

Explanatory Statement

Civil Aviation Safety Regulations 1998

Manual of Standards Part 172 Amendment (No. 1) 2010

Purpose

The purpose of *Manual of Standards Part 172 Amendment (No. 1) 2010* (the **MOS amendment**) is principally twofold: (a) to introduce International Civil Aviation Organization (**ICAO**) Class D airspace procedures at all General Aviation Aerodrome Procedures aerodromes (**GAAP aerodromes**); and (b) to align procedures for existing Class D aerodromes with the procedures to be introduced at the former GAAP aerodromes.

Legislation

Subsection 98 (1) of the *Civil Aviation Act 1988* (the **Act**) provides that the Governor-General may make regulations for the purposes of the Act and in the interests of the safety of air navigation.

Some of these regulations are contained in the *Civil Aviation Safety Regulations 1998* (**CASR 1998**). In particular, Part 172 of CASR 1998 deals with, among other things, air traffic services (**ATS**) for the safe use and management of airspace.

Under subregulation 172.022 (1) of CASR 1998, CASA may issue a Manual of Standards (**MOS**) for Part 172 setting out various standards for ATS. Under paragraph 172.065 (1) (a), an ATS provider must ensure that the ATS it provides are in accordance with the standards set out in the MOS.

CASA has issued *MOS Part 172*. The MOS relevantly includes: Chapter 10, Standards for the Provision of ATS; Chapter 11, Information Provided to Pilots; and Chapter 12, Information Transfer.

Background

In July 2009, CASA introduced changes to procedures at GAAP aerodromes. The GAAP aerodromes were Archerfield, Bankstown, Camden, Jandakot, Moorabbin and Parafield. These changes included: a limitation on the number of aeroplanes operating simultaneously in a particular aerodrome traffic circuit; a requirement for all aircraft to obtain an air traffic control (**ATC**) clearance to enter, cross or taxi along any runway; and changes to ATC hours of operation.

In addition, CASA gave notice that all GAAP aerodromes would be required to introduce ICAO Class D airspace procedures (modelled on ICAO and US Federal Aviation Administration (**FAA**) Class D airspace procedures) from 21 April 2010, later revised to 3 June 2010. The introduction of such Class D procedures would require some changes to MOS Part 172.

In February 2010, CASA issued Notice of Proposed Change (**NPC**) to initiate formal public consultation on the proposed changes to Class D procedures. The proposals related to the following:

- (a) the introduction of FAA-styled ICAO Class D procedures at GAAP aerodromes;

- (b) alignment of procedures for existing Class D aerodromes with the procedures to be introduced at the former GAAP aerodromes;
- (c) addressing the findings of the 2008 ICAO Universal Safety Oversight Audit Programme audit (the **USOAP audit**) in relation to wake turbulence and visual separation requirements;
- (d) correcting a number of obsolete or non-standard entries in the MOS.

Change of airspace procedures

CASA made the decision to change the former GAAP aerodromes procedures to revised Class D procedures after reviewing safety incidents, traffic levels and operational risk. In seeking a solution, CASA was guided by ICAO Annex 11 standards for airspace services, and FAA procedures and weather criteria for procedures for entry into, and operations within, Class D airspace.

Changing the former GAAP aerodromes procedures and adjustments to Class D procedures was considered to be the most appropriate way to address the identified safety risks while minimising impact on high-density training operations at the former GAAP aerodromes.

New procedures in Class D airspace

Using its powers under the *Airspace Regulations 2007*, effective from 3 June 2010, CASA has changed GAAP aerodromes and associated control zones (**CTR**) to revised Class D procedures. As result, air traffic at the former GAAP aerodromes will observe adjusted procedures and receive a different suite of ATS. For example:

- (a) aircraft flight planned according to the Instrument Flight Rules (**IFR**) will not, as formerly, be required to conform to the Visual Flight Rules (**VFR**) when visual meteorological conditions exist; and
- (b) all flights will receive ATS; and
- (c) IFR flights will be separated from IFR and special VFR flights, and will receive traffic information about VFR flights, as well as traffic avoidance advice on request; and
- (d) VFR flights will receive traffic information about IFR and VFR flights, as well as traffic avoidance advice on request; and
- (e) special VFR flights will be separated from other special VFR flights, when the visibility is less than 5 000 m; and
- (f) other procedures and requirements will apply in Class D airspace and at the respective controlled aerodromes, as described in the MOS amendment.

Education and training

Some changes will be made to the way operations are conducted at both former GAAP and Class D aerodromes. CASA recognises the effect of this and has undertaken a significant training and education campaign to ensure that pilots, flying organisations, aerodrome operators and air traffic controllers are all prepared for these changes.

Key features of specific changes and their impact

A Entry into Class D airspace by establishing 2-way communications

As used in the National Airspace System (*NAS*) of the USA, establishing 2-way radio communications will be a new method for ATC clearance of aircraft to enter any Class D airspace.

Impact

No significant impact is expected on operations in the former GAAP airspace. The new system is already in use in this airspace.

However, for existing Class D airspace, the 2-way radio communications method should result in a reduction in the communications required to gain entry clearance to the airspace, thereby, potentially freeing ATC to concentrate on other issues.

In the change from the traditional clearance process involving readback of the clearance, there is the potential for misunderstood communications resulting in unauthorised entry into the airspace. During the education campaign, CASA will be emphasising the need for careful attention during the establishment of 2-way communications. In addition, ATC will retain the ability to use traditional clearance issue methods if there is any doubt during the application of the abbreviated method.

B Visual meteorological conditions for Class D airspace

CASA proposes to adopt the FAA specification for VMC within all Class D airspace, both former GAAP and existing Class D. In general terms, the specifications are as follows:

Type of aircraft	Flight visibility	Distances from cloud – horizontal and vertical	Additional conditions
Aeroplanes, helicopters and balloons	5 000 m	600 m horizontal 1 000 ft above 500 ft below	ATC may permit operations in weather conditions that do not meet these criteria (special VFR).

Impact

For the original GAAP aerodromes, the change of VMC criteria will have no impact on aircraft operations during good weather conditions.

However, when there is inclement weather with a reduced cloud ceiling, the change may result in a slight reduction in the opportunity for VFR operations at these aerodromes as follows.

Aircraft operating around the traffic circuit (pattern) at one of these aerodromes are normally required to fly at a height of 1 000 ft above the surface of the aerodrome. Under the original VMC criteria for GAAP aerodromes, the pilot merely had to remain clear of any cloud in the vicinity of the aerodrome, which meant that VFR

circuit operations could continue when the cloud ceiling was as low as 1 000 ft above aerodrome level.

Under the new VMC criteria, VFR aircraft will be required to maintain a vertical spacing below cloud of 500 ft (152 m). This means that if there is significant amounts of cloud in the vicinity of the aerodrome, then VFR circuit operations will only occur unrestricted if cloud height is around 1 500 ft or higher above aerodrome level.

As is currently the case, and subject to IFR traffic, ATC can authorise a procedure called special VFR. Special VFR allows a VFR aircraft to continue operating with reduced visibility and cloud clearance limits. In particular, aeroplanes so cleared are permitted to operate with a visibility as low as 1 600 m (reduced under the changes from the original visibility minimum of 3 000 m) and with a requirement to remain only clear of cloud rather than at a specified distance from the cloud.

On the other hand, ATC is obliged to separate aircraft cleared for special VFR from IFR aircraft, and if the visibility is less than 5 000 m, from other aircraft cleared for special VFR. This can result in fewer aircraft being able to operate in the airspace at the same time. This requirement for ATC separation is the same as the former requirements and CASA assesses the overall change as having a low impact.

For VFR aircraft in existing Class D airspace, the change to VMC criteria will have a positive impact because new criteria will provide greater opportunity for unrestricted VFR operations.

On the other hand, the reduced minimum spacing below cloud means that there is reduced interval (when compared with the current VMC criteria) between an IFR aircraft breaking out of the base of cloud and then conflicting with a VFR aircraft operating at the VFR minimum beneath cloud. Mitigating this issue is the fact that the proposed minima are used successfully in the USA in similar situations and further because in Class D airspace, ATC would forewarn the IFR aircraft about any conflicting VFR traffic and facilitate an appropriate course of action.

C Maximum speeds in Class D airspace

CASA has adopted the FAA specification for maximum speed within Class D airspace (both the former GAAP and existing Class D), as follows:

- (a) 200 knots (**KT**) indicated air speed (**IAS**) – at or below 2 500 ft above aerodrome level (**AAL**) within 4 nautical miles (**NM**) of the primary Class D aerodrome;
- (b) 250 KT IAS – in other parts of Class D airspace.

The 200 KT speed limit for Class D airspace is a CASA direction to pilots under subregulation 99AA (5) of the *Civil Aviation Regulations 1988 (CAR 1988)* (see instrument CASA 142/10).

If traffic conditions permit, ATC may approve a pilot's request to exceed the 200 KT speed limit to a maximum limit of 250 KT unless the pilot informs ATC a higher minimum speed is an operational requirement.

Impact

The intended impact of the change to maximum speed is to reduce the possible speed differential between aircraft entering and operating within the Class D aerodrome traffic circuit. Smaller speed differential between aircraft reduces spacing problems in the circuit area and facilitates orderly entry. For those aircraft unable to conform to the speed restriction, ATC will have the option to relax the new restriction. CASA considers the impact of this change to be low.

D Parallel runway operations at Class D aerodromes

CASA has adopted the FAA traffic management standards that allow ATC to sequence aircraft for simultaneous, independent, same direction operations on close spaced parallel runways at all Class D aerodromes under specific meteorological conditions.

Impact

The impact of the new simultaneous parallel runway standards is considered to be low. Parallel operations at most of the former GAAP aerodromes will be able to continue without change. Only Archerfield and Bankstown aerodromes may experience limitations to unrestricted parallel runway operations.

For Archerfield aerodrome, the spacing between the parallel runways does not meet the new standard for allowing jet aircraft to conduct runway operations independent of aircraft operating on adjacent runways (other types are not so affected).

At Bankstown aerodrome, the centre runway also does not meet the new standard that would allow unrestricted parallel operations independent of the operations on these outer runways.

In Archerfield's case, the impact is low because of the small numbers of jet operations.

In Bankstown's case, the runway spacing problem is an existing issue under current rules because the spacing does not meet existing rules. CASA has established a regulatory standard that allows CASA to approve parallel operations at an otherwise non-conforming aerodrome on demonstration of an adequate safety case. Given there are proven procedures in use at Bankstown for managing parallel runway operations there, CASA anticipates that, upon application from Airservices Australia, CASA will approve continuation of existing practice.

E Use of aerodrome approach points to be recommended not mandatory

Under the former rules, flights arriving at a GAAP aerodrome from outside controlled airspace had to track visually via a "GAAP approach point" as specified in ERSA. In aligning rules at the former GAAP aerodromes with Class D airspace rules, GAAP approach points will become VFR approach points and their use will become recommended rather than mandatory.

Impact

CASA considers the change to the system of approach points as having a positive safety and efficiency impact. Various studies have identified that the requirement for arriving aircraft, without exception, to proceed via an approach point increases the

collision risk, particularly because aircraft were expected to announce their position only as they passed the approach point.

The ability for pilots to plan an arrival different to a standard approach route is intended to provide a level of randomness to inbound tracks as compared to the current inflexible arrangement (no other approach tracks are currently entertained). This randomness is intended to reduce the collision risk.

Another reason for the change is to provide pilots with greater operational flexibility by allowing aircraft to approach a Class D airport from any direction rather than having to approach via a particular point which may require the pilot to fly extra distance to track inbound via an approach point.

The option will continue to exist for ATC to dictate a particular arrival route, however, CASA expects that this would only occur when actual traffic conditions require it, rather than because it is the “standard way”.

F No requirement for departure reports by VFR flights at Class D aerodromes

VFR aircraft will not be required to make a radio report when departing from a Class D aerodrome directly into Class G airspace.

Impact

CASA considers the impact of this change to be negligible. The practice has been in use at the original GAAP aerodromes for many years, and helps to reduce frequency congestion.

G Wake turbulence separation minima

One of the 2008 USOAP audit findings was that one particular ATC wake turbulence separation minimum was less than the standard specified in ICAO Standards and Recommended Practices (**SARPs**). The time separation minimum for a light wake turbulence category aircraft landing behind a medium wake turbulence category aircraft is, therefore, raised from 2½ minutes to the ICAO standard of 3 minutes.

CASA has also omitted a number of heavy aircraft behind heavy aircraft wake turbulence minima, that were unique to Australia. The minima affected operational efficiency and CASA had been approached by Airservices Australia and a number of affected operators to discontinue this non-standard practice.

Also, in keeping with world-wide practice, when a pilot is maintaining his or her own separation with another aircraft, the pilot is required to avoid the wake turbulence generated by the aircraft. However, Australia had a unique requirement that ATC would resume responsibility for applying a wake turbulence separation minimum for the final part of an aircraft’s landing. This is now no longer required. The pilot will be responsible for avoiding the wake turbulence from the preceding aircraft at all stages of the flight, including the landing. To assist the pilot, ATC is now required to issue a wake turbulence caution when wake turbulence separation is not applied and wake turbulence may have an adverse effect on the aircraft.

Impact

The overall impact is expected to be low. When maintaining his or her own separation with a larger aircraft ahead, pilots have, for many years, been responsible for avoiding

the effects of wake turbulence for all stages other than the final part of the landing. The only change is to extend that responsibility to the final part of the landing. There are a variety of techniques for avoiding wake turbulence on landing, including flying an approach that is above the larger aircraft's final approach flight path. CASA's training efforts focus on this aspect.

ATC workload in establishing wake turbulence separation is expected to be reduced as a result of the change.

Overall, CASA considers that requirements for international standardisation take precedence over a unique local standard.

H Visual separation requirements

The 2008 USOAP audit also found that Australia allowed use of visual separation above the limits specified in ICAO SARPs. The use of visual separation is now limited to aircraft operating at or below 10 000 ft (instead of the former limit of Flight Level (FL) 125).

Impact

The impact is expected to be low because visual separation is rarely used at such high altitudes. CASA considers that requirements for international standardisation take precedence over a unique local standard that has not significant operational benefit.

I Miscellaneous editorial changes

A number of editorial changes are also made to the MOS to remove obsolete or incorrect references (for example, references to Mandatory Broadcast Zone (MBZ)).

Impact

CASA's assessment is that the changes will have a low impact on ATC and aircraft operators.

MOS amendment

Details of the MOS amendment are contained in Attachment 1.

Legislative Instruments Act

Under paragraph 98 (5A) (a) and subsection (5AA) of the Act, MOS Part 172 is a legislative instrument for the *Legislative Instruments Act 2003* (the **LIA**). The MOS amendment is, therefore, subject to registration, and tabling and disallowance in the Parliament under sections 38 and 42 of the LIA.

Consultation

Consultation under section 17 of the LIA has taken place in the usual way under the NPC process and in accordance with the requirements for making a MOS under Subpart 11.J of CASR 1998.

NPC 172/04 was released for public consultation on 19 February 2010 and placed on the Safety Consultative Committee (SCC) website. The period for comment closed on 19 March 2010.

There were 20 responses to the NPC and CASA took each response into account in deciding how to proceed further with the NPC.

Office of Best Practice Regulation (OBPR)

A preliminary assessment of business compliance costs, including consultation with OBPR, indicates that the MOS amendment will have no or low cost impact on business. Through the potential for more efficient use of available airspace under ATC, the measure will be advantageous to industry.

Making and commencement

The MOS amendment commences on 3 June 2010 after it is registered.

The instrument has been made by the Director of Aviation Safety, on behalf of CASA, in accordance with subsection 73 (2) of the Act.

[Manual of Standards Part 172 Amendment Instrument (No. 1) 2010]

Manual of Standards Part 172 Amendment (No. 1) 2010

1 Name of instrument

Under this section, the instrument is named the *Manual of Standards Part 172 Amendment (No. 1) 2010*.

2 Commencement

Under this section, the instrument commences on 3 June 2010.

3 Amendment of the Manual of Standards Part 172

Under this section, Schedule 1 amends Manual of Standards Part 172.

Schedule 1 Amendments

[1] Subsection 1.1.7.1, the table of Abbreviation and Meaning

This amendment adds explanations of the abbreviations ATC, meaning “air traffic control” and ATS, meaning “air traffic service”.

[2] Subsection 1.1.7.1, the table of Abbreviation and Meaning

This amendment adds an explanation of the abbreviation MLJ, meaning “military low jet”.

[3] Subsection 1.2.1.1, the table of Definition and Meaning

This amendment adds an explanation of VFR-on-top, meaning “an IFR flight with ATC authorisation to operate in VMC at or below FL180 in Class E airspace at any appropriate VFR altitude or flight level”.

[4] Relaxation of Speed Restrictions

This amendment inserts a new subsection 10.1.4 so that in providing an ATS in Class D airspace, including a Class D CTR, ATC may permit an aircraft to exceed the 200 KT Class D airspace speed limit.

A Note explains that the 200 KT speed limit for Class D airspace is a CASA direction to pilots under subregulation 99AA (5) of CAR 1988.

Under the new subsection, after taking account of air traffic conditions, ATC may permit a maximum speed limit of 250 KT, or, if the pilot in command of an aircraft informs ATC that a speed greater than 250 KT is an operational requirement, a maximum speed limit of greater than 250 KT.

These new standards are in line with FAA standards.

SARWATCH for IFR Aircraft conducting VFR Operations

Amendment 4 also provides for SARWATCH (search and rescue alerting) requirements in a new subsection 10.1.5. The unit providing an ATS to an IFR aircraft must provide a SARWATCH service for the aircraft if it is conducting a departure, climb or descent under the VFR, or a VFR-on-top procedure.

However, this does not apply if the pilot in command has expressly cancelled the IFR flight plan.

A Note explains that the SARWATCH service is a function of the flight plan, not of the particular procedure being flown at the relevant time.

[5] Subsection 10.3.2.1

This amendment omits a reference to GAAP aerodromes which no longer exist as such.

[6] Subsection 10.3.2.2

This amendment deals with parallel runways and clarifies that, in addition to ICAO PANS-ATM applications, ATC may use parallel runways for Simultaneous Opposite Direction Operations (**SODPROPS**) (which is cross referenced to subsection 10.4.8).

[7] After subsection 10.3.2.4

This amendment inserts subsection 10.3.2.5 which provides that at Class D aerodromes, ATC may authorise simultaneous, same direction operations on parallel runways, parallel landing areas, or a runway and a parallel landing area. However, ATC may only do so if a wide range of conditions are met including in relation to meteorological conditions or visual separation, 2-way radio communications, and the minimum distance between the runways or landing areas.

New subsection 10.3.2.6 provides that if the parallel runways at a Class D aerodrome do not meet the minimum spacing requirements, CASA may approve simultaneous, same direction operations if this is appropriate.

These new standards are in line with FAA standards.

[8] After subsection 10.5.4.6

This amendment inserts subsection 10.5.4.7 which provides that ATC may treat IFR aircraft or aircraft operating on a special VFR clearance, (**relevant aircraft**) operating in Class D airspace as if they are operating under the VFR when the relevant aircraft is operating in the aerodrome circuit and established on the same radio frequency as the ATC tower. The ATC treatment must be for the purpose of separating the relevant aircraft from aircraft in adjacent Class C airspace.

[9] Subsection 10.6.4, the table, Minima for T7c, Second condition

This amendment substitutes a minimum height of 10 000 ft (instead of FL 125) for Definite Passing (sight and pass) minima. This aligns the visual definite passing with the change to visual separation requirements made as a result of the USOAP audit.

[10] Subsection 10.6.10.2

This amendment provides that longitudinal distance separation using ADS-C may be established by measuring specified distances. These distance are either the distances between the displayed positions of 2 or more FANS-1/A aircraft reporting by ADS-C, or the distances between an ADS-C report symbol of a FANS-1/A aircraft and the position of another aircraft determined by an alternative form of position fixing.

The significant change to subsection 10.6.10.2 is removal of the requirement that both aircraft be within continental control area if ADS-C separation is to be determined by comparison of an ADS-C position symbol with an aircraft position determined by another means. The continental control area limitation

is unnecessary and a constraint on operational efficiency. The other changes are editorial.

[11] Subsection 10.10.1.3

The amendment provides that ATC may assign to the pilot of 1 aircraft responsibility to maintain separation with another aircraft only if the aircraft are operating at or below 10 000 ft, and the pilot has reported the other aircraft in sight and accepted responsibility to follow, or maintain, separation.

This change implements ICAO-compliant vertical limits (10 000 ft AMSL) for the use of visual separation in response to a finding of the USOAP audit,

[12] Subsection 10.12.1

This amendment defines certain terms as follows:

- (a) for **lateral extent**, when applying wake turbulence separation, ***directly behind*** means that an aircraft is operating within 760 m of the flight path of the aircraft in front of it.
- (b) **intermediate part — ICAO PANS-ATM**, of a runway, including of a parallel runway separated from the runway by less than 760 m, means a point more than 150 m after the take-off commencement point of the preceding aircraft using the runway or the parallel runway.

This amendment adopts wake turbulence separation minima suitable for application to the Airbus A380.

It also addresses a finding of the USOAP audit on the required separation for a light wake turbulence category aircraft landing behind a medium wake turbulence category aircraft.

[13] Subsection 10.12.2

This amendment modifies the time-based wake turbulence separation minima table to include the SUPER category for the Airbus A380 – recently introduced into the Australian airways system. It also addresses the USOAP audit finding on the required separation for a light wake turbulence category aircraft landing behind a medium wake turbulence category aircraft (3 minutes), and to include parallel runways for the intermediate departures minima.

[14] Subsection 10.12.3.1

This amendment requires that ATC must apply an appropriate wake turbulence separation minimum in all controlled airspace when an aircraft is:

- (a) operating directly behind another aircraft's flight path; and
- (b) at the same level as the other aircraft, or not more than 1 000 ft below it.

[15] Subsection 10.12.3.2

This amendment provides that ATC application of appropriate wake turbulence separation minima to aerodrome traffic is subject to subsection 10.12.3.3, below.

[16] Subsection 10.12.3.3

This amendment modifies the circumstances in which ATC is not required to apply wake turbulence. Thus, ATC is not required to apply wake turbulence separation in the following situations:

- (a) when a MEDIUM fixed-wing aircraft of less than 25 000 kg MTOW precedes a LIGHT aircraft;
- (b) when an aircraft is landing behind another aircraft that is taking-off on the same runway;
- (c) subject to 10.12.3.4, if a pilot has initiated a waiver of the relevant departure wake turbulence separation minimum;
- (d) when a VFR aircraft is in flight and is:
 - (i) operating directly behind a preceding HEAVY or MEDIUM aircraft; or
 - (ii) landing on the same runway as a preceding HEAVY or MEDIUM aircraft; or
 - (iii) landing on a parallel runway separated by less than 760 m from the runway of a preceding HEAVY or MEDIUM aircraft;
- (e) when an IFR aircraft is in flight and the pilot has:
 - (i) reported the preceding aircraft in sight; and
 - (ii) accepted responsibility to follow, or maintain his or her own separation with, that aircraft.

A Note explains that for paragraphs (d) and (e), the pilot in command of the aircraft is responsible for ensuring that the spacing from a preceding aircraft of a heavier wake turbulence category is acceptable. If it is determined that additional spacing is required, the flight crew may inform ATC accordingly, stating their requirements.

Paragraph (c) applies to VFR flights in all cases and IFR flights when responsibility for own separation with another aircraft is assigned to the pilot. The significant change is that in situations where an aircraft is maintaining own separation with another aircraft, ATC will no longer have to intervene and apply a wake turbulence separation minimum for the landing. Instead, a pilot maintaining own separation with another aircraft will be responsible for avoiding the wake turbulence from the preceding aircraft at all stages of the flight, including the landing. The proposal is consistent with practice with international practice.

[17] Subsection 10.12.3.4

This amendment provides that for a LIGHT or MEDIUM fixed-wing aircraft, ATC may not waive the relevant wake turbulence separation minimum if:

- (a) the aircraft is taking-off behind, or in a reciprocal direction to, a HEAVY or SUPER aircraft; and
- (b) the HEAVY or SUPER aircraft has taken-off, or made a low or missed approach.

The waiver system is based on US practice. This change implements the US restriction that waivers cannot be applied when the aircraft ahead is a HEAVY wake turbulence category. The remainder of the change clarifies the context for provision of wake turbulence cautions. The intent is that a caution is only

required if there is a wake turbulence risk and the amendment makes the intent clear.

[18] Subsection 10.12.3.5

This amendment provides that ATC must issue a wake turbulence caution to the pilot of an aircraft if:

- (a) less than the applicable wake turbulence separation minima may exist; or
- (b) the applied wake turbulence separation minima may be infringed; or
- (c) the pilot has waived the relevant departure wake turbulence separation requirement; or
- (d) wake turbulence separation is not provided because of paragraph 10.12.3.3 (d) or (e), and wake turbulence may have an adverse effect on the aircraft.

[19] Subsection 10.12.3.7

This amendment provides that if the required wake turbulence separation can be determined by distance using an aircraft report or ATS surveillance system, ATC is not required to apply the relevant time minimum:

- (a) between arriving aircraft; or
- (b) unless the aircraft following will commence take-off from an intermediate point — between departing aircraft.

A Note explains that **Intermediate point** is explained in subsection 10.12.1.

This amendment adopts the FAA provision that for departing aircraft, distance standards may be used in lieu of time standards if the following aircraft makes a full length departure

[20] Subsection 10.13.8

This amendment omits a section dealing with GAAP aerodromes which no longer exist as such.

[21] Subsection 10.13.9

This section omits runway separation minima for GAAP aerodromes which no longer exist as such, and inserts one of the ICAO reduced separation minima for use between landing aircraft. This is for use at any controlled aerodrome.

[22] Subsection 11.1.1

This amendment omits a subsection dealing with GAAP aerodromes which no longer exist as such.

[23] Subsection 11.1.2.3

This amendment, in removing obsolete references to MBZ, provides that ATIS ZULU (pilot information service):

- (a) must include the following:
 - (i) the expected re-opening time of the Tower;
 - (ii) CTAF and PAL frequency;
 - (iii) the preferred runway or circuit direction;
 - (iv) noise abatement procedures;
 - (v) works in progress; and

- (b) may include operational information of an unchanging nature which provides immediately useful information to pilots.

[24] Subsection 11.1.5.5

In removing obsolete references to MBZ, this amendment provides that if the pilot in command of an IFR or MLJ aircraft at a non-towered aerodrome reports to the unit providing an ATS for the aerodrome that his or her aircraft is taxiing at or airborne from, the aerodrome, the unit must inform the pilot of conflicting traffic which is not on the CTAF.

[25] Subsection 11.1.5.6

In removing obsolete references to MBZ, this amendment provides that the unit providing an ATS for a non-towered aerodrome must inform IFR or MLJ aircraft inbound to the aerodrome of conflicting traffic regardless of where the confliction will occur. However, this obligation ceases when the pilot reports “CHANGING CTAF” or that he or she is changing to the MULTICOM frequency.

[26] After subsection 12.1.2.2

This amendment inserts subsection 12.1.2.3 which provides that, unless ATC instructs otherwise, a pilot intending to land at an aerodrome within Class D airspace may descend to join the aerodrome traffic circuit after he or she has established 2-way communications with the tower.

[27] After subsection 12.1.7

This amendment inserts a new subsection 12.1.8, Clearance by Establishment of 2-way Communications. The amendment provides that in addition to issuing a pilot with a specific clearance or instruction, ATC may authorise an aircraft to enter Class D airspace if 2-way communications have been established with the aircraft.

The amendment also provides that 2-way communication is established if ATC responds to a pilot’s radio call with the aircraft’s radio identification.

A Note explains that if ATC responds to a radio call with the aircraft identification (generally including an instruction or report requirement), 2-way radio communications have been established and the pilot can enter the Class D airspace.

A second Note explains that if ATC responds to the initial radio call without using the aircraft identification, 2-way radio communication has not been established and the pilot may not enter the Class D airspace.

A third Note explains that if workload or traffic conditions prevent immediate entry into the Class D airspace, ATC should expressly instruct the pilot to remain outside the Class D airspace.

A final Note explains that the pilot of an aircraft is required to comply with any instruction that ATC includes with the establishment of 2-way communication.

These new standards are in line with FAA standards.

[28] After subsection 12.3.3.8

This amendment inserts subsection 12.3.3.9 which provides that within a Class D CTR, a clearance to take-off is a clearance to operate within the CTR.

[29] Section 12.4

This amendment omits a Section dealing with GAAP aerodromes which no longer exist as such.

[30] Section 12.5

This amendment omits a Section dealing with GAAP aerodromes which no longer exist as such.

[31] Section 12.6

This amendment omits a Section dealing with GAAP aerodromes which no longer exist as such.