

## **Annex A**

# Runway Width Review of Part 139 Manual of Standards (MOS) – Aerodromes Section 6.2 – Runways

### and

# Post-Implementation Review (PIR) of Part 139 MOS – Aerodromes Chapters 1 and 2 including changes to subsequent chapters

## Proposed changes are divided into three categories:

- E = editorial/correction/clarification
- O = omission
- **S** = change made to existing Standard

Changes are set out in three columns. The first column sets out the proposed changes and are shown in red (on electronic/web based document). The second column denotes the category of change and the last column provides the reasons for the change.



Reasons  Removes reference to Parts 121A and 121B of the Civil Aviation Safety Regulations 1998 (CASR) which do not exist.  Reference to the term 'aeroplanes' replaced with the term 'aircreft'
121B of the <i>Civil Aviation Safety</i> Regulations 1998 (CASR) which do not exist.  Reference to the term 'aeroplanes'
replaced with the term 'aircraft'.  The Part 139 MOS Aerodromes sets out certain standards for certified aerodromes, registered aerodromes, and other aircraft landing areas (ALAs) not certified or registered where aircraft arrive, depart or move.  Chapter 13 is substantially advisory in nature and is therefore being removed from this MOS and placed in a new AC.  Unless otherwise stated within the MOS, any requirement for an aerodrome to upgrade any facility becomes a business decision of the aerodrome operator. Any change in regulation does not automatically trigger the need for aerodrome facilities to be upgraded unless specifically directed by CASA.



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Note: At this time CASR 121A and CASR 121B have not been made. In the interim, for the purpose of this MOS, air transport operations mean either regular public transport operations or charter operations.			
1.1.1.3 Under CASR Part 121A, aeroplanes with not more than 30 passenger seats can also conduct air transport operations from uncertified or unregistered aerodromes, provided certain specified facilities at those aerodromes are to the standard as that of a certified or registered aerodrome. Accordingly, some of the standards in this MOS are also relevant to uncertified and unregistered aerodromes.			
1.1.1.4 To complement CASR Part 121B, a separate chapter has been provided to specify the standards and procedures for aerodromes intended only for aeroplanes with not more than 9 passenger seats or in the case of freight operations, not exceeding 5,700 kg, conducting air transport operations.			
1.1.1.5 In addition to this MOS, specifications and procedures which do not reach the regulatory level and information of an educational or advisory nature, may be issued in the form of Advisory Circulars.			
1.1.1.6 Aerodrome standards will change from time to time to meet identified safety needs, technological changes and changes in international standards and practices. It is recognised that there are difficulties and limitations in applying new standards to existing aerodrome facilities and installations. This aspect is addressed in some detail in Chapter 2.			
1.1.1.7 Standards are identified by the words _must' or _shall'. Appendices and tables form part of the main document and have the same status as the primary text. This MOS may also require standards from other documents to be followed. In this case, the referred standards become part of this MOS.			
1.1.1.8 In some circumstances, the uniform application of a particular standard or procedure may not be possible or necessary. Such a standard or procedure will be phrased such as — if practicablell, — where physically practicablell, — where determined necessaryll or similar words. Whilst such phrases may imply compliance is not mandatory, aerodrome operators need to provide justification for non compliance and the final authority as to the applicability of the standard to a particular aerodrome facility or procedure rests with the regulating authority.			



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1.1.1.9 This MOS includes standards and procedures relating to the prevention of inadvertent entry of animals and people to the movement area. Those standards and procedures are intended for aviation safety only. This MOS does not address Aviation Security, i.e. the safeguarding against acts of unlawful interference as that subject matter is under the purview of the federal Department with carriage for Transport.			
1.1.1.10 Cross-referencing of standards within the MOS is not provided. The Table of Contents provides a ready reference to all the standards.			
1.1.1.11 Where there is flexibility in compliance with a specification, words like —shouldll or —mayll are used. This does not mean that the specification can be ignored, but it means that there is no need to seek CASA approval if an aerodrome operator chooses to adopt alternate means to achieve similar outcomes.			
1.1.1.12 Where it is necessary to provide factual or background information, explanation or references, or to provide a means of achieving compliance, the information is provided in the form of a —Notell. A Note does not constitute part of the standard.			
1.1.1 Background and scope			
1.1.1.1 Under section 3 of the Civil Aviation Act 1988, an aerodrome is an area authorised by the regulations for use as an aerodrome. Paragraph 92 (1) (b) of the Civil Aviation Regulations 1988 has the effect of authorising a place for use as an aerodrome if it is certified or registered under Part 139 of the Civil Aviation Safety Regulations 1998 (CASR 1998). This document is the Manual of Standards (MOS) — Part 139 Aerodromes (the MOS) made under regulation 139.015 of CASR 1998, and, together with Part 139 of CASR 1998, it sets out certain standards for certified aerodromes, registered aerodromes, and other aircraft landing areas (ALAs) not certified or registered where aircraft arrive, depart or move (uncertified or unregistered ALAs). Aerodrome safety is a vital link in aviation safety and the applicable provisions of the MOS must be complied with to ensure aviation safety.			
1.1.1.2 The effect of regulation 139.030 of CASR 1998 is that a place with a terminal instrument flight procedure (other than for specialised helicopter operations) must be a certified aerodrome or a registered aerodrome.			



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available for	effect of regulation 139.040 of CASR 1998 is that a place with a runway suitable and use by air transport operations aircraft having a maximum passenger seating capacity of 30 seats, or a maximum carrying capacity of more than 3 400kg, must be a certified		
1.1.1.4 Exc	ept where otherwise stated, the standards set out in this MOS are for certified aerodromes.		
1.1.1.5 The	standards for registered aerodromes are:		
(a)	for those matters mentioned in paragraph 139.295 (a) of CASR 1998 — the standards set out in this MOS for certified aerodromes; and		
(b)	any other standards stated by this MOS to be applicable to registered aerodromes.		
certified as	ect to regulation 139.040 of CASR 1998, nothing in this MOS prevents an ALA being a certified aerodrome, or registered as a registered aerodrome, if the applicable of Part 139 of CASR 1998 and this MOS are complied with.		
	evoid doubt, except in relation to the effects of Subpart 139.D (reporting officers and safety this MOS does not affect ALAs.		
seating caparegular publ	effect of Subpart 139.D of CASR 1998 is that when an aircraft with a maximum passenger acity of more than 9 but not more than 30 seats uses an ALA at least once a week for c transport operations, the operator of the ALA must conduct safety inspections, and have porting officer who:		
(a)	is trained in accordance with the provisions of the MOS for reporting officers; and		
(b)	monitors the serviceability of the ALA in accordance with the provisions of the MOS for such monitoring.		
	effect of Subpart 139.E of CASR 1998 is that all operators of certified and registered must ensure the following:		
(a)	that airspace monitoring around the aerodrome is in accordance with the MOS for such monitoring; and		



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(b) that obstacle limitation surfaces are established in accordance with the provisions of the MOS for obstacle limitation surfaces.			
1.1.1.10 The effect of Subpart 139.F of CASR 1998 is that all operators of certified aerodromes and registered aerodromes must ensure that frequency confirmation systems and air/ground radio services must comply with the provisions of the MOS for frequency confirmation systems and air/ground radio services.			
1.1.1.11 Appendices and tables form part of this MOS. Where this MOS incorporates by reference standards from other documents, the incorporated standards become part of this MOS.			
1.1.1.12 Other information and guidance concerning aerodromes and ALAs may be contained in Advisory Circulars.			
1.1.1.13 Standards in this MOS to prevent animals and people from inadvertently entering a movement area are for aviation safety purposes only.			
1.1.1.14 This MOS does not deal with aviation security (that is, protection from acts of unlawful interference).			
1.1.1.15 Notes in the MOS may provide information, explanations or references. A Note is not part of the standard.			



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Chapter 1 Section 1.1: General  Amend paragraph 1.1.5.1 as follows:  1.1.5.1 Responsibility for the technical content in the MOS resides with the relevant technical area within the Aviation Safety Standards Division, Flight Standards Branch, Standards Division of CASA.	E	Updates the area of responsibility within CASA.		
Chapter 1 Section 1.1: General  Amend paragraph 1.1.5.2 as follows:  1.1.5.2 This MOS is issued and amended under the authority of the Director of Aviation Safety and Chief Executive Officer.	E	Change to remove reference to Chief Executive Officer.		
Chapter 1 Section 1.1: General  Amend paragraph 1.1.5.3 as follows:  1.1.5.3 Suggested changes to this MOS must be directed to the Head, Standards Administration and Support Branch, Aviation Safety Standards Manager, Air Traffic Management System Standards Section.	E	Update the point of contact for suggested changes to the MOS.		



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1.1.6.1 These star (a) ICAO A (b) ICAO A (c) ICAO D	n 1.1: General  1.6.1 (d) as follows:  Indards should be read in conjunction with:  Annex 4: Aeronautical Charts  Annex 14: Aerodromes (Vol 1)  Doc 9157/AN901: Aerodrome Design Manuals (all parts)  I Aviation Administration (FAA) Advisory Circular 150/5300-13		0	There is no need to refer to the FAA Advisory Circular as it is not referenced within the Amended Instrument.	
Chapter 1 Section Insert definition as Air transport operations  ALA	n 1.2: Definitions  follows:  Charter operations, and regular public transport operations, within the meaning of paragraph 206 (1) (b) and paragraph 206 (1) (c), respectively, of the Civil Aviation Regulations 1988.  Aircraft landing area, being an area for the landing, movement and take-off		Е	Due to confusion regarding the use of the three various taxiway definitions, CASA proposes that the existing definitions be split into individual definitions.  A number of other definitions have been added, to clarify use of the terms	
Apron taxiway  Charter operations	of aircraft that is not a certified or registered aerodrome.  A portion of a taxiway system located on an apron and intended to provide a through taxi route for aircraft across the apron to another part of the taxiway system.  Charter operations has the same meaning as in paragraph 206 (1) (b) of the Civil Aviation Regulations 1988.		throughout the manual.		
Exit taxiway	A taxiway connected to a runway to enable landing aeroplanes to turn off the runway.				
Rapid exit taxiway	A taxiway connected to a runway at an acute angle, designed and intended to allow landing aeroplanes to turn off the runway at higher speeds than are				



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	achieved on exit taxiways, thereby minimizing runway occupancy times.		
Regular public transport operations	Regular public transport operations have the same meaning as in paragraph 206 (1) (c) of the Civil Aviation Regulations 1988.		
RPA	Rules and Practices for Aerodromes issued:  (a) by CASA before the Manual of Standards (MOS) — Part 139 Aerodromes was first issued; or  (b) otherwise by or under the authority of the Commonwealth.		
Taxilane	A portion of an apron that is not a taxiway and that is provided only for aircraft to access aircraft parking positions.		
Taxiway system	A number of interconnecting taxiways.		
Chapter 1 Section	on 1.2: Definition of Critical aeroplane follows:	0	The term 'Critical Aeroplane' is removed, where appropriate, in orde to remove operational restrictions on aircraft from Part 139 MOS.
Critical aeroplane	The aeroplane or aeroplanes identified from among the aeroplanes the aerodrome is intended to serve as having the most demanding operational requirements with respect to the determination of movement area dimensions, pavement bearing strength and other physical characteristics in the design of aerodromes.		



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Chapter 1 Substitute Taxiway	A defined path on an aerodrome on land, established for the taxiing of aircraft from one part of an aerodrome to another. A taxiway includes an apron taxiway and a rapid exit taxiway.	E	Clarification of the definition of a taxiway was needed to remove confusion with a taxilane.  A taxilane is defined separately (see editorial change earlier in this Annex).		
	Note: Apron taxiway, exit taxiway, rapid exit taxiway, taxilane and taxiway system are also defined terms.				
_	: Application of Standards to Aerodromes I General	0	This paragraph is to be removed as Parts 121A and 121B of CASR do not exist.		
2.1.1.1	aragraph 2.1.1.1 as follows:  - Civil Aviation Safety Regulations CASR Part 121A and Part 121B require aeroplane - air transport operations to operate from aerodromes meeting the requirements of CASR Pa				



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Chapter 2 Section 2.1: General  Amend paragraph 2.1.1.2 as follows:  2.1.1.2 CASR Part 139 empowers the Authority to specify standards and procedures relating to aerodromes used in air transport operations. The standards and procedures are set out in this document titled 'Manual of Standards Part 139—Aerodromes' are applicable equally to operators of land aerodromes which are either certified or registered. Operating procedures for certified and registered aerodromes differ and are set out in separate Chapters.	Е	The word 'land' is being removed from this paragraph. There will be a future need to develop standards for water aerodromes. Therefore the applicability of this MOS should not be limited to land aerodromes.		
Chapter 2 Section 2.1: General  Omit paragraph 2.1.1.3 as follows:  2.1.1.3 Under CASR Part 121A and Part 121B, operators of aeroplanes with not more than 30 passenger seats may also conduct air transport operations to aerodromes that are not certified or registered, provided specified aerodrome facilities and reporting arrangements meet appropriate standards. As aerodrome safety standards and procedures are specified in this MOS, the appropriate sections will accordingly also be applicable to those uncertified or unregistered aerodromes used in air transport operations.	0	This paragraph is to be removed as Parts 121A and 121B of CASR do not exist.		
Chapter 2 Section 2.1: General  Omit paragraph 2.1.2.1 as follows:  2.1.2.1 Standards are subject to change from time to time. In general, unless specifically directed by CASA, subject to Paragraph 2.1.2.3, existing aerodrome facilities do not need to be immediately modified in accordance with the new standards until the facility is replaced or upgraded to accommodate a more demanding aircraft.	0	Unless otherwise stated, the requirement for an aerodrome to upgrade any facility becomes a business decision of the aerodrome operator and upgrade of an individual aerodrome facility will no longer trigger a requirement for all aerodrome facilities to be reviewed and upgraded to the new standard.		



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Chapter 2 Section 2.1: General  Substitute paragraph 2.1.2.2 as follows:  2.1.2.2 Unless otherwise directed by CASA, an existing facility that does not meet the standard specified in this Manual must continue to comply with the standard that was applicable to it.  An existing facility at an aerodrome other than a certified aerodrome, that does not meet the standards set out in this MOS may continue to meet the Standards that applied to the facility when it was first introduced or last upgraded (as the case may be) until:  (a) the facility is replaced or again upgraded (as the case may be); or  (b) CASA directs in writing that, in the interests of aviation safety, the facility must comply with the standards specified in this MOS.  Note: The reconfiguring of an existing facility (including, for example, an apron) to cater for more or larger aircraft is considered by CASA to constitute an upgrade.  2.1.2.2A For paragraph 2.1.2.2, Standards means the standards set out in the version of the MOS or RPA that applied to the facility when it was first introduced or last upgraded (as the case may be).	S	Unless otherwise stated, the requirement for an aerodrome to upgrade any facility becomes a business decision of the aerodrome operator. However, the aerodrome operator will be required to upgrade those facilities that do not meet the standard applicable to the facility code that the aerodrome operator has nominated.  Unless otherwise stated, the upgrade of an individual aerodrome facility will no longer trigger a requirement for all aerodrome facilities to be reviewed and upgraded to the new standard.		
Chapter 2 Section 2.1: General  Substitute paragraph 2.1.2.3 as follows:  2.1.2.3 At a certified aerodrome, an existing aerodrome facility that does not comply with this MOS must be identified and recorded in the Aerodrome Manual. Information must include the date or period when that facility was first introduced or last upgraded and an indication from the aerodrome operator of a plan or timescale to bring the facility into compliance with the MOS. As part of the CASA audit, evidence to demonstrate efforts to implement the plan or timescale may be required.	S	Unless otherwise stated, the requirement for an aerodrome to upgrade any facility becomes a business decision of the aerodrome operator.		



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The operator of a certified aerodrome is not required to modify an existing aerodrome facility (a non-compliant facility) so that it complies with this MOS until the facility is replaced or upgraded. However, until it is replaced or upgraded, details of the non-compliant facility must be recorded in the Aerodrome Manual, including;  (a) identification of the facility;  (b) the date or period when the facility was first introduced or last upgraded (as the case may be);  (c) a description of the standard with which the facility complies, including a supporting reference to the version and date of the MOS or RPA which contains this standard; and  (d) details of the plans and timescale for replacing or upgrading the facility so that it complies with this MOS.  Note: As part of the audit of an aerodrome operator, CASA may require the operator to supply evidence showing past and current bona fide efforts to implement the plan and timescale.		However, the aerodrome operator will be required to upgrade those facilities that do not meet the standard applicable to the facility code that the aerodrome operator has nominated.  In such circumstances, the aerodrome operator of a certified aerodrome will be required to identify all facilities that do not meet the standards applicable to the relevant nominated facility code and record these in their Aerodrome Manual.		
Chapter 2 Section 2.1: General  Insert after paragraph 2.1.2.3 as follows:  The operator of a registered aerodrome is not required to modify an existing aerodrome facility (a non-compliant facility) so that it complies with this MOS until the facility is replaced or upgraded. However, until it is replaced or upgraded, details of the non-compliant facility must be recorded in accordance with paragraph 12.1.1.2A.	S	Unless otherwise stated, the requirement for an aerodrome to upgrade any facility becomes a business decision of the aerodrome operator.  However, the aerodrome operator will be required to upgrade those facilities that do not meet the standard applicable to the facility code that the aerodrome operator has nominated.		



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		In such circumstances, the aerodrome operator of a registered aerodrome will be required to identify all facilities that do not meet the standards applicable to the relevant nominated facility code and record these in a suitable Manual in accordance with the new paragraph 12.1.1.2A.			
Chapter 2 Section 2.1: General	Е	The wording of this paragraph has been simplified during the legal			
Substitute paragraph 2.1.2.4 as follows:		drafting process.			
This MOS applies to a new facility that is brought into operation, and to an existing facility that is being replaced or improved. Subject to agreement by the relevant CASA office, changes to an existing facility of a minor or partial nature may be exempted.					
A new facility that is brought into operation and an existing facility that is replaced or upgraded must comply with the standards in this MOS.					
Chapter 2 Section 2.1: General	Е	The wording of this paragraph has			
Substitute paragraph 2.1.3.1 as follows:		been modified to permit CASA to revoke an exemption, should it be considered necessary, in the interests			
2.1.3.1 An exemption granted to an existing facility continues to apply until its expiry date.		of safety			
An exemption granted to an existing facility continues to apply until its expiry date, unless sooner revoked by CASA in the interests of aviation safety.					



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Chapter 2 Section 2.1: General  Substitute paragraph 2.1.3.2 as follows:  2.1.3.2 Application for new exemptions must be supported, in writing, by cogent reasons including, where appropriate, an indication of when compliance with the current standards can be expected.  An application for an exemption from any standard in this MOS must be made and dealt with as if Subpart 11.F of CASR 1998 applied to the application.  Note: This deeming provision will be superseded in due course by Civil Aviation Legislation Amendment Regulations to expressly require exemptions from a Manual of Standards to be in accordance with Part 11 of CASR 1998.	S	This paragraph has been reworded to take into consideration the new regulations under Part 11 of CASR.  This part does not currently make mention of the MOS. Therefore an exemption must be submitted as if Part 11 of CASR applied to a MOS, until such time as Part 11 of CASR can be modified to include reference to the MOS.				
Chapter 2 Section 2.1 General  Substitute paragraph 2.1.3.3 as follows:	E	Paragraph amended to provide clarification to the existing rule.				
2.1.3.3 Those standards which include phrases such as "if practicable", "where physically practicable", etc., still require an exemption to standards when aerodrome operators wish to take advantage of the non-practicability of full compliance.						
2.1.3.3 If a provision of this MOS imposes a standard subject to a qualifying phrase such as "if practicable", "where physically practicable", "where determined necessary", the standard applies despite the qualifying phrase unless CASA has granted an exemption from the standard under paragraph 2.1.3.2.						
Note: The purpose of such qualifying phrases is to recognise that sometimes compliance with particular standards is not possible in some circumstances. The purpose of paragraph 2.1.3.3 is to ensure that it is CASA, not an aerodrome operator, who decides whether the qualifying circumstances exist.						



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Chapter 2 Section 2.1: General	Е	Reference to the 'Critical Aeroplane' has been removed from this			
Amend paragraph 2.1.5.1 as follows:		paragraph.			
2.1.5.1 Australia has adopted the International Civil Aviation Organisation (ICAO) methodology of using a code system, known as the Aerodrome Reference Code, to specify the standards for individual aerodrome facilities which are suitable for use by aeroplanes within a range of performances and sizes. The Code is composed of two elements: element 1 is a number related to the aeroplane reference field length; and element 2 is a letter related to the aeroplane wingspan and outer main gear wheel span. A particular specification is related to the more appropriate of the two elements of the Code or to an appropriate combination of the two Code elements. The Code letter or number within an element selected for design purposes is related to the critical aeroplane characteristics for which the facility is provided. There could be more than one critical aeroplane, as the critical aeroplane for a particular facility, such as a runway, may not be the critical aeroplane for another facility, such as the taxiway.					
The Code letter or number within an element selected for design purposes is related to the characteristics of the aeroplane types for which the facility is intended.					
Chapter 2 Section 2.1: General	S	CASA will no longer apply a code to aerodrome facilities based on the aircraft operations at an aerodrome.			
Amend paragraph 2.1.5.2 as follows:		The aerodrome operator will be required to nominate the facility			
2.1.5.2 The Code number for element 1 shall be determined by the aerodrome operator from column 1 of the table below. The Code number corresponding to the highest value of the aeroplane reference field lengths for which the runway is intended is to be selected.		code(s). CASA Inspectors will audit against the chosen facility code, rather than on the basis of the aircraft operating into that facility.			



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Chapter 2 Section 2.1: General  Amend paragraph 2.1.5.3 as follows:  2.1.5.3 The Code letter for element 2 shall be determined by the aerodrome operator from column 3 of the table below. The Code letter, which corresponds to the greatest wingspan, or the greatest outer main gear wheel span, whichever gives the more demanding Code letter of the aeroplanes for which the facility is intended is to be selected.	S	CASA will no longer apply a code to aerodrome facilities based on the aircraft operations at an aerodrome. The aerodrome operator will be required to nominate the facility code(s) and CASA Inspectors will audit against the chosen facility code.			
Subsection 2.1.6  Omit  2.1.6 Aerodrome Reference Codes and Aeroplane Characteristics  2.1.6.1 A list of representative aeroplanes operating in Australia and others, chosen to provide an example of each possible aerodrome reference code number and letter combination, is shown in Table 2.1-2.  2.1.6.2 For a particular aeroplane the table also provides data on the aeroplane reference field length (ARFL), wingspan and outer main gear wheel span used in determining the aerodrome reference code. The aeroplane data provided for planning purposes is indicative only. Exact values of a particular aeroplane's performance characteristics should be obtained from information published by the aeroplane manufacturer  (Tables with aircraft characteristics are also to be deleted)	0	Aircraft data tables will be removed from the MOS. Aerodrome operators will need to discuss the aircraft requirements with either (i) the aircraft manufacturer or (ii) the aircraft operator, prior to establishing the design criteria for an aerodrome upgrade.			



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Subsection 2.1.8  Omit	0	This information has been removed as it is not a standard.			
2.1.8 Non-instrument and Instrument Runways					
2.1.8.1 Runways are classified as non-instrument (also known as visual or circling approach) and instrument runways. Instrument runways are further categorised as: non-precision, precision Category I, Category II, and Category IIIA, IIIB and IIIC.					
2.1.8.2 Aerodrome operators must liaise with the relevant CASA office before initiating any changes to the runway classification or instrument category as such a change will involve changes to the standards of a number of aerodrome facilities.					
2.1.8.3 This MOS contains specifications for precision approach runways category II and III, for aerodrome facilities intended for aeroplanes with Reference Code numbers 3 and 4 only. No specification is prescribed for code 1 or 2 precision approach runways, as it is unlikely that such facilities will be required in Australian weather conditions. Aerodrome operators are asked to liaise with the relevant CASA office should there be a need to provide aerodrome facilities for Reference Code 1 or 2 aeroplanes.					



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Subsection 2.1.9 Omit as follows:	0	This information has been removed as it is not a standard.			
2.1.9.1 A non-precision approach runway is defined in Chapter 1. Non-precision approach procedures are currently designed by CASA delegates (Airservices Australia and IAC GPS P/L) and are published by Airservices Australia in the AIP section titled _Departure and Approach Procedures', commonly known as DAP charts.					
2.1.9.2 To make recognition easier, new straight-in or runway aligned procedures will be further identified by the runway number in the title of the approach chart (e.g. RWY 18 GPS or RWY 08 VOR/DME). Non-runway aligned approach procedures will not have the runway number in the title (e.g. GPSS, GPS-N or NDB).					
Note: There is a program to bring all existing charts to this convention. This will be introduced to existing charts as the opportunity arises.					
2.1.9.3 The result of accident enquiries have demonstrated that straight in approaches are much safer than circling approaches, especially at night. With the advent of GPS, NPA runways can now be provided without any ground based navigation aid. Aerodrome operators of non-instrument runways are strongly urged to liaise with aerodrome users and upgrade their runways to NPA runways wherever it is practicable to do so. However, the benefit of having an NPA runway can only be realised if the runway meets the applicable NPA standards. These include:					
(a) increased runway strip width (can be compensated by increase in MDA);					
(b) increased inner horizontal, conical and approach obstacle limitation					
surfaces to be surveyed for obstacles;					
(c) spacing of runway edge lights; and					



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(d) the availability of the wind direction indicator, near the threshold, if possible, or an alternate method for obtaining wind information such as an automatic weather information service. See the relevant Chapters for the applicable standards. It should be noted that some of the ICAO standards have been relaxed for Australian GPS NPA operations.							
2.1.9.4 Before an NPA procedure is published the procedure designer has to arrange for the design to be flight validated. Besides checking the operational aspect of the design, the flight validation also checks the adequacy of the runway, visibility of the wind direction indicator and clearances from all existing obstacles. An NPA procedure is only approved for publication when all requirements are met. Otherwise direction on the use of the procedure may be annotated on the chart, including in the worst case a direction that straight-in landing is not permitted.							
2.1.9A Aerodrome with Terminal Instrument Flight Procedures							
2.1.9A.1 Where an aerodrome with a terminal instrument flight procedure (TIFP) ceases (for whatever reason) to be:							
(a) a certified aerodrome (and does not immediately become registered);							
<del>Of</del>							
(b) a registered aerodrome (and does not immediately become certified);							
CASA will take every reasonable step necessary to notify the certified or authorised designer of the TIFP of the cessation.							
Note: This procedure is to complement the obligations on the certified or authorised designer of a TIFP under Chapter 6 of the Manual of Standards (MOS) Part 173 — Standards Applicable to the Provision of Instrument Flight Procedure Design. However, a failure to comply with subsection 2.1.9A does not affect any obligation under Chapter 6 of MOS Part 173							



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Subsection 3.1.7 (including the Note)  Omit as follows:  3.1.7.1 Under the CASR Part 139 transitional provisions, an existing aerodrome licence issued under CAR 89C will still be valid until it is replaced by a certificate issued under CASR Part 139 or for three years from the date of CASR Part 139, whichever is earlier.  3.1.7.2 Existing licence holders do not need to apply for the aerodrome certificate but they need to liaise with the relevant CASA office for the issue of a replacement aerodrome certificate. Relevant CASA Aerodrome Inspector will issue the replacement certificate when satisfied that the Aerodrome Manual has been brought into line with the CASR Part 139.  Note: To facilitate orderly issue of replacement aerodrome certificates, aerodrome operators are advised to have their Aerodrome Manuals brought up to date as early as possible and not wait towards the end of the three-year period.	0	Transitional arrangements from the Civil Aviation Regulations 1988 (CAR) to the CASR no longer apply to aerodromes.			
Chapter 5 Section 5.1: General  Omit paragraph 5.1.3.9 (including the Note and Table 5.1-1) as follows:  5.1.3.9 The Aircraft Classification Number (ACN) values for various aircraft types operating on flexible and rigid pavements are provided in Table 5.1-1. The aircraft weight limits are defined by maximum take-off weight (MTOW) (kg) and operating weight empty (OWE) (kg). The operating tyre pressure is defined by TP (kPa). The main wheel under-carriage configurations are: single (S), dual (D), dual tandem (DT) and triple-tandem (TT).  Note: Specific ACN values for a particular aircraft should be obtained from the aircraft operator or the aircraft manufacturer.  (Table 5.1-1 which contains aircraft specific values is also to be deleted)	0	Aircraft-specific information is being removed from Part 139 MOS as this information is operational data and no applicable to aerodrome operations.  When designing aerodrome facilities, the aerodrome operator should consu with potential aircraft operators to establish the required pavement strengths.			



LIST OF PROPOSED AMENDMENTS - MANUAL OF STANDARDS (MOS) PART 139 - AERODROMES					
Proposed Amendment	Code	Reasons			
Chapter 6 Physical Characteristics  Section 6.1: General  Insert note after paragraph 6.1.1.1 as follows:  6.1.1.1 The standards for the physical characteristics are the statutory requirements which apply to the planning, design and construction for the movement area facilities at certified and registered aerodromes, and at non-certified and non-registered aerodromes used by aircraft conducting air	E	The note has been added to reinforce the role of Chapter 6 in defining the standards for aerodrome facilities and to highlight that CASA does not intend for the standards to be applied as limiting factors to aircraft operations.			
transport operations.  Note: The standards in this Chapter are intended for the planning and construction of new aerodrome facilities rather than to limit the operations of aeroplanes.					
Chapter 6 Section 6.1: General  Omit paragraph 6.1.1.5 as follows:  6.1.1.5 The standards for aerodromes used by aircraft operating under CASR Part 121 B are set out in Chapter 13.	0	Chapter 13 contains guidelines for the operation of ALAs. These are being removed and placed into a new Advisory Circular (AC) - therefore this reference can be removed.			
Chapter 6 Section 6.1: General  Omit paragraph 6.1.1.6 as follows:  6.1.1.6 The standards in this Chapter are intended for the planning and construction of new aerodrome facilities. Where an existing facility does not meet these standards, CASA may approve the use of such facilities by an aircraft larger than that which the facilities are designed for, with, or without, operational restrictions on the aircraft operator.	0	Reference to 'aircraft operations' is being removed from Part 139 MOS. The aircraft operator is responsible for any decision they make to use an aerodrome; this is not to be limited by Part 139 MOS.			



	Prop	osed Ame	ndment				Code	Reasons
hapter 6 Section 6.2: In the mit 1a from Paragraph 6 sert 1 in Paragraph 6.2.3 able 6.2-1: Minimum ru	2.3.1, Table 6.2-1 3.1, Table 6.2-1, Co		per				E	Accompanying removal of Chapter 13 from Part 139 MOS, the reference to the footnote can be removed.
Code number			Code lett	er				
	Α	В	С	D	E	F		
1 <sup>a</sup>	18 m	18 m	23 m	-	-	-		
2	23 m	23 m	30 m	-	-	-		
3	30 m	30 m	30 m	45 m	_	-		
4	-	-	45 m	45 m	45 m	60 m		
	Runway width may strictions placed or							
	•	duced to 15		epending c	on the restri	ctions placed	E	Accompanying removal of Chapter 1: from Part 139 MOS, the reference to the Note can be removed.



LIST OF PROPOSED AMENDMENTS – MANUAL OF STANDARDS (MOS) PART 139 – AERODROMES					
Proposed Amendment	Code	Reasons			
Chapter 6 Section 6.2: Runways  Omit paragraph 6.2.3.1A as follows: 6.2.3.1A If a minimum runway width: (a) is mentioned in instructions issued under subregulation 235A (1) of CAR 1988 as applicable to a particular type of aeroplane; and (b) differs from the requirement in Table 6.2-1 that would otherwise apply to operations by that type; the width mentioned in the instructions: (c) if it is less than the requirement in the Table — may be used in determining the required runway width for operations by that particular type; and (d) if it is more than the requirement in the Table — must be used in determining the required runway width for operations by that particular type.  Note: Subregulation 235A (1) allows CASA to issue instructions specifying the minimum runway width applicable to an aeroplane or a type of aeroplane. Use of that runway width is subject to compliance with the conditions contained in the instructions.	E	This paragraph refers to operational documents that were not meant to be used in the design and operation of aerodromes. As a result, this paragraph will be removed.			
Chapter 6 Section 6.2: Runways  Omit paragraph 6.2.3.1B as follows:  6.2.3.1B Subject to meeting the additional requirements for runway shoulders mentioned in paragraph 6.2.14.3, code letter E runways may be used for A380 operations.	E	Paragraph 6.2.14.3 defines the shoulder requirements for Airbus A380 operations. There is no requirement for this to be included within Section 6.2 of the Part 139 MOS.			



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Proposed Amendment	Code	Reasons			
Chapter 6 Section 6.2: Runways  Omit paragraph 6.2.3.1C as follows:  6.2.3.1C Paragraph 6.2.3.1B does not allow code letter E runways to be used for A380 operations:  (a) if their construction begins after the commencement of paragraph 6.2.3.1B; or  (b) if they are subjected to a major redevelopment, such as a runway extension, that begins after the commencement of that paragraph.	E	Operation of Airbus A380 aircraft to and from code letter E runways (45 m) as opposed to code letter F runways (60 m), is an operational restriction and not a standard for the design and operation of aerodromes.			
Chapter 6 Section 6.2: Runways  Substitute paragraph 6.2.9.3 as follows:  6.2.9.3 The runway surface standards for grass or natural runways and gravel runways are the same as those for runways intended for small aeroplanes set out in Chapter 13.  The runway surface standards for grass, gravel or natural runways are as set out in Table 6.2-4A. However, the runway surface must not have irregularities which would adversely affect the take-off or landing of an aircraft.	E	With removal of Chapter 13 from Part 139 MOS, the table providing the surface standards for grass, natural surface runways and gravel runways needs to be moved to Chapter 6.			



6.2-4A			
Surface	Runway	Runway strip	
Sealed surface	After compaction, the surface is to be swept clean of loose stones	N/A	
Maximum height of grass:			
Sparse	450 mm	600 mm	
• Medium	300 mm	450 mm	
Dense	150 mm	300 mm	
Maximum size of loose stones:			
Isolated stones on natural surface	25 mm	50 mm	
Constructed gravel surface	50 mm	75 mm	
Maximum size of surface cracks:	40 mm	75 mm	



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Proposed Amendmer	nt	Code	Reasons
Chapter 6 Section 6.2: Runways  Omit '1ab' from paragraph 6.2.18.1, Table 6.2-5, Aerodrome Refe  Table 6.2-5: Graded runway strip width	erence Code and insert '1b' as follows:	0	Accompanying removal of Chapter 13 from Part 139 MOS, the reference to the footnote can be removed.
Aerodrome reference code	Runway strip width		
1 ab	60 m		
2 °	80 m		
3 (where the runway width is 30 m)	90 m		
3, 4 (where the runway width is 45 m or more)	150 m		
<ul> <li>Runway strip width may be reduced to 30 m depending restrictions placed on small aeroplane operations. See Chabe Runways used at night are required to have a minimum runway strip width.</li> <li>Aeroplanes not exceeding 5,700 kg by day, the runway width may be 60 m.</li> </ul>	apter 13. 80 m		
Chapter 6 Section 6.2: Runways  Dmit from paragraph 6.2.18.1, Table 6.2-5, Footnote 'a' as follow	rs:	0	Accompanying removal of Chapter 13 from Part 139 MOS, the reference to the footnote can be removed.
<ul> <li>Runway strip width may be reduced to 30 m depending aeroplane operations. See Chapter 13.</li> </ul>	ng on the restrictions placed on small		



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	Proposed Amendment		Code	Reasons	
	Chapter 6 Section 6.2: Runways  Substitute paragraph 6.2.18.2, Table 6.2-6 as follows:			The revised table removes the notes from the substituted table.	
	Aerodrome reference code	Overall runway strip width		The notes required an exemption to be issued by CASA. There is no need for the notes to be included under the	
	1 or 2	90 m		table, as CASA must assess any strip width not complying with the	
	3 (where the runway width is 30 m)	150 m		requirements of the table and issue an	
	3 or 4 (where the runway width is 45 m or more)	300 m		exemption (where approved), regardless of the notes' existence.	
Omit	Chapter 6 Section 6.2: Runways  Omit paragraph 6.2.18.3, Table 6.2-7, Note 1 as follows:  1. Where it is not practicable to provide the full runway strip width, a lesser strip width may be provided subject to landing minima adjustments. However, the standard width of the graded area must be provided.			This note required an exemption to be issued by CASA. There is no need for the notes to be included under the table, as CASA must assess any strip width not complying with the requirements of the table and issue an exemption (where approved), regardless of the note's existence.	
Subs 6.2.2 for s	stitute paragraph 6.2.23.4 as follows:  23.4 The standards for the surface of runway strips are the same mall aeroplanes set out in Chapter 13.  way strip surface standards are the same as those set out in Tab		E	With removal of Chapter 13 from Part 139 MOS, the table providing the surface standards for grass, natural surface runways and gravel runways needs to be moved to Chapter 6.  The reference is therefore changed to the new Table 6.2-4A.	



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Proposed Amendment	Code	Reasons		
Chapter 6 Section 6.2: Runways  Omit Paragraph 6.2.39.1 as follows: 6.2.39.1 The bearing strength of a stopway must be able to support at least one single pass of the eritical-aircraft that the facility is intended to serve, without causing structural damage to the aircraft.	E	Reference to the 'Critical aircraft' has been removed from this paragraph in line with the project objectives		
Chapter 6 Section 6.5: Aprons  Insert after Subsection 6.5.2 as follows: 6.5.2A Alternative aircraft parking position separation 6.5.2A.1 If:  (a) physical constraints prevent proposed aircraft parking positions (the positions) from complying with the separation distances set out in subsection 6.5.2; and (b) the aerodrome operator:  (i) designs the positions in accordance with Part 2 of the ICAO Aerodrome Design Manual; and  (ii) submits the design to CASA with a safety case and an application for approval of the design and the safety case; and  (c) CASA in writing, with or without conditions, approves the design and the safety case; then:  (d) the standards in subsection 6.5.2 that are specified in the CASA approval are taken not to apply to the operator; and  (e) the approved design and safety case, and the conditions of the approval (if any) are taken to be the applicable standards for the positions.	S	In order to cater for more aircraft on confined aprons, a number of aerodromes have started to introduce 'aircraft-specific' parking positions. CASA has determined that this will be permitted, subject to CASA approval. If approved, CASA will issue a letter of approval in lieu of an exemption.		



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Proposed Amendment	Code	Reasons	
Chapter 6 Section 6.7: Glider Facilities  Amend paragraph 6.7.1.1 as follows:  6.7.1.1 Where the physical characteristics of the site allow it, and where the expected number of powered aircraft operations does not exceed 5,000 per annum, the glider runway strip may be located within an existing runway strip.  Where the physical characteristics of the site allow it, and where the expected number of powered aircraft movements does not exceed 10,000 per annum, the glider runway strip may be located within an existing runway strip.  Note: Movement for an aircraft is defined in section 1.2 as either a take-off or a landing by the aircraft.	E	CASA has elected to replace the term 'operation' with the term 'movement', due to confusion over what is considered an 'operation'. As a result, the number of 'movements' is double the previous number of 'operations', to accommodate the fact that an operation, as previously stated, comprised one take-off and one landing.	
Chapter 7 Obstacle Restriction and Limitation  Section 7.1: General  Omit the Note from Paragraph 7.1.7.2 as follows:  Note: Requirements and standards relating to instrument procedure design will be promulgated in CASR Part 173, currently under development. In the interim, aerodrome operators are advised to liaise with Airservices procedure designer in regard to PANSOPS obstacle monitoring drawings.	0	This note can be removed now Part 173 of CASR is now in force.	



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Proposed Amendment	Code	Reasons	
Chapter 8 Visual Aids Provided by Aerodrome Markings, Markers, Signals and Signs  Section 8.2: Markers  Amend Paragraph 8.2.2.3 as follows:  8.2.2.3 Where agreed by CASA, 200 litre (44 gallon) steel drums or tyres may be used as runway strip markers at aerodromes used by aeroplanes of not more than 9 passenger seats (See Chapter 13). Steel drums must be cut in half along their length, placed on the ground open side down. Drums and tyres must be painted white. At a certificated aerodrome, use of these markers must be noted in the Aerodrome Manual.	E	Reference to Chapter 13 can be removed as Chapter 13 is being removed from Part 139 MOS.	
Chapter 8 Section 8.5: Markers  Amend Paragraph 8.5.28.1 as follows:  8.5.28.1 The tug parking position line marking must be provided at aerobridges and other power-in/push-out aircraft parking positions, to ensure parked tugs are clear of incoming aircraft. The marking must consist of a red line 0.10 m wide in the shape of a U, 3.5 m by 1.0 m commencing 3 m from the nose of the critical-aircraft that the facility is intended to serve, as illustrated, below.	E	Reference to the 'Critical aircraft' has been removed from this paragraph in line with the project objectives	
Chapter 8 Section 8.6: Movement Area Guidance Signs (MAGS)  Amend Paragraph 8.6.13.2 as follows:  8.6.13.2 The overall height of the sign above the ground, and offset from the edge of the runway pavement, must be such as to provide at least 300 mm clearance between the top of the sign and any part of the most critical any aircraft using the runway when the outer edge of the wheel of the aircraft is at the runway pavement edge.	E	Reference to the 'Critical aircraft' has been removed from this paragraph in line with the project objectives	



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Proposed Amendment	Code	Reasons	
Chapter 8 Section 8.11: Helicopter Areas on Aerodromes  Amend Paragraph 8.11.5.2 as follows:  8.11.5.2 These designations must be located and oriented in such a way that they can be seen by the critical aircraft the pilot of an aircraft 15 m away on the taxi guideline.	Е	Reference to the 'critical aircraft' has been removed from this paragraph and replaced with the words 'pilot of an aircraft'.	
Chapter 10 Operating Standards for Certified Aerodromes  Section 10.15: Pavement Maintenance  Substitute Paragraph 10.15.5.1 as follows:  10.15.5.1 The surface of natural and gravel surface runways and runway strips must be maintained to the physical standards outlined in Chapter 13.  Surface standards for natural and gravel surface runways and runway strips are the same as those set out in Table 6.2-4A. However, the runway surface must not have irregularities which would adversely affect the take-off or landing of an aircraft.	E	With removal of Chapter 13 from Part 139 MOS, the table providing the surface standards for grass, natural surface runways and gravel runways needs to be moved to Chapter 6. Consequently, the reference is also updated to the new Table 6.2-4A.	
Chapter 12 Operating Standards for Registered Aerodromes  Section 12.1: General  Insert at the end of Paragraph 12.1.1.1 as follows:  Note: However, operators of registered aerodromes should consider developing an aerodrome manual similar to that required of certified aerodrome operators, in order to keep all relevant aerodrome information and documentation in one volume. For details that could be included in such a manual, see regulation 139.095 of CASR 1998.	E	While not mandatory, the operators of registered aerodromes will be encouraged to create and maintain an Aerodrome Manual in a similar manner as required of the operator of a certified aerodrome.	



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		Proposed Amendment	Code	Reasons
_	Chapter 12 Section 12.1: General		S	Due to past difficulties in establishing when certain facilities were introduced
12.1.1		ragraph 12.1.1.2 as follows:  For paragraph 2.1.2.3A, for each non-compliant facility:		at registered aerodromes, with resultant compliance issues, CASA has determined that registered aerodromes should keep (at the very
(a)	the fo	llowing details must be recorded in an appropriate manual and kept up to date:		least) a list of non-compliant facilities at the aerodrome. This new paragraph
	(i)	identification of the facility;		details the information to be included on this list.
	(ii)	the date or period when the facility was first introduced or last upgraded (as the case may be);		
	(iii)	a description of the Standards with which the facility complies, including a supporting reference to the version and date of the MOS or RPA which contains this standard;		
	(iv)	details (if any) of the plans and timescale for replacing or upgrading the facility so that it complies with this MOS; and		
(b)		letails mentioned in subparagraph (a) must be included in each aerodrome safety ction report mentioned in subparagraph 12.1.1.2 (c).		
12.1.1 MOS be).		For paragraph 12.1.1.2A, Standards means the standards set out in the version of the that applied to the facility when it was first introduced or last upgraded (as the case may		



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Proposed Amendment	Code	Reasons	
Chapter 13 Standards for Aerodromes intended for Small aeroplanes conducting Air Transport Operations under CASR 121B  Omit Chapter 13 it totality.	0	Chapter 13 is substantially advisory in nature and is therefore being removed from this MOS and placed in a new AC.	