Summary of consultation on CD 1903AS - Changes to air traffic control standards for parallel runway operations

The consultation was published on the Consultation Hub from 3 April 2019 to 1 May 2019 and invited industry to comment on a proposal to amend Part 172 Manual of Standards (MOS). The amendment was to introduce new International Civil Aviation Organization (ICAO) standards for operations to parallel runways. The consultation has closed, and a summary of the feedback is provided below.

About this consultation

ICAO standards, published around 2001, require operations to independent parallel runways to use instrument landing systems (ILS) for final approach guidance and air traffic control (ATC) to manually vector all arriving aircraft onto final approach. These standards were included in Part 172 MOS when it was first made in 2005.

In November 2018, ICAO amended the standards for parallel runway operations to allow the use of Ground Based Augmentation System Landing System (GLS), the Required Navigation Performance Authorisation Required (RNP AR) approach specification and Approach Procedures with Vertical Guidance (APV) as well as ILS for final approach guidance. In addition to vectoring, air traffic control (ATC), gained the ability to clear aircraft to intercept final approach for a parallel approach operation using a published arrival and approach procedure.

In response to requests from industry, CASA proposed to remove the limiting Part 172 MOS provisions and adopt the new ICAO standards.

Respondents

In total, there were 6 respondents. Of the respondents, 3 consented to having their comments published and 3 requested their submissions be confidential.

Responses were received from 2 airlines, an organisation representing pilots and navigators, an aerodrome operator, an air traffic service provider and an aviation consultant.

Summary of feedback

All except one respondent agreed (without comment) with the proposal to remove subsection 10.4.2 — Independent parallel approaches in IMC. A respondent annotated their response to 'Agree with changes' and made the following comments in relation to the proposal:

* The spacing between parallel runways at one Australian aerodrome requires an RNP value of 0.27 for independent approaches using RNP AR. The respondent sought the ability to avoid publishing RNP 0.3 minima for the RNP AR procedure (as normally required by Performance-based Navigation design standards) as this might be misleading for operators at the aerodrome.
* The ICAO standard for independent parallel approaches using RNP AR requires aircraft to confirm established on the RNP AR procedure. The respondent proposed an alternative standard whereby an aircraft would be deemed to be established on an RNP-AR approach if the aircraft has been cleared via the Initial Approach Fix (IAF), is observed by surveillance to be tracking in accordance with the approach, and has not reported being unable to conduct the approach.
* The ICAO standard for independent parallel approaches precludes breakout instructions once an aircraft descends through 400ft on final approach. The respondent proposed an alternative standard where the height limit would be marked on the controller display a distance from the threshold at which an aircraft on 3 degree descent angle will pass 400ft.
* For each of these comments, the respondent said it would seek approval for an Alternative Means of Compliance (AMC)or an exemption from the relevant standard.

The respondents agreed (without comment) with the proposal to remove the following subsections of the MOS and replace them with the equivalent ICAO standard:

* 10.4.3 (Dependent parallel approaches in IMC)
* 10.4.4 (Independent Parallel Departures).

All except one respondent agreed (without comment) with the proposal to remove subsection 10.4.7 of the MOS — Segregated Parallel Operations in IMC. The other respondent indicated 'Undecided / Not my area of expertise'.

All except one respondent agreed (without comment) with the proposed consequential amendment to subsection 10.5.5 of the MOS. A respondent annotated their response to 'Agree with changes' and indicated that, while they were confident about meeting the November 2019 final implementation date for one aerodrome, implementing at another aerodrome by 8 November 2019 would be challenging because of the significant lead time required to reconfigure precision radar monitoring equipment at the aerodrome. The respondent said it was preferable for the changes to take effect 27 February 2020 with the ability to ‘opt in’ prior to that date.

One respondent said that the existing MOS standards for independent parallel visual approach (IVA) should be updated at the same time as the parallel instrument approach standards. The respondent stated that not doing so is a significant lost opportunity for Australia’s airline industry. The respondent recommended a number of changes to the existing IVA standards.

One respondent made a general comment that adopting the new ICAO standards is a sensible approach to parallel runway operations and is supported by the respondent's organisation.

Another respondent made a general comment about the ICAO requirement for ATC, when vectoring an aircraft, to ensure a period of level flight prior to intercepting the glide path from below. The respondent said this was not optimal or flexible, as flight crew ideally prefer a constant descent path, with energy managed to ensure compliance with any speed requirements etc. The respondent asserted that the existing MOS procedure is more flexible because it only requires a period of level flight as necessary to dissipate speed prior to G/S intercept required (in other words, only when requested by the flight crew).

Next steps

CASA notes the responses from respondents to all the proposed changes and appreciates all comments received.

Regarding the comment about not publishing RNP 0.3 minima for particular aerodromes, CASA sought advice from a PBN specialist. The response was that including an RNP 0.3 minima, despite a lower value being required for independent parallel approach operations, is beneficial for other types of approach operation, such as dependent parallel approaches. The risk of publishing only lower RNP minima is an increased probability of ‘Unable RNP’. CASA considers the matter as being outside the scope of this Part 172 MOS amendment and proposes to engage with the respondent to address compliance aspects.

Regarding the response about alternate means of confirming an aircraft is established on the RNP AR procedure, CASA has been advised by members of the technical working group, who developed the new ICAO standard, that a voice report is not the sole method for confirming an aircraft is established on an RNP AR approach. Observation of the aircraft to be tracking in accordance with the approach, using the surveillance system, is a valid method and was recently implemented at an aerodrome in Canada. CASA has no in-principle issue with the proposed methodology. However, CASA would need to assess the procedure in the context of a formal proposal from the ATS provider.

Regarding the advice that the respondent proposes to mark the 400 ft breakout instructions limit on the controller's display as a distance from the threshold, CASA has no concern in-principle, and again would need to assess the formal proposal.

Regarding the request to defer the implementation date, CASA is mindful about the need for changes to be implemented in a systematic and safe manner. CASA is willing to amend the effective date to 27 February 2020 while retaining the option for early opt in.

Regarding the recommendation to also update the IVA standards, CASA does not believe it is necessary or appropriate to amend these standards at this time. This is for several reasons:

* Unlike the standards for parallel instrument approaches, the existing IVA standards do not specifically preclude the use of GLS or RNAV guidance - the references to 'localiser' only apply when localiser guidance is used.
* The MOS does not specifically require vectoring in all circumstances. Sub-paragraph 10.4.5.1 (c) -  'when vectoring an aircraft to intercept the final course …' - is a conditional statement of action when (and only when) an aircraft is vectored. This does not preclude other methods for intercepting and following final approach.
* The new ICAO standards underwent many years of development, with significant involvement from Australian experts. Changing the IVA standards based on a single respondent's recommendation would require safety work which would significantly delay the introduction of the ICAO standards. The new parallel instrument approach standards are particularly essential for introducing parallel runway operations at Brisbane.

Notwithstanding this, Airservices, industry and CASA are currently reviewing IVA standards and operations. This review and the associated safety work will be the appropriate basis for any update to the IVA standards. CASA will await the outcomes of this review before commencing action to amend the IVA standards.

Regarding the comment about level flight requirements, CASA does not agree that the new standard is significantly more restrictive than the existing standard in terms of allowing a continuous descent until glide path intercept. Both the standards require ATC to 'provide' a period of level flight (the ICAO standard specifies a distance in level flight). Both standards require ATC to assign descent with enough time to allow aircraft to level off and dissipate speed if this is required. Neither requires ATC to ensure the aircraft actually levels off, and a pilot may fly a continuous descent path if desired.

In addition, the new standards introduce the use of the RNP AR approach specification for parallel runway operations. As a three-dimensional pre-programmed operation, an RNP AR approach is intended for constant descent path operations. Compared to manual vectoring, accurate flight path tracking also reduces the probability of aircraft deviating across the runway centreline, which is a specific safety hazard during closely spaced parallel runway operations. It is therefore appropriate that RNP AR approach operations can be implemented to facilitate constant descent operations. However CASA does not believe it is necessary to vary from the ICAO standards that also allow vectoring during parallel runway operations.

CASA intends to proceed with the proposed change to Part 172 MOS. The final implementation date will move from 8 November 2019 to 27 February 2020.

Regulation impact statement

For the amendment to the Part 172 MOS relating to Air Traffic Control Standards for Parallel Runway Operations, the Office of Best Practice Regulation (OBPR) determined that no further analysis in the form of a Regulation Impact Statement was required (OBPR ID: 25296).

Published Responses

View submitted responses where consent has been given to publish the response.