168, chapter 3, paragraph 13.5 – including diagrams.

1764	CS-ADR - Book 2 - GM-ADR-DSN.B.045 — Width of runways	212	**Page No:** 212 **Paragraph No:** GM.ADR-DSN.B.045 – Width of runways **Comment:** This section should contain additional information to cover operations from runways narrower than shown in the table. **Justification:** ADR.OR.C.010 – Use of the aerodrome by large aircraft specifically covers how an aerodrome operator may permit such an operation, which may be the use of a narrow runway. The UK CAA has conducted a recent high level review of previous studies on this subject and the current regulatory framework around this. We suggest it would be prudent to add some additional information. Historically, Annex 14 criteria has been proven to be adequate. Permitting the use of a narrower runway requires highlighting and some prior consideration for both the aircraft operator and aerodrome operator. It is important for there to be no confusion between the aircraft and aerodrome operator regarding what approvals are required and from whom. **Proposed Text:** New GM.ADR-DSN.B.045 "**(c) The aerodrome operator should advise any aircraft operator whom they intend to permit to operate from a runway narrower than specified in (a) to check the Aircraft Flight Manual for any operational restrictions and/or crew training requirements for operations on narrow runways. The aerodrome operator should remind the aircraft operators to note that any such information within the Aircraft Flight Manual or the aerodrome terms of approval does not constitute an operational approval and the operator must check with their competent authority for such an approval. Any limitations should be published in the AIP."** and renumber subsequent paragraphs.	
1767	CS-ADR - Book 2 - GM-ADR-DSN.B.175 — Grading of runway strips	219 - 220	**Page No:** 220 **Paragraph No:** GM.ADR.DSN.B.175(c) **Comment:** The guidance material offers an increased width of 90m for the cleared and graded area, for a code 4 precision approach runway. This is less than the ICAO Annex 14 guidance, that the cleared and graded area be increased to 105m from the centreline for a code 3 or 4 precision approach runway. No guidance is provided on the origin and measurement of declared distances from intersections. The guidance material should reflect ICAO, but may also permit a reduction in width to 90m where justified by a safety assessment **Justification:** ICAO consistency and hazard reduction. **Proposed Text:** Revised (c): A graded area **may be reduced to a width** of 90m **if justified by a safety assessment accepted by the competent authority**.	
1769	CS-ADR -	233	**Page No:** 234	

	Book 2 - GM-ADR-DSN.D.340 — Location of holding Bays, runway-holding positions, intermediate holding positions and road-holding positions	- 234	**Paragraph No:** GM.ADR.DSN.D.340 (d) **Comment:** This guidance material contains a requirement that is not contained in the CS as the GM includes references to the infringement of the approach and take-off surfaces. The paragraph should be deleted. **Justification:** This is not consistent with the applicable CS. Many aerodromes have holding points situated within the approach surface (whenever the runway threshold is displaced by more than 60m) without adverse effect on safety. **Proposed Text:** New paragraph (d): "For all runways, it will be verified that the distance between a holding bay, runway holding position established at a taxiway/runway intersection or road-holding position and the centre line of a runway is so that a holding aircraft or vehicle will not: **a) cause interference with navigation aids;** **b) penetrate the obstacle free zone.**"	
1770	CS-ADR - Book 2 - GM-ADR-DSN.D.340 — Location of holding Bays, runway-holding positions, intermediate holding positions and road-holding positions	233 - 234	**Page No:** 234 **Paragraph No:** GM.ADR.DSN.D.340 (f) **Comment:** This guidance does not make sense as currently written. The paragraph should be rewritten or deleted. **Justification:** The meaning of the current text is not understood.	
1772	CS-ADR - Book 2 - GM-ADR-DSN.G.375 — General	238	**Page No:** 238 **Paragraph No:** GM.ADR.DSN.G.375 **Comment:** This paragraph needs text to clarify that specific de-icing facilities may not be required. Instead provision should be made by the aerodrome operator to ensure that aircraft de/anti-icing is available. **Justification:** It is important that aircraft de-icing is carried out. How this is carried out is not the purpose of these requirements, which appear to prescribe dedicated de-icing facilities. **Proposed Text:** ADD: "**The specifications below are not intended to infer that dedicated de-icing/anti-icing facilities are provided at an aerodrome. Where dedicated facilities are not provided the aerodrome operator should make provisions to ensure that aircraft de/anti-icing is available.**"	
1775	CS-ADR - Book 2 - GM-ADR-DSN.L.520 —	249	**Page No:** 249 **Paragraph No:** GM.ADR.DSN.L.520(b)	

	General – Colour and conspicuity		**Comment:** The use of reflective paints at aerodromes where operations take place at night is neither necessary nor practical. Suggest that paragraph (b) is deleted. **Justification:** At night guidance is provided by surface lighting or, for apron areas, floodlighting. The UK does not require the use of reflective paint, which is expensive and is more easily worn down (owing to the additional reflective materials included in it) and there have been no adverse safety reports that would suggest it is necessary. **Proposed Text:** DELETE GM.ADR.DSN.L.520(b)	

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