



EASA
European Aviation Safety Agency

Future Regulatory Development

Maintenance of Aerodromes Rules (EASA Developments)

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Aerodromes Section
26 November 2014

Your safety is our mission.

An agency of the European Union 

TE.GEN.00409-001

A bike path northwest Amsterdam





The world's first 100 m long solar bike lane made of solar / concrete modules, opened 12 Nov 2014. Power 10 kWh / day.

A lesson for Airports?



ADR Rules Developments

- Maintenance of Aerodrome rules
 - NPA Q1/2015, Opinion/ Decision Q1/2016
 - Issues to be addressed
 - ICAO Annex 14 Am 11A & 11B
 - Safety recommendations
 - Update of CS Table D-1
- Working method
 - Technical consultation for NPA
 - Focused thematic consultations

(RMT.0591, NPA 2014-21)

**EASA**
European Aviation Safety Agency

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ToR RMT.0591

Description:	ToR RMT.0591 Issue 1
Language:	English
ToR number:	RMT.0591
ToR Series:	RMT
Related Rulemaking Subject(s):	Maintaining aerodromes rules



Taxiway minimum separations

- Update of CS ADR-DSN.D.260 Taxiway minimum separation distances
 - Revision of Table D-1 (ICAO Table 3-1)
 - In advance of identical ICAO line
 - To facilitate ADR certification process in Member States



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Taxiway minimum separations

Background of the proposal:

- ICAO ADWG WP accepted by AP3;
- taxiway centreline deviation studies performed at several international airports;
- different sources of data: ICAO, FAA, Safety Boards, Airbus, Boeing & Airlines;
- risk-based assessment methodology concluded that the lower centre line separations could achieve a TLS between $1e10^{-7}$ and $1e10^{-8}$.



Taxiway minimum separations

Update of CS ADR- DSN.D.260 Taxiway minimum separation distance RMT.0591 — 3.9.2014

CS ADR-DSN.D.260 Taxiway minimum separation distance

- (a) The safety objective of minimum taxi separation distances is to allow safe use of taxiways and aircraft stand taxilanes to prevent possible collision with other aeroplanes operating on adjacent runways or taxiways, or collision with adjacent objects.
- (b) The separation distance between the centre line of a taxiway and the centre line of a runway, the centre line of a parallel taxiway or an object should not be less than the appropriate dimension specified in Table D-1.

Code letter	Distance between taxiway centre line and runway centre line (metres)								Taxiway centre line to taxiway centre line (metres)	Taxiway, other than aircraft stand taxilane, centre line to object (metres)	Aircraft stand taxilane centre line to aircraft stand taxilane centre line (metres)	Aircraft stand taxilane centre line to object (metres)	
	Instrument runways Code number				Non-instrument runways Code number								
	1	2	3	4		1	2	3	4				
(1)	(2)	(3)	(4)	(5)		(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13) (12)
A	82.5	82.5	—	—		37.5	47.5	—	—	23 (23.75)	15.5 (16.25)	19.5	12
B	87	87	—	—		42	52	—	—	32 (33.5)	20 (21.5)	28.5	16.5
C	—	—	168	—		—	—	93		44	26	40.5	22.5 (24.5)
D	—	—	176	176		—	—	101	101	63 (66.5)	37 (40.5)	59.5	33.5 (36)
E	—	—	—	182.5		—	—	—	107.5	76 (80)	43.5 (47.5)	72.5	40 (42.5)
F	—	—	—	190		—	—	—	115	91 (97.5)	51 (57.5)	87.5	47.5 (50.5)
<p>Note 1.— The separation distances shown in columns (2) to (9) represent ordinary combinations of runways and taxiways.</p> <p>Note 2.— The distances in columns (2) to (9) do not guarantee sufficient clearance behind a holding aeroplane to permit the passing of another aeroplane on a parallel taxiway.</p>													

Table D-1. Taxiway minimum separation distances



Taxiway minimum separations

Feed back on Consultation:

- Fully supported!;
- Improving airfield efficiency and capacity by increasing the taxi routes available to aircraft;
- Enabling site constrained airports to safely accommodate larger aircraft;
- Increasing flexibility for ATC in taxing aircraft on the ground;
- Positive influence on constructing new facilities;
- Positive respond from Boeing and Airbus.



ICAO Amendment 11A & 11B

ICAO SL41/2011 proposals are mainly not captured with published EASA AMC/CS/GM (decided by RMG)

ICAO SL20/2013 Adoption of Am 11 to Ann. 14, Vol I

Reference: EASA recommendation for a reply to SL20:

➤ Chapter 1, Am. 11A, Definitions (accepted)

Am. 11B, Definitions (revised instrument and non-instrument app. runway) (accepted)

➤ Chapter 2 Aeronautical data (accepted)

➤ 2.1 Aeronautical data

➤ 2.6 Strength of pavements

➤ 2.9 Condition of movement area and related facilities



ICAO Amendment 11A & 11B

- Chapter 3, Physical characteristics (accepted)
 - 3.1 Runways
 - 3.3 Runway turn pads
 - 3.4 Runway strips
 - 3.5 Runway end safety area
 - 3.7 Stopways
 - 3.9 Taxiways
- Chapter 5, Visual aids for navigation (accepted)
 - 5.2.8 Taxiway centre line marking
 - 5.3.14 Simple Touchdown Zone Lights
 - 5.3.16 Taxiway centre line lights
 - 5.3.19 Stop bars



ICAO Amendment 11A & 11B

- 5.3.22 Runway guard lights
- 5.3.28 No-entry bars
- Chapter 6, Visual aids for denoting obstacles (accepted)
 - 6.1 Objects to be marked and/or lighted
 - 6.1.1 Objects within the lateral boundaries of the obstacle limitation surfaces
 - 6.1.2 Objects outside the lateral boundaries of the obstacle limitation surfaces
 - 6.2.1 General
 - 6.2.2 Mobile objects
 - 6.2.3 Fixed objects
 - 6.2.4 Wind turbines

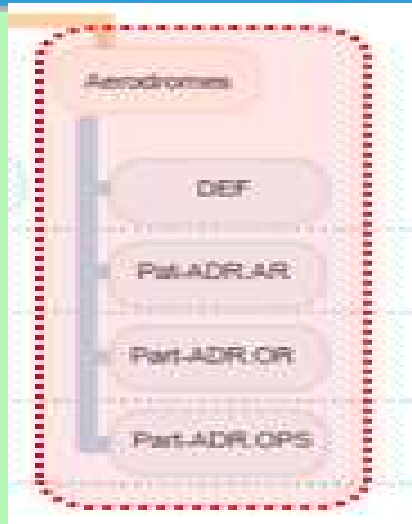


ICAO Amendment 11A & 11B

- 6.2.5 Overhead wires, cables, etc. and supporting towers
- Changes to Table 6-3; Table 6-X and Table 6-Y
- Chapter 9 Aerodrome operational services, equipment and installations (accepted, except 1 part. accepted)
 - 9.1 Aerodrome emergency planning (partially accepted)
 - 9.2 Rescue and fire fighting
 - 9.9 Siting of equipment and installations on operational areas
- Chapter 10, Aerodrome maintenance (accepted)
 - 10.1 General
 - 10.2 Pavements
 - 10.3 Removal of contaminants
 - 10.4 Runway pavement overlays
 - 10.5 Visual aids



Other ADR on-going tasks



ADR Operations



ADR Design



ADR Operator & Oversight



Commission Regulation (EU)
No 139/2014 of 12 February 2014
Entry into force: 6 March 2014

AMC/CS/GM
ED Decisions (27 February 2014)
Entry into force: 6 March 2014

Apron Management Services

- Opinion published on 24 September 2014

Rescue and Fire Fighting Services

- NPA expected 2015

Maintenance of ADR rules

- ICAO Am 11, safety recommendations, ...
- Update of CS Table D-1, NPA 3 Sep – 3 Nov 2014

VFR Heliports at aerodromes

- ToR published on 22 September 2014

ADR equipment



Food for thought – CS ADR-DSN.T.915

DP presented at ICAO ADWG 14, Oct 2014, Montreal

Possible inconsistencies in Annex 14, Volume 1 on standard 9.9.4 with regards to St. 3.5.3 and Rec. 3.5.4

- **3.5.4 Recommendation.**— *A runway end safety area should, as far as practicable, extend from the end of a runway strip to a distance of at least:*
 - *240 m where the code number is 3 or 4; or a reduced length when an arresting system is installed; ...*
- **9.9.4:** Unless its function requires it to be there for air navigation or for aircraft safety purposes, no equipment or installation shall be located within 240 m from the end of the strip and

THIS REFERS TO EASA CS:

- **CS ADR-DSN.C.215** Dimensions of runway end safety areas
- **CS ADR-DSN.T.915 (d)** Siting of equipment and installations on operational areas



Food for thought – CS ADR-DSN.C.210

DP presented at ICAO ADWG 14, Oct 2014, Montreal

Runway End Safety Area (RESA) at take-off runways

- Annex 14, **St. 3.5.1**: RESA to be provided at runways with a code number 3 or 4, and at instrument runways with a code number 1 or 2. **Rec. 3.5.2**: *RESA is recommended for non-instrument runways with code number 1 or 2.*
- However, no relevant specification for the **provision of RESA at take-off runways with code-number 1 or 2** exists in Annex 14, to mitigate the safety risks of a take-off overrun.

(Proposal for) Recommendation.— A runway end safety area should be provided at each end of a runway strip where the code number is 1 or 2 and the runway is a take-off one.

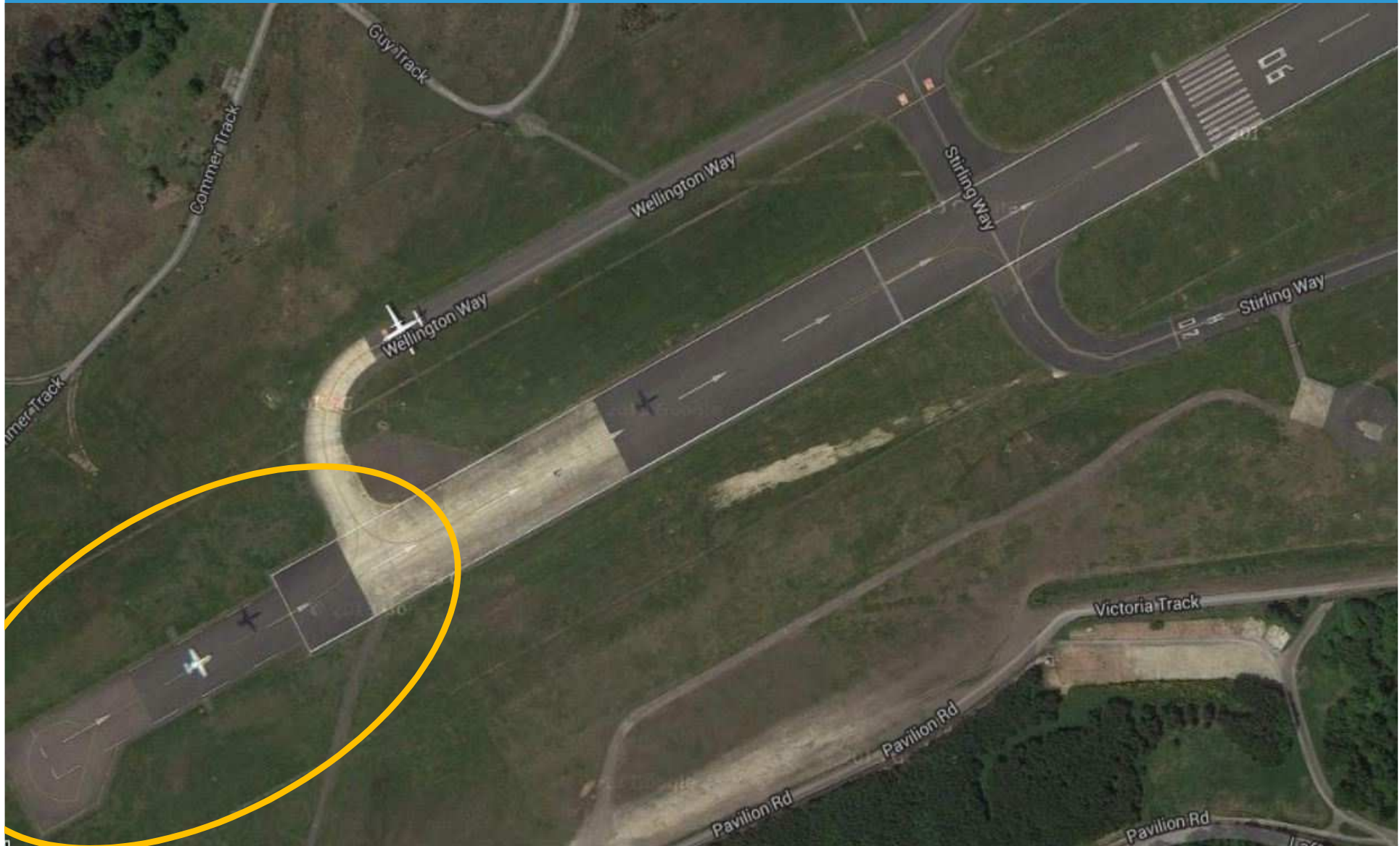
THIS REFERS TO EASA CS:

- **CS ADR-DSN.C.210** Runway End Safety Areas

Questionnaire to be sent to MS and ACI!



Food for thought – starter extension





Food for thought – Starter extension

POSSIBLE NEW CS / GM !?

- Starter extensions to provide additional runway distance to be used for take-off;
- The length of a starter extension is limited to a maximum of 150 m and the width to two-thirds of the normal runway requirement;
- TORA, TODA and ASDA should include the length of starter extension.



A background image showing four hands raised against a cloudy sky. The hands are dark, and the sky is a mix of blue and white clouds. The hands are positioned in the lower half of the frame, with their fingers spread. A semi-transparent blue banner is overlaid on the bottom half of the image, containing white text.

Your comments!

or via email: aerodromes@easa.europa.eu



EASA
European Aviation Safety Agency



Thank you!

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Your safety is our mission.

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