

Annex B

Consolidated Summary of Comments /
Responses Received, CASA's Response and
Disposition Actions to NPC 139/03 –
Proposed Amendments to
Manual of Standards (MOS) Part 139 – Aerodromes



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How comments have been administered

Where comments are the same or substantially similar, they have been amalgamated into a single response. Where comments have an obvious action that can be applied to them, the actions have been documented in the response and disposition. Some comments state an opinion which by its nature is difficult to incorporate into meaningful change to the proposed regulation. Where this is the case, CASA has noted the comments. Some comments have been edited for readability and presentation purposes.

The following comments reflect the results of consultation process.

COMMENT 1 – Aerodrome Reference Code and Aeroplane Characteristics

Respondents supported the proposal in the NPC to introduce the A380 and Dash 8Q400 aeroplanes into the MOS Part 139, Chapter 2 Table 2.1 which characterises aircraft by Aerodrome Reference Code.

In addition CASA has taken up the suggestion by one respondent to include details of the Airbus A340–500 and 600, Boeing B777–300 and Embraer E170/190 aircraft. New aircraft types will be incorporated in future amendments to MOS Part 139 – Aerodromes as they are introduced for regular air transport service into Australia.

CASA's response

Agreed. Details of the Airbus A340-500 and 600, Boeing B777-300, Embraer E170 and E190 have also been included.

Disposition

Aerodrome reference code and aeroplane characteristics for the new aeroplane types will be included in Table 2.1 of MOS Part 139, Chapter 2.

Although the majority of respondents accepted the changes being proposed to the standards for runway width and runway shoulders for A380 specific operations many suggested the wording could be changed to provide better clarification. When the proposed standards were drafted they were done with some haste to try and get the NPC process underway early. CASA agrees with many of the suggested changes put forward by respondents and the CASA Legal Services Group has worked to make the changes to the wording consistent with the responses received. The comments received were:

COMMENT 2 – Chapter 6, Section 6.2 – Runways

“proposed Note 2b refers to additional 7.5m outer shoulder for blast protection purposes. Paragraph 6.2.14.2 already requires a “further 7m outside each shoulder prepared to resist engine blast erosion”. Paragraph 6.2.14.2 may need to note that it applies to code E aeroplanes and that code F aeroplanes require 7.5m outer shoulders”.

CASA response

Agreed. Proposed standards have been redrafted to reflect respondents’ suggestion.

Disposition

A new paragraph 6.2.14.3 will be introduced which sets out the minimum shoulder requirements on 45m wide runways used for regular A380 operations.

COMMENT 3 – Chapter 6, Section 6.2 – Runways

“proposed Note 2b should say that for aerodromes used by A380 aeroplanes only for alternate/diversion purposes, normal code E shoulder requirements are acceptable”.

CASA response

Disagreed. MOS Part 139 sets out design standards applicable at destination aerodromes used for regular air transport operations. It is more appropriate to include this as general information in Chapter 1 of MOS Part 139.

Disposition

CASA will, in due course, include a section on the minimum standards for alternate aerodromes in MOS Part 139, Chapter 1.

COMMENT 4 – Chapter 6, Section 6.2 – Runways

“proposed Note 2b can be misleading when read in isolation to Paragraph 6.2.11.1. The Note may assume that 45m wide runways are appropriate with a 7.5m outer shoulder only and no consideration is given to the 7.5m inner shoulder requirement. A suggested amendment is: *For A380 operations 45m is acceptable subject to the provision of additional inner and outer shoulder requirements. Refer to paragraph 6.2.11.1*”

CASA response

Agreed. Proposed standards have been redrafted to reflect respondents’ suggestion.

Disposition

New paragraphs 6.2.3.1B and 6.2.14.3 will be introduced to set out the minimum shoulder requirements on 45m wide runways used for regular A380 operations.

COMMENT 5 – Chapter 6, Section 6.2 – Runways

proposed Note 2b refers to the provision of an additional 7.5m outer shoulder for blast protection purposes. Suggest the words outer shoulder be removed, as the use of these words creates an inconsistency with several of the requirements of paragraph 6.2.12 about the characteristics of runway shoulders (which the blast protection will not be required to meet). Suggest changing the wording to *For A380 operations 45m is acceptable subject to the provision of an additional 7.5m of blast protection on each side.*

CASA response

Disagreed. The purpose of the outer runway shoulders is to provide an area which is resistant to engine blast erosion, prevent engine ingestion and be able to support emergency and service vehicles.

Disposition

New paragraph 6.2.14.3 will require runway outer shoulders to be resistant to engine blast erosion, prevent engine ingestion and be able to support emergency and service vehicles.

COMMENT 6 – Chapter 6, Section 6.2 – Runways

Recommend changes to the MOS that allow provision of existing code E runways and taxiways for A380 operations but requires compliance with ICAO Code F standards for the construction of new facilities or major redevelopment/upgrade of existing facilities.

CASA response

Agreed. Proposed standards have been redrafted to reflect respondents’ suggestion.

Disposition

New paragraph 6.2.3.1C does not allow Code E runways to be used for regular A380 operations if the runway is constructed after the commencement of this standard or the runway is about to undergo a major redevelopment.

COMMENT 7 – Chapter 6, Section 6.2 – Runways

CASA should also include a Note dealing with the Dash 8 Q400 aircraft type. The aircraft is a code D which should only be operated on 45m wide runways. In the 18 months the aircraft has been operating there have been no safety concerns raised by any aerodrome operator. Table should reflect that 30m wide runways are acceptable for the Dash 8 Q400.

CASA response

Disagreed. Under CAR 235A minimum runway width requirement for Dash 8 Q400 operations can be reduced by one runway width to 30m and Table 6.2-1 does not need to be changed to reflect this.

Disposition

New paragraph 6.2.3.1A will allow one runway width less to be used if this is permissible under CAR 235A.

COMMENT 8 – Chapter 6, Section 6.2 – Runways

Within Note 2 the word ‘area’ should replace ‘shoulder’ as the word ‘shoulder’ may imply the provision of structural support. I do not believe this is the intention.

CASA response

Disagreed. Outer runway shoulder is to be capable of supporting emergency and service vehicles.

Disposition

New paragraph 6.2.14.3 will require runway outer shoulders on Code E runways used for regular A380 operations to be resistant to engine blast erosion prevent engine ingestion and be able to support emergency and service vehicles.

COMMENT 9 – Chapter 6, Section 6.2 – Runways

To prevent possible misinterpretation suggest *For A380 operations 45m is acceptable subject to provision of additional 7.5m outer shoulder giving a total shoulder 15m wide for blast protection purposes.*

CASA response

Agreed. Proposed standards have been redrafted to reflect respondents’ suggestion.

Disposition

New paragraph 6.2.14.3 will require runway outer shoulders on Code E runways used for regular A380 operations to be resistant to engine blast erosion prevent engine ingestion and be able to support emergency and service vehicles.

COMMENT 10 – Chapter 6, Section 6.2 – Runways

In the additional sentence to paragraph 6.2.11.1, it is suggested the word ‘must’ replace ‘may’. It is suggested the proposed additional sentence also contain a ‘rider’ that for alternate aerodromes normal code E shoulder requirements are acceptable.

CASA response

Agreed with the use of ‘must’. Disagreed on the use of a ‘rider’. MOS Part 139 sets out design standards applicable at destination aerodromes used for regular air transport operations. It is more appropriate to include a reference in Chapter 1 of MOS Part 139 on the minimum infrastructure requirements for alternate aerodromes.

Disposition

There will be no changes made to paragraph 6.2.11.1. Paragraph 6.2.11.2 provides the inner shoulder requirement for the A380 operating on Code E runways and Paragraph 6.2.14.3 provides the outer shoulder requirements for the A380 operating on Code E runways. A new section will be provided in subsequent amendment to MOS Part 139, Chapter 1 to cover minimum standards required for alternate aerodromes.

COMMENT 11 – Chapter 6, Section 6.2 – Runways

In new sentence proposed for paragraph 6.2.11.1 reference is made to 7.5m inner and outer shoulder requirement for runways. This is not consistent with existing paragraph 6.2.14.1 which refers to 7m shoulder requirements to prevent Boeing B747 engine blast erosion.

CASA response

Agreed. Proposed standards have been redrafted to reflect respondents’ suggestion.

Disposition

There will be no changes made to paragraph 6.2.11.1. Paragraph 6.2.11.2 provides the inner shoulder requirement for the A380 operating on Code E runways and Paragraph 6.2.14.3 provides the outer shoulder requirements for the A380 operating on Code E runways.

COMMENT 12 – Chapter 6, Section 6.2 – Runways

The additional sentence intended for paragraph 6.2.11.1 should appear in paragraph 6.2.11.2 and changed to read: *For code letter E runways which are used by the A380, an additional 7.5m of blast protection must be provided. The total width of the runway, shoulders and blast protection must therefore be not less than 75m, consisting of the 45m wide runway, with 7.5m of runway shoulder on each side for occasional aircraft runoff and 7.5m of blast protection on each side.*

CASA response

Agreed. Proposed standards have been redrafted to reflect respondents' suggestion and incorporated into new paragraph 6.2.14.3.

Disposition

There will be no changes made to paragraph 6.2.11.1. Paragraph 6.2.11.2 provides the inner shoulder requirement for the A380 operating on Code E runways and Paragraph 6.2.14.3 provides the outer shoulder requirements for the A380 operating on Code E runways.

COMMENT 13 – Chapter 6, Section 6.2 – Runways

The use of word 'outer shoulder' implies the provision of structural support, and should be replaced with 'blast area'.

CASA response

Disagreed. Outer runway shoulder is to be capable of supporting emergency and service vehicles.

Disposition

New paragraph 6.2.14.3 will require runway outer shoulders on Code E runways used for regular A380 operations to be resistant to engine blast erosion prevent engine ingestion and be able to support emergency and service vehicles.

COMMENT 14 – Chapter 6, Section 6.3 – Taxiways

On the basis that a 23m taxiway is acceptable for A380, then the following adjustment should be made to associated standards relating to taxiway edge clearance and to shoulder width, viz:

- in Table 6.3–2, paragraph 6.3.2.1 the pavement edge clearance should be reduced to 4.3m when an A380 uses a 23m wide taxiway; and
- paragraph 6.3.9.1 should have additional requirement for 18.5m shoulders where an A380 uses a 23m wide taxiway (except if the A380 uses the aerodrome only as an alternate/diversion aerodrome)

CASA response

Agreed. Proposed standards have been redrafted to reflect respondents' suggestion.

Disposition

New paragraph 6.3.2.1A will require the minimum clearance between the outer main gear wheels and the edge of the taxiway for an A380 aircraft regularly using a Code E taxiway to be not less than 4.3m. New paragraph 6.3.9.1A will require shoulders not less than 18.5m to be provided on Code E taxiways used regularly by the A380.

COMMENT 15 – Chapter 6, Section 6.3 – Taxiways

Add provision requiring a taxiway plus shoulder width of 60m to be maintained for A380 operations. The proposed addition to Table 6.3–1 and the current paragraph 6.3.9.1 would allow A380 operation on a taxiway plus shoulder surface of 58m. ICAO Annex 14 paragraph 3.10.1 and the A380 Airbus Compatibility recommends a taxiway plus shoulder width of 60m for Code F operations.

CASA response

Agreed. Proposed standards have been redrafted to reflect respondents' suggestion.

Disposition

New paragraph 6.3.9.1A will require shoulders not less than 18.5m to be provided on each side of Code E taxiways used regularly by the A380.

COMMENT 16 – Chapter 6, Section 6.3 – Taxiways

Consideration should be given to an amendment to deal with the Dash 8 Q400 aircraft type. The Dash 8 Q400, a Code 3D aeroplane which normally would require 23m wide taxiways has currently been exempted to operate on 15m taxiways. There have been no adverse safety issues associated with the Dash 8 Q400 operations on narrower taxiways and the standards should be changed to reflect this.

CASA response

Disagreed. Review of aerodrome standards for Dash 8 Q400 operations will be undertaken as part of future review of MOS Part 139.

Disposition

There will be no change to current MOS Part 139 requirements in respect of specific taxiway design standards for Dash 8 Q400 aeroplanes.

COMMENT 17 – Use of elevated edge lights for A380 operations

Elevated runway and taxiway edge lights are at risk of being damaged by the outer engines of the A380 and this situation may have significant safety implications.

CASA response

Disagreed. Indications to date are that elevated runway edge lights are not at significant risk of being damaged by the A380 engines. Although the preferred CASA position is to have elevated edge lights CASA allows the aerodrome operator the option of installing inset lights. This is discussed in the CASA A380 Airport Compatibility paper in Annex D.

Disposition

There will be no change to current MOS Part 139 requirements in respect of elevated versus inset runway edge lights.

COMMENT 18 – Use of Code E aerodromes by larger Code F aeroplanes

Code F standards should not be applied to Code E aerodromes as the standard for both codes were devised in the interests of safety by an international panel and any relaxation of those standards is not in the best interest of aviation and of the travelling public, but solely in the interest of the airport operators.

CASA response

Disagreed. There is sufficient evidence from international studies that the A380 is capable of being safely operated on Code E runways and taxiways conditional on providing specific shoulder treatments to prevent erosion of the shoulder surface and engine ingestion, and providing an outer shoulder capable of supporting emergency and service vehicles. The CASA A380 Airport Compatibility paper in Annex D discusses this further. Please note the CASA positioning does not apply to new airports being developed for Code F aeroplanes or when major redevelopment is undertaken at existing Code E aerodromes used regularly by the A380.

Disposition

New paragraphs will be included in MOS Part 139, Chapter 6, Section 6.2 to cover runway width, runway shoulder width and runway shoulder surface requirements for existing Code E runways used for regular A380 operations. New paragraphs will be included in MOS Part 139, Chapter 6, Section 6.3 to cover taxiway width, taxiway edge clearance and width and surface of taxiway shoulders for existing Code E taxiways used for regular A380 operations.