

Summary of public submissions

Submissions on

- proposed amendments to Civil Aviation Rule Part 139 relating to runway end safety area lengths (NPRM 26-01), and
- a consequential amendment to Part 1 Definitions and Abbreviations.

July 2026

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Introduction

On 13 April 2026, the Civil Aviation Authority (CAA) released the Notice of Proposed Rule Making 26-01 (NPRM), proposing amendments to Civil Aviation Rule Part 139 Aerodromes – Certification, Operation and Use and a consequential change to Civil Aviation Rule Part 1 Definitions and Abbreviations. The proposals focused on runway end safety area (RESA)¹ length requirements and the use of arresting systems² at New Zealand aerodromes.

The NPRM sets out detailed information about the problems with the current RESA length rules, the options explored to resolve those problems, and the policy objective of amendments. This summary should be read alongside the NPRM.

Submitters had four weeks to provide feedback, with submissions closing on 11 May 2026.

During the consultation period, the CAA also made itself available to answer questions from stakeholders who had helped inform development of the NPRM, including the New Zealand Airports Association, the New Zealand Air Line Pilots' Association, Air New Zealand, the Board of Airline Representatives New Zealand.

We thank everyone who took the time to make a submission.

Purpose of this document

This document summarises the feedback the CAA received on the proposals set out in the NPRM, with a focus on the main issues raised across submissions. It provides a record of the consultation themes and the CAA's responses, rather than a complete record of every point raised.

Submissions received

Eight submissions were received. Seven came from organisations, including:

- Board of Airline Representatives New Zealand (BARNZ)
- Far North Holdings Limited (Far North Holdings)

¹ The International Civil Aviation Organization (ICAO) defines a RESA as an area symmetrical about the extended runway centre line and adjacent to the end of the strip, primarily intended to reduce the risk of damage to an aeroplane undershooting or overrunning the runway. See ICAO Annex 14, Aerodromes. Volume I Aerodrome Design and Operations. Chapter 1, Section 1.1 Definitions, July 2022, and Civil Aviation Rule Part 1, Initial Issue, Definitions and Abbreviations, CAA Consolidation 5 April 2025.

² An arresting system is a system designed to decelerate an aeroplane overrunning the runway. See ICAO Annex 14, Aerodromes, Volume I Aerodrome Design and Operations, Chapter 1, Section 1.1 Definitions, July 2022.

- Nelson Airport Limited (Nelson Airport)
- New Zealand Air Line Pilots' Association (NZALPA)
- New Zealand Airports Association (NZ Airports)
- Queenstown Airport (ZQN)
- Wellington International Airport Limited (WIAL).

One response came from an individual with aeronautical experience.

Navigating this paper

This paper comprises three sections:

1. provides an overview of submitter feedback,
2. provides more detail on submitter comments and concerns, and
3. sets out issues raised outside the scope of this consultation.

Section 1: Overview of feedback

RESA lengths

The CAA received eight submissions about the proposed rule changes:

- four submitters supported the proposals, subject to changes to improve clarity and ensure alignment with ICAO. These submitters were NZ Airports, WIAL, BARNZ, and Far North Holdings³.

However, it should be noted that, while NZ Airports and WIAL support the proposals, they also submitted alternative approaches to the rule which they consider remain appropriate⁴. Section 2 discusses aspects of those proposals.

BARNZ stated, “the proposals do not reduce safety; rather, by moving from rigid but ambiguous rules to a flexible, ICAO-aligned, risk-based framework, they align safety measures with risk and international best practice”.⁵

Far North Holdings stated that it “strongly supports progression of NPRM 26-01 and considers the proposed rule changes essential for the future sustainability of regional aviation in the Far North district and Northland as a whole”⁶

³ Far North Holdings submission, page 1, paragraph 4, states “BOI Airport strongly supports the intent of the proposed rule changes and supports the submission made by the New Zealand Airports Association (NZA), including the amendments and recommendations put forward by NZA.”

⁴ Policy Director NZ Airports, email message to CAA of 20 May 2026.

⁵ BARNZ submission, page 1, paragraph 3.

⁶ Far North Holdings submission, page 4, paragraph 7.

- two submitters (Nelson Airport and ZQN) were unclear about their overall position on the proposals. Nelson Airport stated that they were supportive of the intent of the proposals⁷. ZQN stated that the proposed drafting fails to achieve the objective of the policy⁸, noted in the NPRM. Both airports highlighted concerns and suggested changes
- one submitter (NZALPA) sought a rule that would require larger regional and international aerodromes to provide the longest RESA length recommended by the International Civil Aviation Organization (ICAO), and
- the individual that submitted opposed the proposals and sought a rule based on minimum RESA length standards set by ICAO.

Practicability – definition within the RESA length rule

Most submitters considered that the proposed definition of practicable could be amended to provide consistent interpretation and legal certainty. Some concerns focused on the factors that would be used to determine practicability, the role of cost-benefit analysis, and whether the assessment should consider aerodrome-level impacts or wider regional benefits.

A consistent theme was the need for clearer guidance on how to develop a RESA proposal and how the CAA will assess proposals. Some submitters requested that worked examples, templates, and more transparent decision-making criteria.

Arresting systems

Near-unanimous support was expressed for recognising arresting systems in the rules, and prescribing standards for arresting systems in a transport instrument.

Transport Instrument

Among submitters who commented on the transport instrument, the majority agreed that it is the appropriate legislative tool for incorporating arresting system design standards. They also agreed with adopting only the Federal Aviation Administration (FAA) Engineered Materials Arresting System (EMAS) standards.

One submitter preferred alternative international guidance on arresting systems.

Consequential amendment to Part 1 Definitions and Abbreviations (Part 1)

No submissions on the proposed definition of arresting system in Part 1 were received.

⁷ Nelson Airport submission, page 1, paragraph 3.

⁸ ZQN submission, page 1, paragraph 1(c).

Section 2: Additional comments and concerns raised by submitters

What we heard on RESA length rules

1. To align with ICAO, the rule should start with the Standard and then the Recommended Practice

The draft rule sets out the ICAO Recommended Practice before the ICAO Standard. Three submitters — NZ Airports, ZQN, Nelson Airport — asked the CAA to reverse this order so the Standard appears first and the Recommended Practice second, to align more closely with ICAO.

For example, NZ Airports proposed wording along the lines of: *“Where the code number is 3 or 4, a RESA must extend from the end of the runway strip to at least 90 metres; and as far as practicable, to a distance of 240 metres”*.⁹

[CAA response](#)

The CAA agrees that revising the proposed rule drafting to present the Standard before the Recommended Practice would more closely align with the way ICAO SARPs are presented in Annex 14. The CAA notes that this amendment would not change the policy intent of the proposed rule set out in the NPRM.

2. Codes 1 and 2 non-instrument runways should be included in the Rule to more closely align with ICAO

ZQN noted that the proposed rule does not include requirements for Codes 1 and 2 non-instrument runways. ICAO Annex 14 specifies a Recommended Practice of 30 metres for a RESA at these runways. ZQN stated that:

*“...explicitly clarifying the treatment of Code 1 and 2 non-instrument runways would better align Part 139 with ICAO standards...”*¹⁰

[CAA response](#)

The CAA agrees. Including the Annex 14 Recommended Practice for Codes 1 and 2 non-instrument runways in the rule will improve ICAO alignment and clarify how RESA requirements apply to these aerodromes. It will also future proof the rule. This change will not affect any aerodromes because there are currently no Code 1 and 2 non-instrument runways serving aircraft with more than 30 seats.

⁹ NZ Airports Association submission, page 37, Recommendation 6.

¹⁰ ZQN submission, page 3, paragraph 6.

3. Only the ICAO Standard of 90 metres should be in the Rule; the Recommended Practice should be in a non-mandatory instrument, be replaced by a risk-based analysis, or considered alongside other criteria such as costs and benefits

Three submitters – NZ Airports, WIAL, and an individual – considered that the rule should not make ICAO’s recommended practice, if practicable, mandatory.

Two submitters (NZ Airports and an individual) argued that New Zealand has no obligation to pursue recommended practice under the Chicago Convention¹¹. The individual submitter stated that:

“Recommended Practices are distinguished by ICAO from Standards, NZ’s obligations under the Convention on International Civil Aviation are for the Standards published in the Annexes. ICAO’s Recommended Practice for RESA should be given effect by way of an Advisory Circular and not be referenced in the Rule.”¹²

NZ Airport submitted that “...ICAO uses (‘shall’ for Standards, ‘should’ for Recommended Practices), and in the obligations they engage under the Chicago Convention. Article 38 of the Convention requires a Contracting State that finds it impracticable to comply with an international standard or procedure, or to bring its own regulations or practices into full accord with an international standard, to give immediate notification to ICAO of the differences between its own practice and that established by the international standard. The Article 38 difference-filing obligation applies to Standards. The Recommended Practices are not subject to the same Article 38 obligation; the Convention’s framework is that Recommended Practices are aspirational rather than mandatory”¹³.

CAA response

The CAA agrees that the legal obligation to conform with the ICAO Standard is stronger than the obligation to conform with Recommended Practices. However, under Article 37 of the Convention, States must actively pursue Recommended Practices. Not doing so could create legal and reputational risk for New Zealand.

The CAA also considers that the Recommended Practices should be included for safety reasons, because the landing, take-off, and approach phases of flight are the major contributors to accidents.

¹¹ International Convention on Civil Aviation 1944, also known as the Chicago Convention.

¹² Page 2 refers.

¹³ NZ Airports submission, page 8, paragraph 35.

4. RESA length should be determined using a risk-based approach based on a target level of safety (TLS)

WIAL accepts that the NPRM proposal is “*sensible and workable*”¹⁴. However, it also suggested a rule based on the “*ICAO’s target level of safety (TLS) for runway excursion risk...of no greater than 1×10^{-7} per flight operation*”¹⁵.

Under this approach, “*the aeronautical study should be required to address the full range of excursion scenarios, including consideration of both overruns and undershoots arising from a reasonably probable combination of adverse operational factors.*”¹⁶

CAA response

ICAO does not publish a TLS specifically for runway excursion risk and the CAA does not require aerodrome operators to use one. However, an aerodrome operator may adopt one for operational risks such as runway excursion, overrun, or undershoot as part of its safety management system.

Existing research suggests this would be difficult for New Zealand regional airports to achieve. The basic safety benchmark of 1×10^{-7} per movement is based mainly on data from larger aerodromes, where precision approach aids are typically available and where significant ‘excess’ runway often exists. This TLS “*cannot be readily achieved by increased RESA provision at smaller aerodromes where precision approach aids are lacking and there is little or no excess runway for typical movements*”¹⁷.

European Union Aviation Safety Agency (EASA) research shows that a TLS of 1×10^{-7} can be a “*very reasonable*”¹⁸ starting point for large aircraft on instrument runways, but “*it is unclear what a feasible TLS could be*”¹⁹ for small aircraft on non-instrument runways. It can be expected that any such TLS “*will be higher than for large aircraft operating on instrument runways due to the lower safety performance of small aircraft on non-instrument runways*”²⁰.

The EASA methodology for safety assessment of RESA has not been adopted by any European Union member state.

¹⁴ General Manager Aeronautical Operations Wellington Airport, email message to CAA of 18 May 2026.

¹⁵ WIAL submission, page 1.

¹⁶ WIAL submission, page 2.

¹⁷ Final Report on the Risk Analysis in Support of Aerodrome Design Rules, Norwegian Civil Aviation Authority, p 14.

¹⁸ Research Project: Study on models and methodology for safety assessment of Runway End Safety Areas (RESA), EASA, section 7.3, p 92.

¹⁹ Ibid.

²⁰ Ibid.

5. RESA lengths should be constructed to meet the ICAO Standard and, if practicable, Recommended Practice. If Recommended Practice is not practicable, RESA length requirements beyond the Standard would be determined using a codified safety assessment pathway

NZ Airports submitted that the proposed rule changes would work but suggested an alternative approach (“fifth option”). The fifth option would provide a codified safety assessment pathway based on ICAO Annex 19²¹ and Document 9981²² for cases where the Recommended Practice is not practicable²³. Under the fifth option, these aerodromes would assess RESA length against their safety objectives within existing safety management systems, with CAA approval. NZ Airports also proposed that the CAA develop the safety assessment methodology in the supporting advisory circular²⁴.

BARNZ stated that “We ... note the option raised by some stakeholders for rules based on aerodrome-specific safety cases [and] we understand the sentiment behind such approaches, we agree with the NPRM’s conclusion that this option should be discounted, noting also that this option could introduce unnecessary complexity and increased subjectivity in decision-making”.²⁵

CAA response

The CAA does not support suggestions that Annex 19 could override the requirements in Annex 14. While submitters cited Annex 19, ICAO clearly states that “Compliance to all applicable SARPs remains the foundation on which State safety programmes are established. The concepts of performance or risk management in Annex 19 do not absolve the States from complying with the existing provisions in other Annexes, which remains fundamental to aviation safety”²⁶.

6. All Code 3 and 4 aerodromes should have 240 metres of paved RESA and if that is not possible, an EMAS that is equivalent to 240 metres

NZALPA stated that it is “not in support of a regime where non-practicability of a 240m permits a 90m RESA as 240m should be practicable in all cases (whether by means of a paved RESA or by means of an arresting system that provides an equivalent).”²⁷

²¹ ICAO Annex 19 Safety Management, 3rd edition, November 2025.

²² ICAO Document 9981, Procedures for Air Navigation Services, Aerodromes, 3rd edition, 2020.

²³ NZ Airports submission, page 2, paragraph 6.

²⁴ NZ Airports submission, page 30, paragraph 186.

²⁵ BARNZ submission, page 1, paragraph 5.

²⁶ ICAO Safety Management, [Standards and Recommended Practices \(SARPs\)](#).

²⁷ Senior Solicitor NZALPA, email message to CAA of 19 May 2026.

NZALPA also sought “a clearer statement that an application for a RESA that is not compliant with Annex 14 Vol I 3.5.4 will need to be accompanied by a thorough aeronautical study”.²⁸

CAA response

This proposal does not align with ICAO SARPs, and, in practice, not all Code 3 and 4 aerodromes could meet a 240 metre-RESA. The CAA considers that the proposed rule appropriately reflects the ICAO framework, which sets out a Standard and a Recommended Practice. No other jurisdiction, with aviation regulatory frameworks and operations comparable to the NZ context, has adopted NZALPA’s suggested approach.

7. Aerodrome codes should have different recommended practices

NZ Airports proposed differentiating between the Recommended Practice RESA lengths for codes 3 and 4 aerodromes. They noted that “the same 240 metre Recommended Practice applies to both²⁹”, even though the aeroplane reference field length (ARFL)³⁰ of aeroplanes using these aerodromes, which is used to determine code numbers, differs significantly. NZ Airports submitted that “the ATR 72-500 operated by one NZ regional airline has an ARFL of 1,223 m, while the A320-200 has an ARFL of 2,058m...They differ by a factor of two in maximum take-off weight, by a similar margin in approach speed, and by a substantial margin in the energy that an overrun would carry into the RESA³¹”. Recommended Practice should reflect these differences.

The individual submitter also argued that “...different rules for domestic aerodromes for RESA should be considered especially in regard to the large variances in Code 2 and Code 3 runways. Noting the Aerodrome Reference Code is a design standard for new aerodromes and not an operational requirement.”³²

NZ Airports also disputed the NPRM’s statement that there is insufficient data to substantiate a difference between codes 3 and 4. They provided the following references:

- ACRP Report 3 (Transportation Research Board, 2008)³³
- ACRP Report 50 (Transportation Research Board, 2011)³⁴

²⁸ NZALPA submission, page 6, paragraph 43.

²⁹ NZ Airports submission, page 20, paragraph 111.

³⁰ The ARFL is the minimum runway length needed for take-off at maximum certificated take-off mass under standard conditions (sea level, still air, zero runway slope), see Advisory Circular 139-6 Aerodrome Design Requirements, section 1.3 Definitions.

³¹ NZ Airports submission, page 20, paragraph 111.

³² Page 5 refers.

³³ NZ Airports submission, page 22, paragraph 121.

³⁴ NZ Airports submission, page 22, paragraph 121.

- EASA Certification Specifications and Guidance Material for Aerodrome Design (CS-ADR-DSN, Issue 6, ED Decision 2022/006/R)³⁵
- the empirical record on turboprop overruns (2024) GAC Aviation.³⁶

The individual submitter also provided data on runway incidents.

CAA response

This proposal does not align with ICAO SARPs. Despite the data submitters provided, the CAA still considers there is insufficient data to substantiate the suggested differentiation.

CAA's approach to identifying robust data

The CAA sought to identify credible and sufficiently robust data capable of supporting an evidence-based differentiated Recommended Practice length for Code 3 aerodromes serving turboprops.

In December 2025, the CAA engaged an international aviation consultancy to analyse global accident and incident data on turboprop runway overruns and undershoots. The consultancy found that the data was limited and lacked detail, making it unlikely to provide a credible or defensible basis for setting a turboprop-specific RESA distance to achieve an 83 per cent³⁷ or greater capture rate.

In January 2026, the CAA Analytics Team (Team) reviewed global runway events involving the ATR72, DHC-8/Q300 (Dash 8), and Saab 340 aircraft types from 1980 onwards.

What data was reviewed

The review sought to identify, where available:

- the type of event (runway excursion, veer-off or overrun)
- runway characteristics and available landing distance
- the extent of runway exceedance beyond the runway end
- phase of flight

³⁵ NZ Airports submission, page 22, paragraph 123.

³⁶ NZ Airports submission, page 22, paragraph 124.

³⁷ This rate is not mandated by ICAO. However, the 83% capture rate was derived from ICAO analyses of historical runway-excursion accident data, which examine how far aircraft typically travel beyond the runway end following an overrun.

- meteorological conditions
- contributing safety factors
- investigating authority findings
- any identified systemic or operational safety issues.

The Team also identified a number of global runway excursion events involving the aircraft types in scope.

Why the evidence was insufficient

The review found that, while data was generally available to establish the occurrence and frequency of runway excursion events, the records frequently lacked sufficient detail on:

- the distance travelled beyond the runway end
- the location and geometry of the overrun
- the aircraft deceleration profile
- the terrain interaction beyond the runway end
- the extent to which a particular RESA length may have altered the severity of the outcome.

The CAA concluded that the available global data is not robust enough to determine an appropriate RESA distance for Code 3 turboprop operations.

CAA response to NZ Airports submission

The CAA acknowledges that data on runway excursion events involving ATR and Q300 aircraft is available. However, the CAA's position remains that the available data on runway exceedance distance for ATR and Q300 is insufficient to support robust, evidence-based, and defensible safety arguments for regulatory decision-making.

ACRP Reports 3 and 50

The CAA is aware of, and has previously considered, both reports. Several Part 139 aeronautical studies submitted to the CAA for assessment of proposed RESA distances have referenced, analysed, and graphically interpreted the data in ACRP Reports 3 and 50.

EASA

The CAA did not undertake a detailed review of the *EASA Certification Specifications and Guidance Material for Aerodrome Design (CS-ADR-DSN, Issue 6, ED Decision 2022/006/R)* as part of this assessment.

The empirical record on turboprop overruns

The CAA has reviewed data from numerous sources for this rule change. The CAA's view is that the data is inconclusive and does not support the CAA requiring Code 3 aerodromes to have a lesser RESA distance than Code 4 aerodromes.

In preparing the NPRM, the CAA also reviewed the *EASA Final Report RESA 2011/12 – Research Project: Study on Models and Methodology for Safety Assessment of Runway End Safety Areas (RESA)*, dated 30 July 2014, which drew on data from the UK CAA, FAA, ICAO, and the Netherlands aviation authority.

The CAA and EASA representatives met via Microsoft Teams to discuss the report's implementation status. EASA representatives advised that, to the best of their knowledge, regulatory authorities had not universally or formally adopted the report's conclusions and recommendations.

CAA's response to the individual submitter's data submission

The individual submitter stated that:

“Due to the small number of overrun incidents involving the in-scope aircraft able to be identified, it is difficult to establish what might be an appropriate RESA distance.”³⁸

And that:

“Analysis of those turboprop overrun events for in-scope aircraft did not provide adequate data on the distance the aircraft travelled into the RESA”.³⁹

The individual also presented a trend line suggesting an increase in Go Around/Missed Approach incidents between 2000 and 2018⁴⁰. However, the CAA observes that the trend line presents aggregate occurrence numbers only and does not normalise them against aircraft movement data. It therefore does not account for likely increases in aircraft movements, operational exposure, or reporting rates over the period. Consequently, this data has limited value in establishing whether the underlying operational risk rate has materially changed over time.

³⁸ Page 7 refers.

³⁹ Page 8 refers.

⁴⁰ Page 11 refers.

8. Adopting Australia's requirements for code 3 and 4 domestic aerodromes

NZ Airports noted that Australia requires a 90 metre RESA for domestic Code 3 and 4 aerodromes and has *“not been found to be in breach of its Chicago Convention obligations by reason of operating this framework⁴¹”*. In NZ Airports' view, this *“demonstrates that differentiation by operation type or by activity profile is a workable regulatory model that operates within the ICAO SARPs framework and is operating successfully in a comparable jurisdiction⁴²”*.

BARNZ acknowledged the consideration the CAA gave to aligning with Australian requirements and the reasons why this approach has not been pursued.⁴³

CAA response

Australia's RESA requirements differentiate between domestic and international operations. Adopting Australia's requirements would mean that all domestic code 3 and 4 aerodromes would need to meet the 90 metre ICAO Standard.

Under Article 37 of the Convention, States are required to actively pursue Recommended Practice⁴⁴. Not doing so could create a legal and reputational risk for New Zealand. The CAA considers that the Recommended Practice should be included for safety reasons if practicable, as the landing, take-off, and approach phases of flight are the major contributor to accidents.

9. Improved aerodrome operational requirements have not been taken into account

The individual submitter stated that *“when ICAO implemented RESA, the supporting data was based on aircraft overruns from 1950-1980, often at airports and in countries with limited infrastructure...[and] limited regulatory oversight...”⁴⁵*

The submitter added that *“in New Zealand we have very good aerodrome infrastructure, a very good regulatory oversight system and modern instrument flight procedures”⁴⁶*

This should have been taken into account.

In contrast, NZALPA submitted that *“Airports and their environment play a vital role in the completion of safe air transport journeys”⁴⁷* and *“...a safe RESA is the last line of*

⁴¹ NZ Airports submission, page 23, paragraph 131.

⁴² NZ Airports submission, page 24, paragraph 135.

⁴³ BARNZ submission, page 1, paragraph 5.

⁴⁴ “...Each contracting State undertakes to collaborate in securing the highest practicable degree of uniformity in regulations, standards, procedures, and organization in relation to aircraft, personnel, airways and auxiliary services in all matters in which such uniformity will facilitate and improve air navigation...”

⁴⁵ Page 5 refers.

⁴⁶ Page 5 refers.

⁴⁷ NZALPA submission, page 2, paragraph 9.

*defence where all else goes wrong in the case of an aviation emergency. The relevance of a compliant RESA to aviation safety cannot be understated given the reliance that pilots will place on the runway end to avail them in times when all other resources have been depleted”.*⁴⁸

CAA response

Although aviation infrastructure and technology have improved since RESA was first adopted in Annex 14, Volume I, in 1976, New Zealand, as a contracting State, has obligations to align with section 3.5 of the Annex, which remains the effective and applicable SARP.

Improved operational and technological measures, such as runway surface maintenance and friction testing, modern instrument approaches, runway condition reporting, safety management systems, GNSS, and precision approaches, may reduce the likelihood of an overshoot or undershoot during an emergency, but they do not eliminate the risk entirely.

The CAA agrees with NZALPA that RESA is the last line of defence in cases where modern technology fails.

10. Aircraft approach speed and runway length is more a determinant of runway overruns than just runway length

The individual submitter suggested that “...the aircraft approach speed and runway length is more a determinant of runway overruns than just runway length. This is reflected by ICAO in changes to obstacle limitation surfaces (which MoT/CAA has not progressed) which are in ICAO Annex 14 as of Amendment 18 and are applicable from 21 November 2030 based on aircraft approach speeds.”⁴⁹

CAA response

The CAA considered a methodology along these lines and engaged with the FAA to better understand the application of its runway safety area requirements, which are broadly comparable in length to a runway strip and RESA combined. The CAA also considered adopting the FAA methodology and developing a comparable risk-based framework. However, the CAA notes that aircraft approach speed is only one factor in the FAA methodology, and applying this methodology would result in aircraft-specific RESA length requirements, some of which would not be consistent with ICAO SARPs. This option has therefore been discounted because a key objective of the proposed rule change is to align with ICAO SARPs in Annex 14.

⁴⁸ NZALPA submission, page 2, paragraph 10.

⁴⁹ Page 4 refers.

What we heard on the definition of ‘practicable’

11. Submitters differed on whether a definition of ‘practicability’ should be included in the rule

BARNZ supports the introduction of a definition of “practicable” and considers it a significant improvement over the current rule. They state that “*The proposed definition appears consistent with the considerations applied by the Supreme Court in Wellington International Airport Ltd v New Zealand Air Line Pilots’ Association Inc [2017] NZSC 199*”.⁵⁰

NZ Airports consider the inclusion of the definition to be a “*constructive step*”.⁵¹

The individual submitter stated that “*ICAO’s Recommended Practice for RESA should be given effect by way of an Advisory Circular and not be referenced in the Rule*”.⁵²

CAA response

The CAA considers that RESA should be constructed to the ICAO Recommended Practice, if practicable, and therefore it is proposed that the term ‘practicable’ be in the rule.

The CAA understands the use of the term ‘practicable’ in the current rule has created significant uncertainty about how practicability is assessed when determining RESA lengths. The CAA therefore intends to develop supporting documentation to provide more detail on the factors relating to ‘practicable’, including the provision of a worked example and a checklist.

12. The definition of practicable requires greater clarity and certainty

Several submitters felt that the proposed definition of “practicable” needed further clarification, or drafting refinement.

BARNZ noted that “*the application of “practicable” will remain inherently judgement-based, with some potential for subjectivity and inconsistency across aerodromes. BARNZ therefore recommends that CAA develop supporting guidance material...*”.⁵³

Nelson Airport requested that an advisory circular be provided that “*includes a template checklist covering the practicability of RESA length considerations...for airports to complete in support of RESA/EMAS applications*”.⁵⁴

⁵⁰ BARNZ submission, page 2/3.

⁵¹ NZ Airports submission, page 26.

⁵² Page 2 refers.

⁵³ BARNZ submission, page 3.

⁵⁴ Nelson Airport submission, page 2.

WIAL is concerned that *“the definition remains open to interpretation and will continue to produce inconsistent outcomes across different aerodromes and Director decisions”*.⁵⁵

NZ Airports submitted that ‘practicable’ should not be a definition and instead proposed a non-exhaustive list of factors be used to determine practicability.⁵⁶ It considered that some requirements in the proposed definition were duplicated, and that the definition should consider engineering and whether expected benefits exceed expected costs.

Some submitters also requested guidance material, including templates, checklists, and worked examples on how the definition will be applied.

[CAA response](#)

The CAA agrees with NZ Airports that a non-exhaustive list of factors would be more appropriate than a definition and that further refinements are warranted. The CAA also intends to develop a supporting advisory circular on how to comply with any new RESA rule approved, including consideration of checklists, and illustrative ‘worked’ examples.

13. The definition of the term “practicable” is already well established

NZALPA stated that *“the interpretation of practicability has been well established by the Supreme Court”*.⁵⁷ It submitted that:

“Practicable should mean capable of being put into practice or feasible in the sense of actually able to be constructed in the circumstances. Consideration of the circumstances includes consideration of practical issues such as the nature of the site and surrounding physical environment, available engineering technology, and potential construction options. It would also involve consideration of the Resource Management Act 1991... Economic cost-benefit analyses appear to provide an objective basis for what is, ultimately, a fact-based judgment. The outcome of any cost-benefit analysis will depend entirely on the risks, probabilities and economic values that are input into the calculations”.⁵⁸

[CAA response](#)

The CAA agrees that the definition of practicable should be refined based on submissions. However, we consider the factors set out in the proposed definition generally align with the Supreme Court judgment.

⁵⁵ WIAL submission, page 2.

⁵⁶ NZ Airports submission, page 38, recommendation 7.

⁵⁷ NZALPA submission, page 4, paragraph 23.

⁵⁸ NZALPA submission, page 2, paragraph 13.

14. ‘As far as practicable’ should be used in the rule rather than ‘if practicable’

Some submitters considered that, to align with ICAO Annex 14, Chapter 3.5.4, the rule should use as far as practicable, rather than if practicable. The individual submitter emphasised that the rule wording “...differs significantly from ICAO Annex 14 Volume I...”⁵⁹ meaning the RESA should “...extend from 90m “as far as practicable”, not start at 240m and work back”.⁶⁰

[CAA response](#)

The CAA considers that “if practicable” better reflects the proposed two-step rule approach and avoids potential confusion arising from the word “far” in the ICAO wording, which could be read as referring to RESA distance, rather than achievability.

15. Views differed on how costs and benefits should be considered in relation to practicability

NZALPA questioned the reliability of cost-benefit analyses but accepted they “...can produce insights that are relevant to the ultimate analysis”.⁶¹ It submitted that “...any such analysis should take into account the benefits likely to accrue from the development including the wider benefits to the community in terms of economic flow-on effects, tourism expenditure, access to markets and so on”.⁶²

BARNZ submitted that “The inclusion of cost-benefit considerations and proportionality of cost relative to safety benefit is appropriate”.⁶³

NZ Airports submitted that “The cost-benefit limb at (iii) turns on the comparison between expected costs and expected benefits. The proposed rule includes the safety benefit explicitly within expected benefits but does not otherwise define the term. NZ Airports submits that this is the correct drafting approach and should be retained”.⁶⁴

[CAA response](#)

The proposed rule does not establish a mandatory requirement for a cost-benefit analysis; it explains what an assessment of practicability may include. The CAA intends to develop Advisory Circular guidance on cost-benefit analysis, supported by worked examples and a basic template or checklist.

⁵⁹ Page 2 refers.

⁶⁰ Page 2 refers.

⁶¹ NZALPA submission, page 3, paragraph 14(e).

⁶² NZALPA submission, page 4, paragraph 28.

⁶³ BARNZ submission, page 3.

⁶⁴ NZ Airports submission, page 29, paragraph 170.

The CAA considers that including wider regional benefits in a cost-benefit analysis would be inconsistent with the WIAL Supreme Court decision. The CAA also considers that airport companies may not control, and should not necessarily be held responsible for, benefits to the wider region in which they operate.

16. Whether the definition of practicable should include recognition of an aeronautical study

Some submitters considered that an aeronautical study, undertaken in accordance with rule 139.131, should inform the determination of practicability.

[CAA response](#)

The CAA agrees that the assessment of practicability should recognise aeronautical studies because they can help determine whether constructing RESA to the Recommended Practice is practicable in a particular case.

What we heard on the inclusion of arresting systems

17. EASA guidance on arresting systems would be more suitable than FAA guidance, as its content is more ICAO compliant

The individual submitter expressed concern that the proposed arresting systems Advisory Circular relies heavily on FAA design standards for EMAS. This submitter also stated that “The use of EASA guidance on EMAS “CS ADR-DSN.C.236 Engineered Materials Arresting System (EMAS)” would be more appropriate and contains guidance better aligned to the New Zealand aviation environment, and is ICAO aligned.”⁶⁵

[CAA response](#)

ICAO guidance (Doc 9157, Appendix 5) outlines performance and compatibility requirements for arresting systems such as EMAS that are widely used for commercial aeroplanes, and notes these may be “*used directly as applicable provisions*”⁶⁶. This includes the EMAS guidance the FAA developed. ICAO does not list EASA’s certification specifications among the documents that provide guidance on EMAS systems.

18. Work on arresting systems should be paused

The individual submitter recommended that work on the proposed arresting systems Advisory Circular be paused, stating that:

“Focusing on EMAS and even developing an Advisory Circular is not the priority as it is a hugely expensive investment and no aerodromes in the foreseeable future would need

⁶⁵ Page 5 refers.

⁶⁶ ICAO Document 9157 (Aerodrome Design Manual), Chapter 5, 5.4.21.

to”⁶⁷ and “as the two main international airports that EMAS was suitable for have installed and now operate with EMAS no further CAA resource should be applied and the focus should be on the RESA safety and risk assessment guidance”.⁶⁸

[CAA response](#)

The proposed rule change aims to align RESA requirements more closely with ICAO Standards. ICAO allows arresting systems as an alternative means⁶⁹ of meeting RESA length requirements, which the current rule does not explicitly recognise. Including arresting systems in the rule will improve ICAO alignment.

What we heard on using a transport instrument

19. The transport instrument requires more detail

NZALPA sought more detail in the transport instrument covering the maintenance requirements and design specifications of arresting systems, stating that:

*“...any transport instrument on this topic should set out a range of detailed stipulations in regard to the topics covered by the instrument”.*⁷⁰

NZALPA proposed greater clarification of the aerodrome operator’s responsibilities for:

- compliance with the arresting system manufacturer’s maintenance programme⁷¹
- developing and providing performance certification (as per the maintenance programme)⁷²
- a testing programme to monitor the condition of the installed arresting system at regular intervals⁷³
- re-evaluating the performance of the arresting system when the operator introduces a new aircraft type after installation.⁷⁴

[CAA response](#)

The transport instrument requires compliance with the FAA AC, which includes the EMAS manufacturer preparing an inspection and maintenance programme, and the

⁶⁷ Page 2 refers.

⁶⁸ Page 6 refers.

⁶⁹ ICAO Annex 14, Aerodromes Volume I, Chapter 3, 3.5.3, Dimensions of runway end safety areas.

⁷⁰ NZALPA submission, page 5, paragraph 35.

⁷¹ NZALPA submission, page 5, paragraph 35(a).

⁷² NZALPA submission, page 5, paragraph 35(b).

⁷³ NZALPA submission, page 5, paragraph 35(c).

⁷⁴ NZALPA submission, page 5, paragraph 35(d).

aerodrome operator implementing it. The CAA will amend the wording of the Advisory Circular to make these requirements clearer.

Further, rule 139.131 requires aerodrome operators to conduct an aeronautical study for any significant change that may affect the safety of aerodrome operations, including a significant change in the type of aircraft operations.

Introducing a new aircraft type would reasonably require the operator to ensure that all the requirements of rule 139.51 are met for the characteristics of the aircraft the aerodrome is designed to serve, including the applicable Part 139 appendices.

Section 3: Out of scope issues raised during consultation

A small number of submissions raised issues outside the scope of the proposals consulted on in the NPRM. These issues are set out below for completeness. The CAA did not consider them in determining any changes to the proposals.

20. A fuller review of RESA length requirements should be carried out (it should not be a quick update)

CAA response

The CAA considers that it and the Ministry of Transport provided sufficient resource and priority to this project and that, notwithstanding the timeframe, the outcome would not have differed materially from the proposal.

21. Proposed Part 139 amendments need to reconcile with RESA lengths in Part 121

NZ Airports noted that “six Code 3 turboprop aerodromes are currently operating with NIL RESA under grandfathering. The regulatory regime has tolerated this position for the nineteen years since the 2006 RESA regime came into effect, without an evident safety issue at those aerodromes. An aerodrome regulatory framework that nominally requires 240 m at these aerodromes but has accepted NIL RESA in practice for nineteen years is not a framework that can credibly assert that 240 m is the calibrated outcome for the activity at those aerodromes. NZ Airports highlights an inconsistency between different New Zealand Rules - Part 121 requires the ICAO Standard RESA of 90 m to be taken into account by aircraft operators when calculating take-off and landing performance if operating from a runway with a RESA requirement”.⁷⁵

⁷⁵ NZ Airports submission, page 21, paragraph 115.

[CAA response](#)

There is currently no inconsistency between Parts 139 and 121. Any changes to Part 121 were out of scope of the work on RESA lengths.

22. Action should be taken to ensure that Part 119 operators are ensuring that flight crews are trained to use the EMAS

[CAA response](#)

The CAA considers it beneficial to provide pilots with guidance on the performance characteristics of EMAS and on how to operate aircraft when entering an EMAS. The CAA will collaborate with industry on the regulatory action required to disseminate this guidance effectively. The CAA also acknowledges the benefit of ensuring other flight crew members are appropriately trained.

23. The Aeronautical Information Publication (AIP) should be updated to ensure that flight crews are notified of the presence of EMAS at an aerodrome and are provided some basic information about EMAS design specifications (NZALPA)

NZALPA submitted that it would “*like to see the AIP updated to ensure that flight crews are notified of the presence of EMAS at an aerodrome and are provided some basic information on the EMAS design specification (we have previously given CAA an example of what is done overseas). Similarly, we would like to see some action taken to ensure that Part 119 operators are ensuring that flight crews are trained to use the EMAS in the necessary circumstances*”.⁷⁶

[CAA response](#)

The CAA has shared the AIP EMAS examples NZALPA provided with Queenstown and Wellington airports. Both airports have added text to the AIP on EMAS performance and on what pilots should do when entering the EMAS. The CAA also agrees there is merit in providing a templated example of an AIP EMAS entry in the appropriate Advisory Circular(s).

⁷⁶ NZALPA submission, page 6, paragraph 38.