Australian Government
Civil Aviation Safety Authority

SUMMARY OF CONSULTATION

Proposed RPAS operations over or near people

File ref: D26/223662

August 2026

Acknowledgement of Country

The Civil Aviation Safety Authority (CASA) respectfully acknowledges the Traditional Custodians of the lands on which our offices are located and their continuing connection to land, water and community, and pays respect to Elders past, present and emerging.

Artwork: James Baban.

Overview

In most cases, remotely piloted aircraft (RPA) and model aircraft—for simplicity we will refer to these types of aircraft as drones— must not fly over populous areas and must stay at least 30 m away from people who aren't directly involved in the operation of the drone.

CASA consulted on Policy Proposal PP 2609US that outlined CASA's current approach to the enablement and regulation of drone operations over or near people (OONP) and proposed changes to provide for a more proportionate, risk-based framework. The proposal identified gaps in effective controls for potentially unmitigated risk and changes to support these, while also seeking to expand the operational accessibility to industry and other drone flyers, while maintaining appropriate safety outcomes for people on the ground.

CASA proposed to reduce regulatory and administrative requirements for lower-risk activities by allowing certain operations OONP, without an application and CASA approval, for:

- drones weighing 250 g or less
- operations where people are physically separated from the drone by a suitable barrier or structure, such as buildings or stationary vehicles.

The proposal also updated CASA's current policy in *TMI 2024-01 - RPA Operations over or near people*, by:

- clarifying when a CASA approval is required
- strengthening application expectations using concepts of operations and emergency response planning
- refining OONP application and assessment pathways to better address operational factors such as laceration risk, impact energy, moving vehicles, and operations near major gatherings or organised events.

Overall, the proposal intends to remove the requirement to hold a CASA approval for certain lower-risk operations, provide clear expectations of industry to improve the quality of applications and efficiency of CASA assessment timeframes. The proposal will enable CASA to focus assessment effort on more complex and higher-risk activities, while maintaining or improving safety outcomes.

Contents

1 Reference material

1.1 Acronyms

The acronyms and abbreviations used in this summary of consultation (SOC) are listed in the table below.

Table 1: Acronyms

Acronym	Description
AC	advisory circular
CASA	Civil Aviation Safety Authority
CASR	*Civil Aviation Safety Regulations 1998*
CONOPs	concept of operations
DPP	documented practices and procedures
ERP	emergency response plan
FAA	Federal Aviation Administration
OONP	over or near people
ReOC	RPA Operator's Certificate
RePL	Remote Pilot Licence
RPA	Remotely Piloted Aircraft
PRS	parachute recovery system
SOC	summary of consultation
SORA	Specific Operations Risk Assessment
TRA	temporary restricted airspace
TMI	temporary management instruction

1.2 Definitions

Terms that have specific meaning within this SOC are defined in the table below. Where definitions from the civil aviation legislation have been reproduced for ease of reference, these are identified by 'grey shading'. Should there be a discrepancy between a definition given in this SOC and the civil aviation legislation, the definition in the legislation prevails.

Table 2: Definitions

Term	Definition
drone/s	For the purpose of this document, it is taken to mean remotely piloted aircraft and model aircraft.

Term	Definition
major gathering or organised event	An organised or advertised event, generally with a high level of public interest, where a significant number of people come together in a specific location for a common purpose. The density of people is such that there is limited free or open ground between individuals and if an RPA was to fail, it would have a very high likelihood of impacting a person at the event. This may include events like outdoor concerts, festivals, and sporting events, as well as spontaneous gatherings such as large protests and rallies.
laceration	A cut that goes all the way through the layers of the skin and may require emergent medical attention.

1.3 References

Legislation

Legislation is available on the Federal Register of Legislation website https://www.legislation.gov.au/

Table 3: Legislation references

Document	Title
CASA EX45/24	Operation of Remotely Piloted Aircraft Over Populous Area Exemption 2024
CASA 20/25	Operation of Certain Unmanned Aircraft and Rockets – Directions Instrument 2025
	Part 101 – Unmanned aircraft and Rockets of the Civil Aviation Safety Regulations 1998
	Part 101 (Unmanned Aircraft and Rockets) Manual of Standards 2019

Advisory material

CASA's advisory materials are available at https://www.casa.gov.au/publications-and-resources/guidance-materials

Table 4: Advisory material references

Document	Title
AC 101-01	Remotely piloted aircraft systems - licencing and operations
ASTM Standard F3322-22	Standard Specification for Small Unmanned Aircraft System (sUAS) Parachutes
ASTM Standard F3389/F3389M-21	Standard Test Method for Assessing the Safety of Small Unmanned Aircraft Impacts
TMI 2024-01	RPA Operations over or near people – 2024-01

2 Respondents

A total of 185 responses to the consultation were received. One hundred and twenty-three (123) respondents gave permission for their response to be published.

Respondents were asked to best describe the group they represent with the following results:

- Remotely piloted aircraft operators' certificate (ReOC) holder – 53 respondents
- Remote pilot licence (RePL) holder – Operating under a ReOC – 25 respondents
- Remote pilot licence (RePL) holder – 39 respondents
- RPA operator accreditation holder – 14 respondents
- Flying drones or model aircraft for sport or recreation – 29 respondents
- General public – 9 respondents
- Other – 16 respondents

The sixteen (16) respondents who identified as 'other' include a crewed aircraft or sport aviation pilot, an industry association representative, an RPA instructor and consultant, a drone manufacturer, an advanced air mobility designer, a landowner, and a CASA officer.

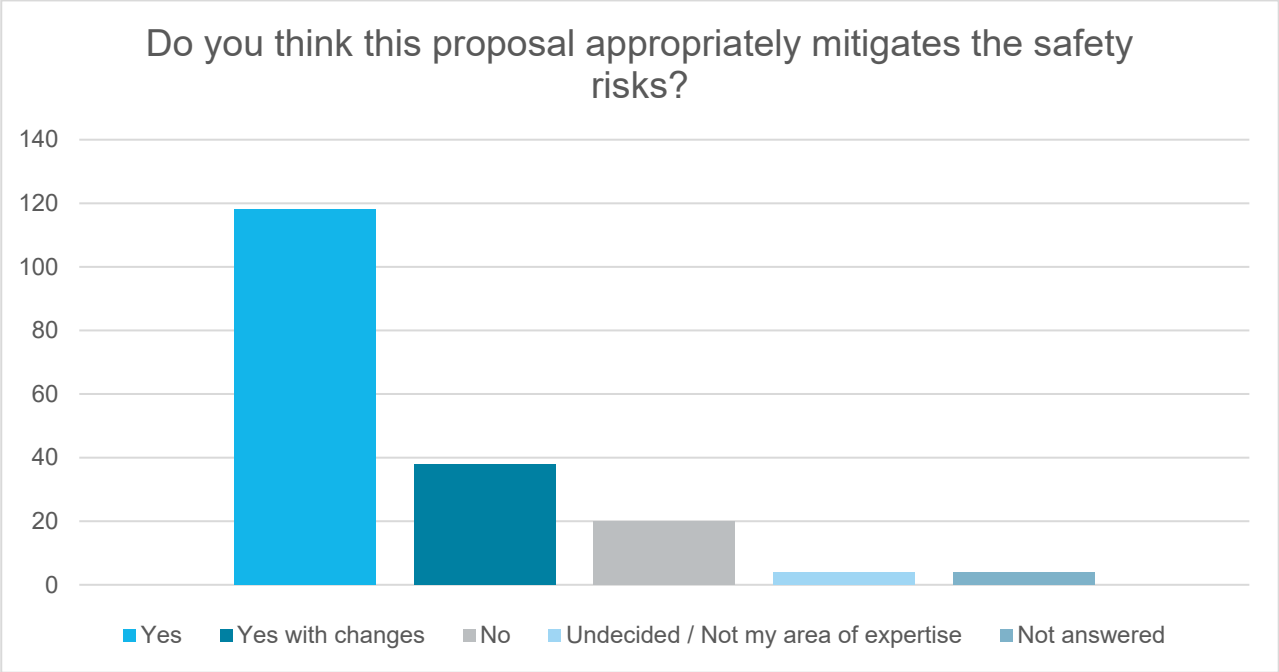
Fifty-two (52) respondents submitted feedback on behalf of an organisation.

CASA values the contributions made by all respondents. Where permission to publish has been granted by the respondent, individual consultation responses can be found at Proposed RPAS operations over or near people - (PP 2609US) - Civil Aviation Safety Authority - Citizen Space.

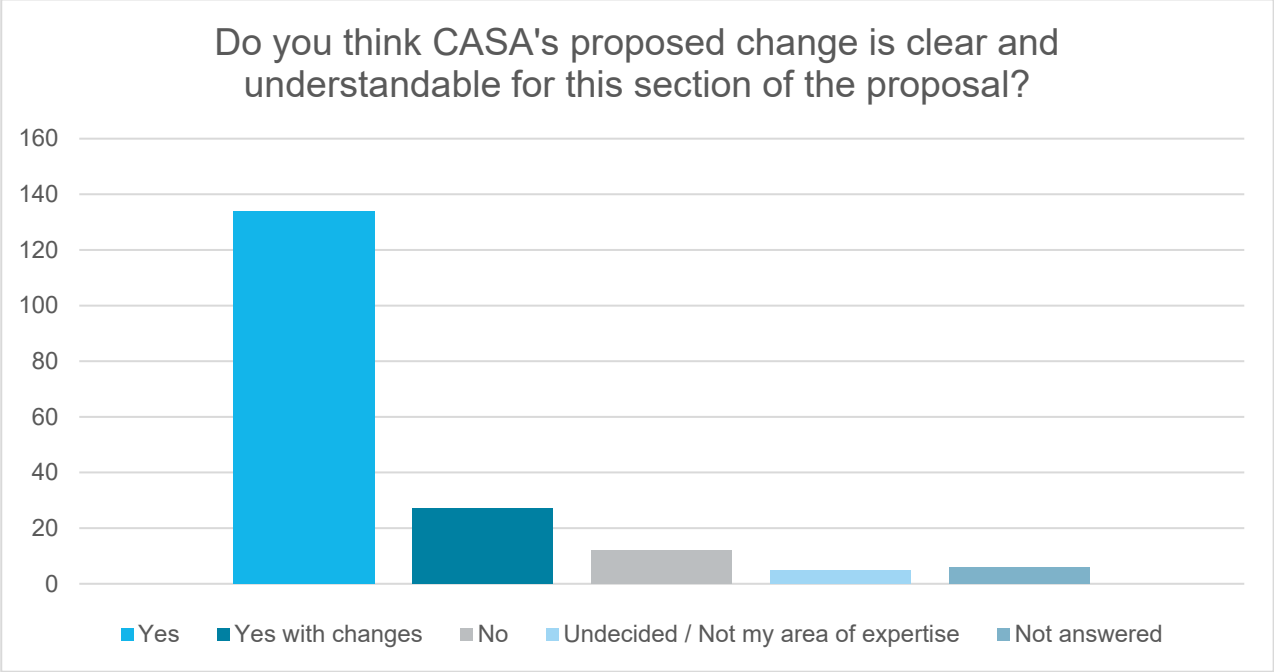
3 Key feedback

3.1 Proposal: Operations over or near people with drones 250 g or less without needing a CASA approval

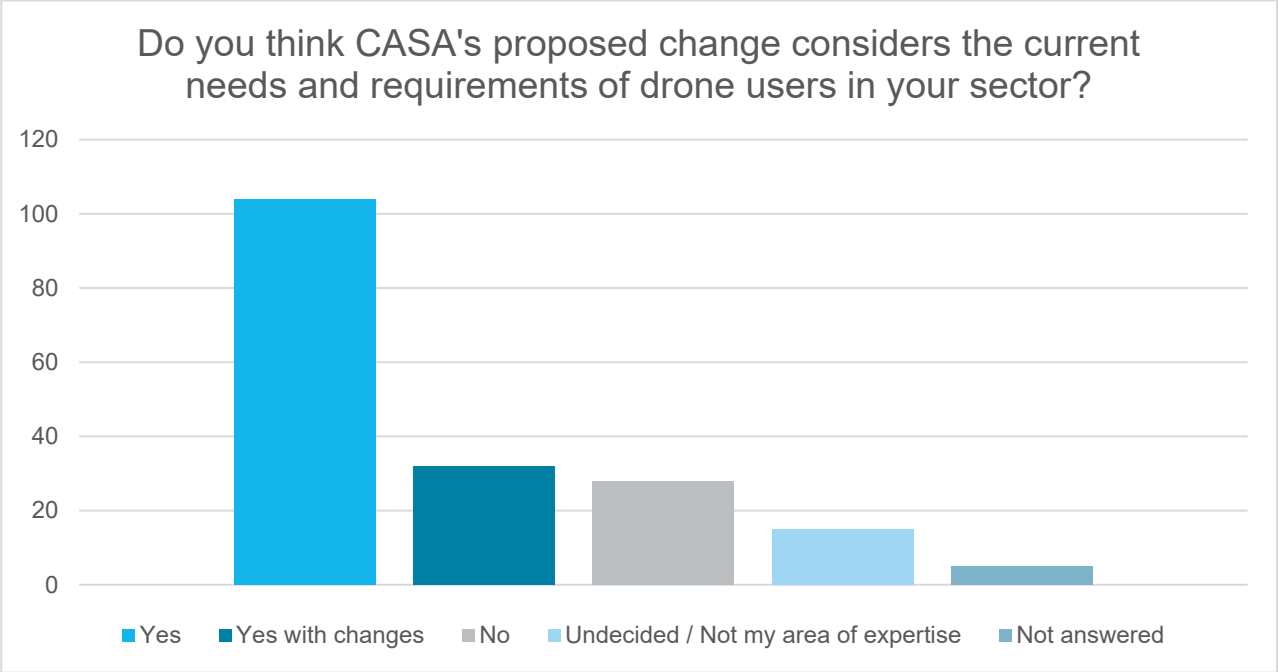
A majority of respondents (118) agreed the proposal would appropriately mitigate safety risk. Thirty-eight (38) respondents agreed it would generally mitigate safety risk, subject to suggested changes. Twenty (20) respondents did not agree the proposal would appropriately mitigate safety risk. Eight (8) respondents declined to answer or were undecided.



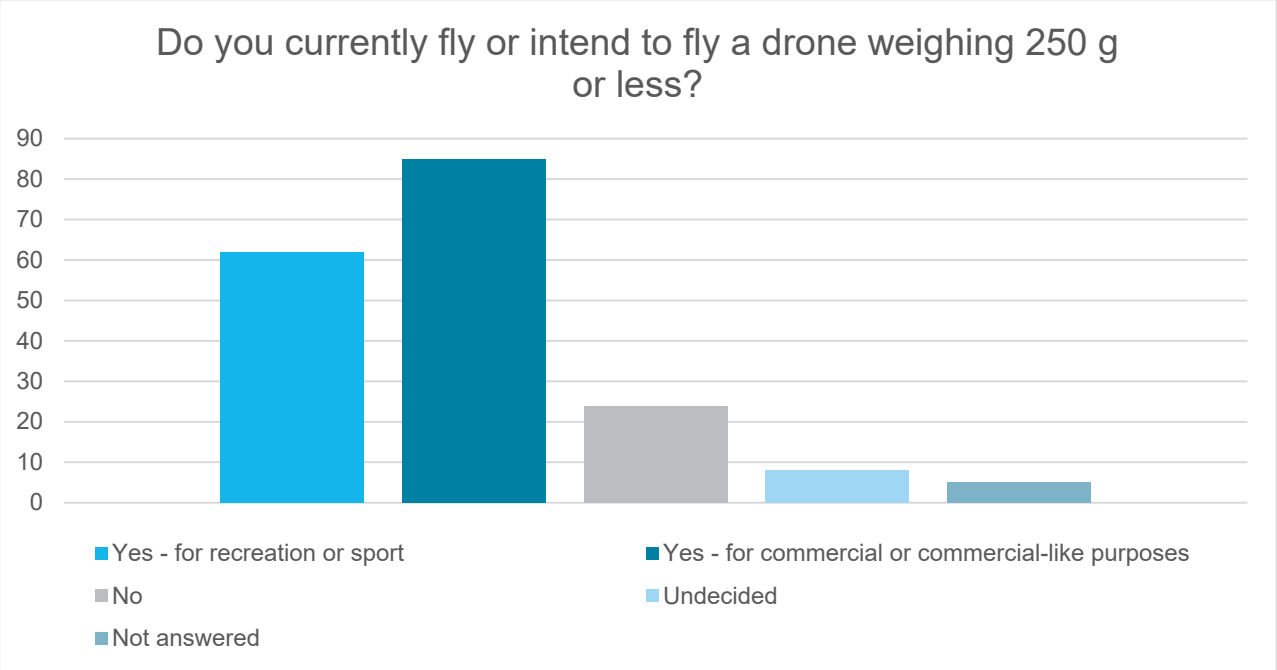
A majority of respondents (134) agreed the proposed changes were clear and understandable; 27 agreed it was clear and understandable with suggested changes, and 12 responded it was not clear and understandable. Eleven (11) respondents were undecided or declined to answer.



One hundred and four (104) respondents thought the proposed change considers the current needs and requirements of drone users in their sector; 32 respondents also agreed with suggested changes, and 28 responded that it did not consider the current needs and requirements of drone users in their sector. Twenty (20) respondents were undecided or declined to answer.



One hundred and forty-seven (147) respondents indicated they currently fly or intend to fly a drone 250 g or less. Eighty-five (85) respondents operate or will operate drones for commercial or commercial-like purposes and 62 fly or will fly for recreation or sport. Twenty-four (24) respondents indicated they would not fly a drone 250 g or less, and 13 were undecided or declined to answer.



Comments

CASA received 185 additional comments across free text fields in response to this proposal.

While there was generally broad support for this proposal, a common theme from multiple respondents was some changes are too restrictive. In particular, the requirement to obtain a RePL was viewed as unnecessary for safe operations and too costly for the operation of drones 250 g or less, especially for recreational flyers. Some respondents suggested the proposal should be extended to RPA operator accreditation holders who are permitted to operate in the excluded category, with specific OONP-related questions to be included in the accreditation test.

Additionally, limiting the proposal to drones that weigh 250 g or less, and within existing standard drone safety rules, was also perceived by some respondents as too limiting either for all operators or specifically for ReOC holders.

Several respondents described the proposal as a needed or logical change, more proportionate with the risk and consequence of the operation or commented positively on the proposed shift towards more outcome-based and less prescriptive rules.

Conversely, other respondents prefer a more prescriptive approach, suggesting controls are required for safety such as:

- additional operating height limitations below the 400 ft limitation, such as a maximum operating height of 100 ft (30 m)
- mandatory laceration-protection such as shrouds
- obstacle avoidance systems
- speed limits
- minimum distances from people such as 10 or 20 m instead of 30 m
- seeking consent from people before operating
- notifying people in the area.

Several respondents expressed concern that determining a 'safe distance' to operate a drone from people relied too much on the judgement of the drone pilot and that documented procedures should be required as well as CASA guidance material.

Comments from some respondents expressed concern over drone noise impacting health and wellbeing, the malicious operation of drones and security risk, privacy issues, risk to low flying crewed aircraft including paragliders, and the risk of laceration or blunt-force injuries to people on the ground.

Several respondents outlined concern that reducing or removing barriers to these operations for new operators would impact negatively on the economic viability and commercial sustainability for established commercial drone operators. Some suggested the proposal was too permissive and that, for safety reasons, an ReOC should be a requirement for drones to be OONP, regardless of the lighter weight of the drone.

Across the comments, multiple respondents highlighted the regulatory issue of an operator's inability to include a micro RPA on their ReOC.

CASA response

CASA acknowledges this proposal received generally broad support from respondents, however, it is noted that the requirement for a RePL was seen by some as excessive and/or a potential barrier, particularly for recreational flyers. It is also noted that additional prescriptive controls were suggested by respondents, such as height limitations below 400 ft, and a mandated minimum distance from people rather than allowing the person flying the drone to determine a safe distance to operate from people.

The intent of the proposal is to provide a simple outcome-based option to enable lower risk drone operations across the commercial and recreational sectors. CASA will review the proposal to determine if any requirements should be amended to better reflect or mitigate risk and consequence and ensure that proposed outcome-based rules such as the requirement to maintain a 'safe distance' are supported by appropriate guidance material.

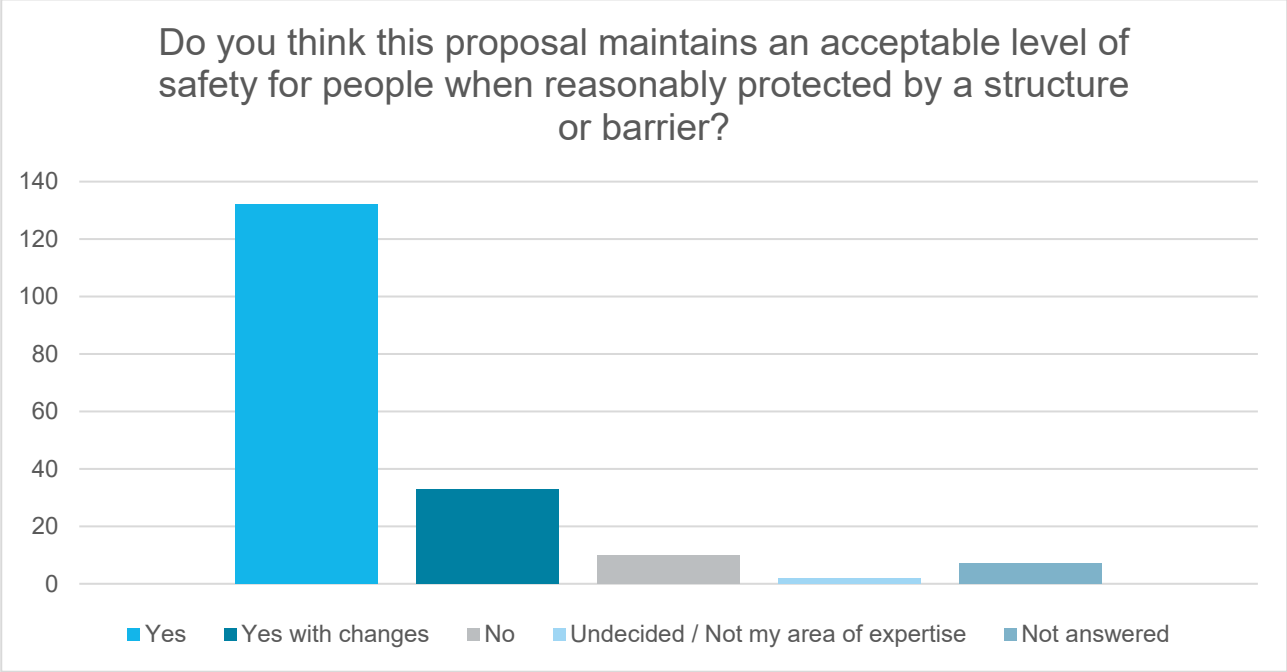
CASA notes respondent concerns in relation to the potential for malicious operation of drones. Criminal law considerations are outside CASA's remit and legislative framework, which is limited to regulating and promoting aviation safety.

To mitigate risk to crewed aircraft, the regulations already limit drone operations to below 400 ft above ground level (AGL), unless the operator holds an approval issued by CASA. The regulations also prohibit a person from operating a drone in a way that creates a hazard to another aircraft.

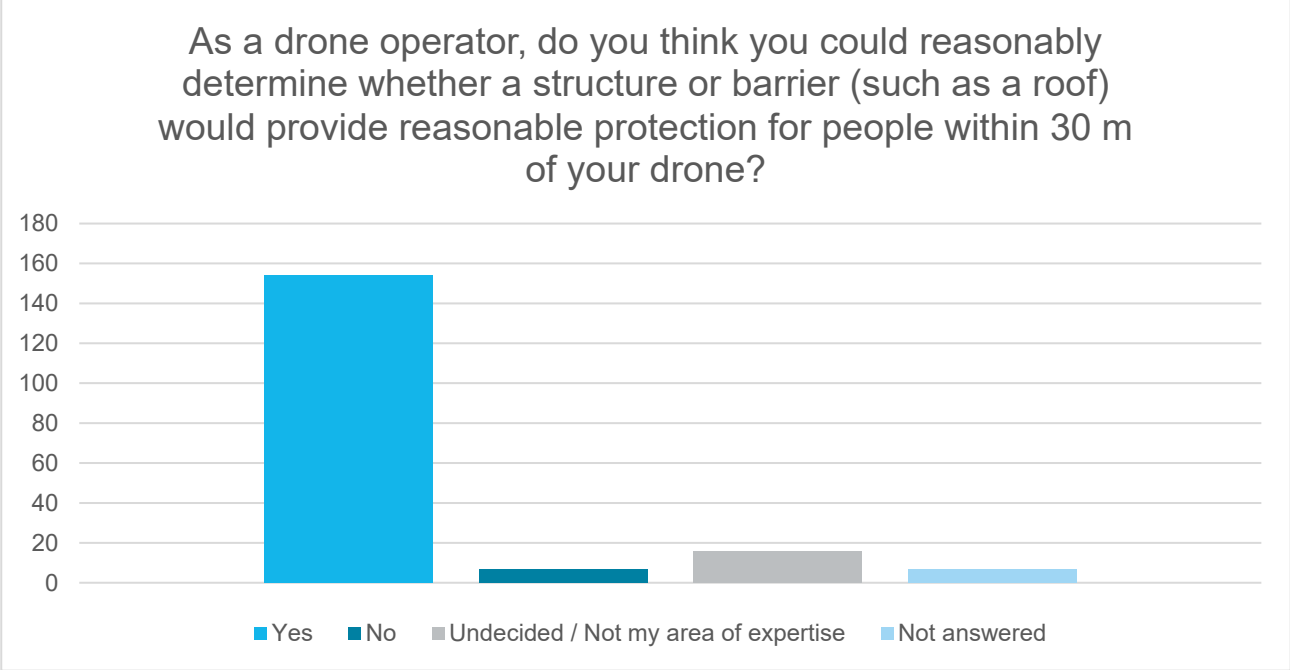
CASA also acknowledges the need to review and rectify the regulatory provisions for micro RPA to enable these RPA to be operated under a ReOC; this work would include regulatory review and changes for the applicability of Subpart F of Part 101 of CASR to micro RPA.

3.2 Proposal: Operations where a physical barrier separates the drone from people

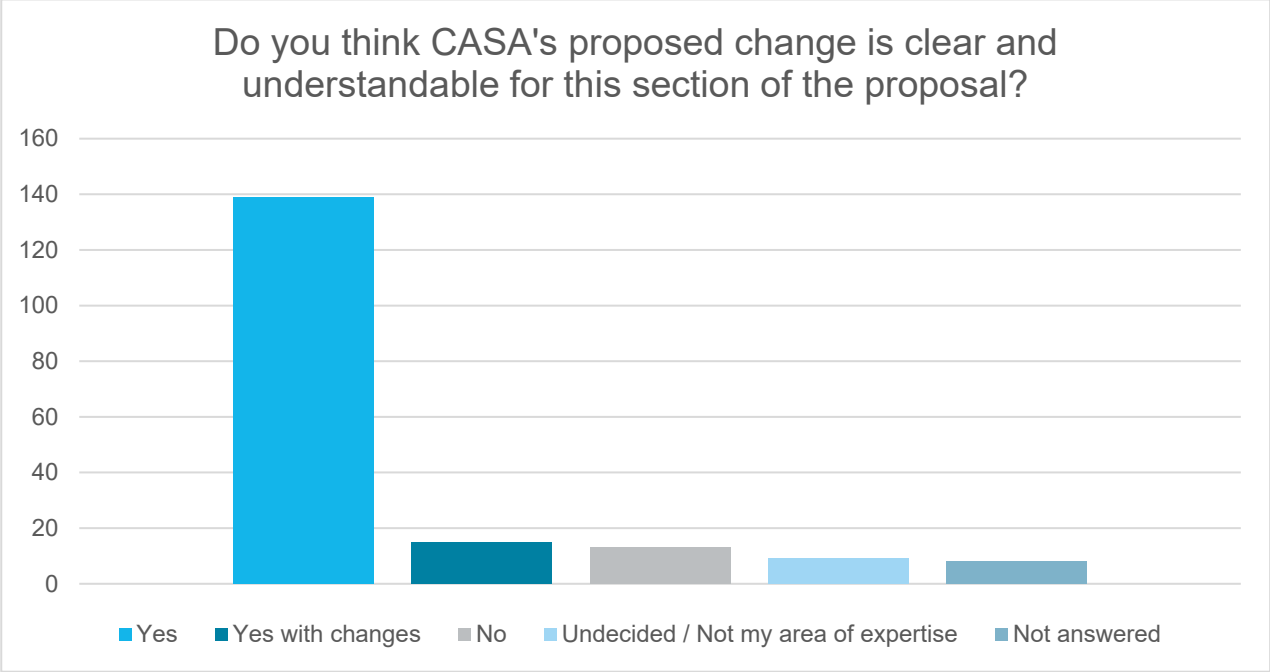
A majority of respondents (132) agreed the proposal would maintain an acceptable level of safety for people, and 33 respondents thought, subject to changes, an acceptable level of safety would be maintained. Ten (10) respondents did not think the proposal would maintain an acceptable level of safety. Nine (9) respondents were undecided or declined to answer.



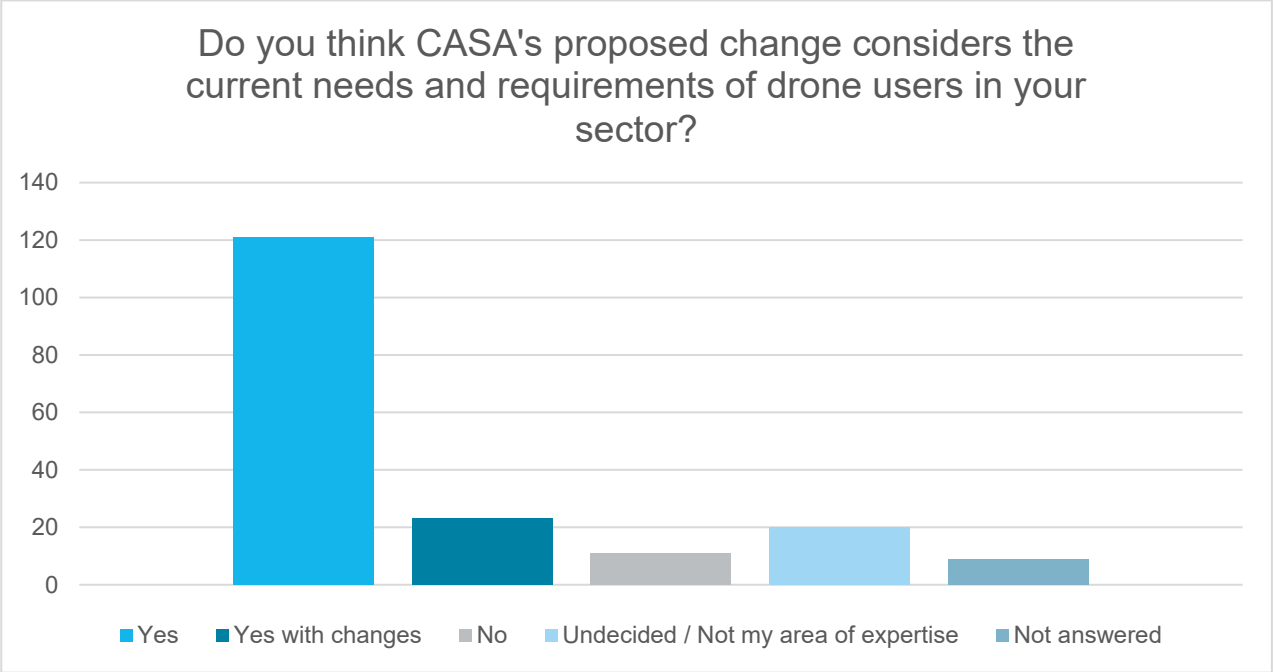
One hundred and fifty-four (154) respondents believed they could reasonably determine whether a structure or barrier (such as a roof) would provide reasonable protection for people within 30 m of their drone. Seven (7) did not think they could reasonably determine this, and 23 respondents were undecided or declined to answer.



A majority of respondents (139) thought the proposed change was clear and understandable and 15 said that it would be clearer, with suggested changes. Thirteen (13) respondents did not think the proposal was clear and understandable, and 17 were undecided or declined to answer.



One hundred and twenty-one (121) respondents thought the proposal considered the needs and requirements of drone users in their sector. Twenty-three (23) thought suggested changes would improve their sectors needs and requirements, and 11 suggested it did not consider the needs and requirements of their relevant sector. Twenty-nine (29) responded they were undecided or declined to answer.



Comments

CASA received 157 additional comments across free text fields in response to this proposal.

Several respondents commented that structures or barriers represent reasonable protection to people and are a common-sense risk mitigation; the proposal was viewed by some as pragmatic and a step in the right direction.

Largely, respondents believed they could, as a drone operator, reasonably determine whether a structure or barrier would be suitable. However, multiple respondents considered it more feasible for drone pilots to be able to make this determination if supported by clear guidance including practical examples. Some respondents thought it would be clear with drones that weigh 2 kg or less, or with drones in certain scenarios, while others suggested that only an engineer, or someone who could calculate kinetic energy, or the holder of a ReOC would be able to determine the suitability of a structure or barrier in the context of their drone operation.

The proposed drone weight limit (25 kg or less) was mentioned in multiple comments. Views varied with some suggesting the proposed weight limit was too high. Others suggested that it was too low and that weight may be immaterial in certain use cases where physical structures could provide protection from drones exceeding 25 kg.

In relation to operations over vehicles, several respondents believed that operations should be allowed over moving vehicles under a risk-based approach, potentially with a prescribed drone weight limit much lower than 25 kg.

Some respondents stated concerns with drones OONP more broadly, in relation to safety, privacy, or property damage.

Multiple comments suggested clarification about who could operate under this proposal, for example, excluded RPA operators. Some comments indicated that the proposal should only apply to holders of a ReOC or that a tiered approach should be used with additional privileges for holders of a RePL.

Several respondents proposed additional consideration should be given to agricultural operations or locations that are controlled environments, subject to other legislated frameworks or strict requirements for higher risk activities such as on a construction site.

CASA response

CASA acknowledges this proposal received broad support from respondents, and that OONP operations and operators would benefit from clear guidance material with practical examples.

This proposal is intended to enable drone operations without CASA approval, where a physical barrier would separate and protect people within 30 m of the drone. It is intended to support more simple operations and promote accessibility due to the lower risk and consequence of these operations, adopting an outcome-based approach that would permit the drone pilot to determine whether the operation can be conducted safely. In line with some international approaches to these operations, it is not intended to require complex calculation of kinetic energy or ballistic trajectories which would be inconsistent with the intent of a simple and accessible option for OONP.

The proposal would apply to all drone operators including of recreational drones and excluded RPA; however, the proposal would also apply in conjunction with existing operator requirements. One concern outlined in the feedback was that the proposal was extending the operating drone weight limit for excluded RPA operators, who are currently limited to drones 2 kg or less, unless meeting the criteria of landholder excluded RPA; this is not the intention. Under this proposal, there is no proposed change to the existing operator framework which includes the following requirements:

- To operate a drone that is 2 kg or less for commercial or commercial-like purposes, RPA operator accreditation is required (=**<2 kg excluded RPA**).
- For drones weighing more than 2kg, a RePL and ReOC is required to operate for commercial or commercial-like purposes (**ReOC operations**).

- To operate a drone that is 25 kg or less over your own land for commercial-like purposes, RPA operator accreditation is required (**landholder excluded RPA, with drones 25 kg or less**).
- A RePL is required to operate a drone that is more than 25 kg, up to 150 kg, over your own land for commercial-like purposes (**landholder excluded RPA, with drones 150 kg or less**).
- No accreditation or licencing is required to fly a drone or model aircraft that is 25 kg or less for recreation or sport.

All drones used for commercial or commercial-like purposes must be registered.

CASA will further consider whether the proposed drone weight limit should be amended.

3.3 Policy proposals relating to OONP approvals

CASA's current policy to assess and approve OONP applications for holders of a ReOC, is detailed within Temporary Management Instruction RPA Operations over or near people - 2024-01 (the 2024 TMI).

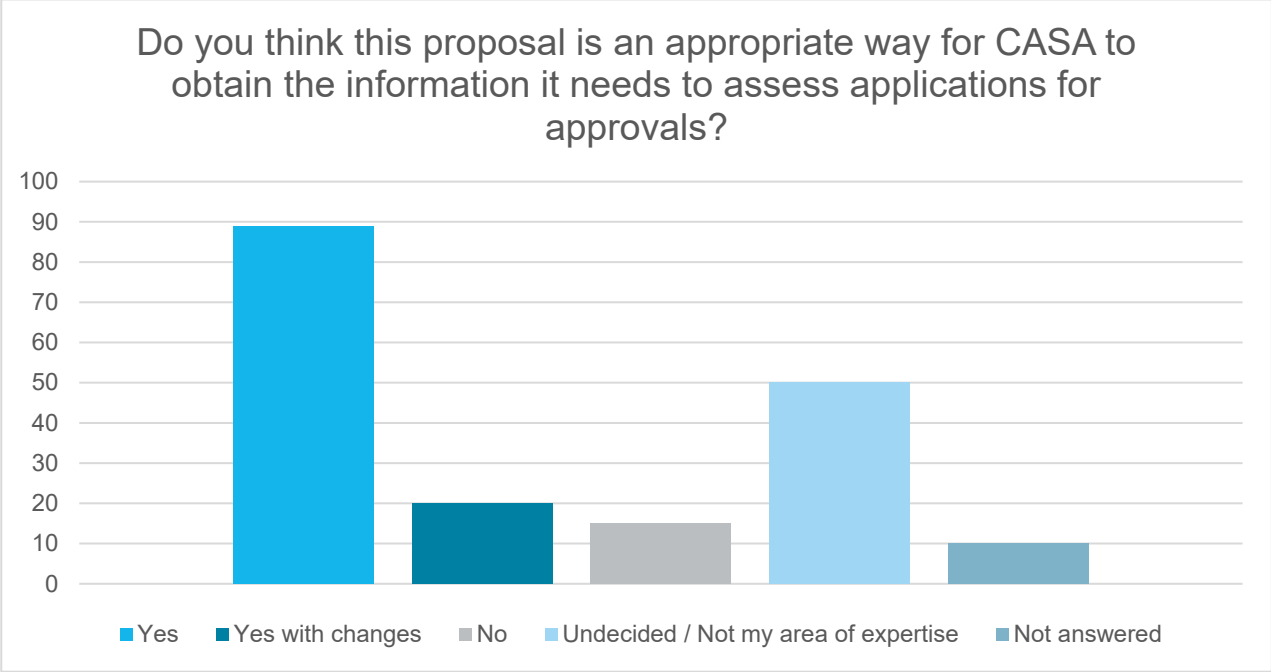
The 2024 TMI contains three pathways for applications for an OONP approval:

- Pathway 1 - Informed consenting active participants
- Pathway 2 - Unlikely to cause serious harm upon impact
- Pathway 3 - SORA based assessments.

The following section summarises respondent feedback related to the proposed policy changes to the 2024 TMI and is separate from the feedback for the proposal to permit OONP with drones 250 g or less and where a physical barrier separates the drone from people, without a CASA approval.

3.3.1 Proposal: Requirement for operational details to support applications for an OONP approval

Approximately half of respondents (89) think the proposal to require operational details to support OONP applications would be an appropriate way for CASA to assess applications, with 20 responding that it would be appropriate, subject to changes. Fifteen (15) respondents did not think the requirement to provide operational details to support OONP applications was appropriate. Sixty (60) respondents were undecided or declined to answer.



Comments

Thirty-seven (37) comments were received in response to this proposal.

The comments from respondents expressed varying views. Some respondents said it was appropriate and logical for CASA to seek additional operational details to support the assessment of an application for OONP, particularly if the requirement was scalable and proportionate to the complexity of the operation and CASA provided guidance material or templates. Others suggested it would be overly burdensome if it was intended that the concept of operations (CONOPs) was required to be submitted before every operation, determined the scope of the approval, and/or if multiple operation-specific OONP approvals are required.

CASA response

The intended outcome of this proposal is to better enable CASA assessment of an operator's understanding of risk and controls and also provide data to CASA to better inform our understanding of how operators are operating OONP. This may be achieved through specific questions on the application form, or through the requirement to submit a CONOPs. It would not be a requirement to submit a new CONOPs before every operation. It is also not intended to specifically limit an approval to the submitted CONOPs.

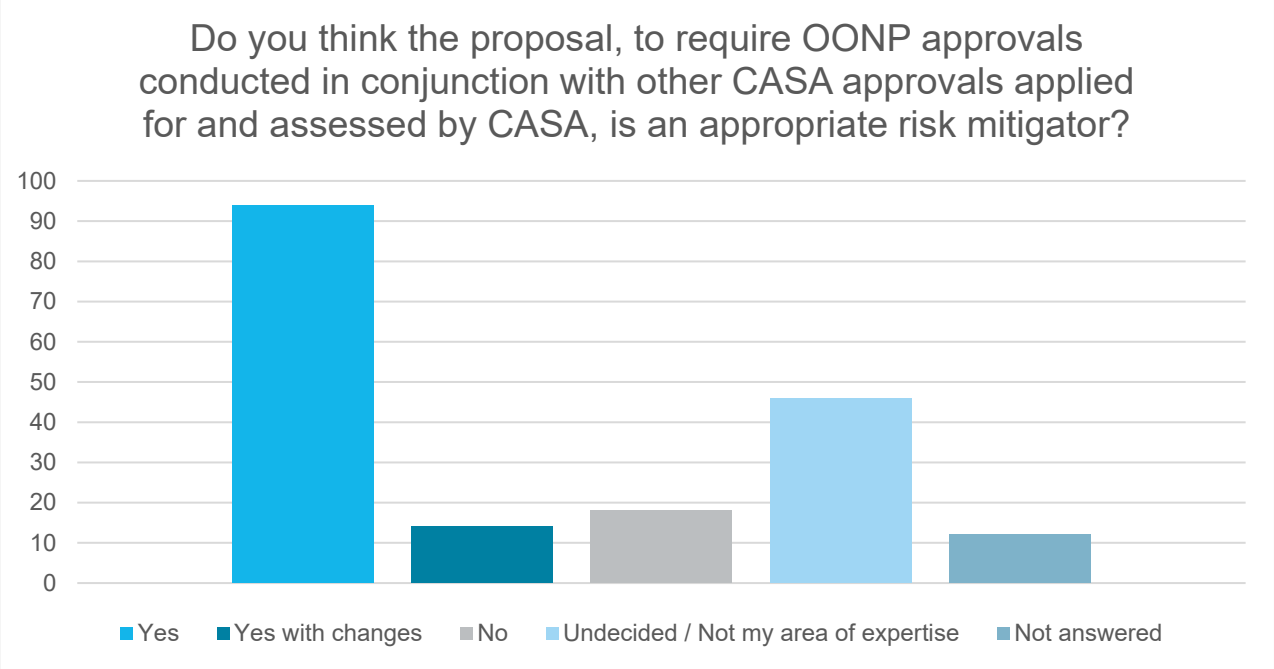
It is expected that this proposal would also support more efficient CASA assessment as applicants provide more detail relevant to their intended operations.

CASA acknowledges that a CONOPs may represent a static view of often dynamic operations; it would be expected that after receiving an OONP approval, an operator would review the risk and relevant controls as per their risk assessment and job safety assessment process, where their operations expand beyond the operations outlined to CASA in the application for their OONP approval, subject to instrument conditions.

CASA proposes to review which data should relevantly be collected to limit administrative burden for applicants while still enabling CASA to conduct a more robust assessment.

3.3.2 Proposal: OONP approvals outside of standard RPA operating conditions requiring specific assessment

Approximately half of respondents (94) agreed it would be appropriate for CASA to require OONP applications, intended to be used alongside other existing CASA approvals, to be considered together during CASA assessment. Fourteen (14) respondents thought, subject to changes, it would be appropriate. Eighteen (18) respondents think this proposal would not be appropriate. Fifty-eight (58) respondents were undecided or declined to answer.



Comments

Thirty-eight (38) comments were received in response to this proposal.

Several respondents said it would be sensible or appropriate for CASA to consider whether an operator is combining approvals, for example, operating OONP beyond the standard drone safety rules, as it may introduce additional risk to people on the ground. Some respondents supported the proposal in principle but highlighted more detail was needed as it could further impact negatively on approval timeframes. Other comments suggested the proposal and subsequent operations should not require multiple assessment or should be managed through a broader process approach rather than individual approvals.

Multiple respondents disagreed with the proposal, indicating it would be too restrictive, increase administrative burden or assessment delay, or would demonstrate a lack of trust in approval holders or ReOC holders and their ability to assess and manage risk. Several comments stated individuals perceive there to be little to no safety benefit in CASA specifically considering how approvals could be 'stacked' with an OONP approval. Another comment suggested where documented practices and procedures (DPP) address additional hazards, further CASA assessment should not be required.

CASA response

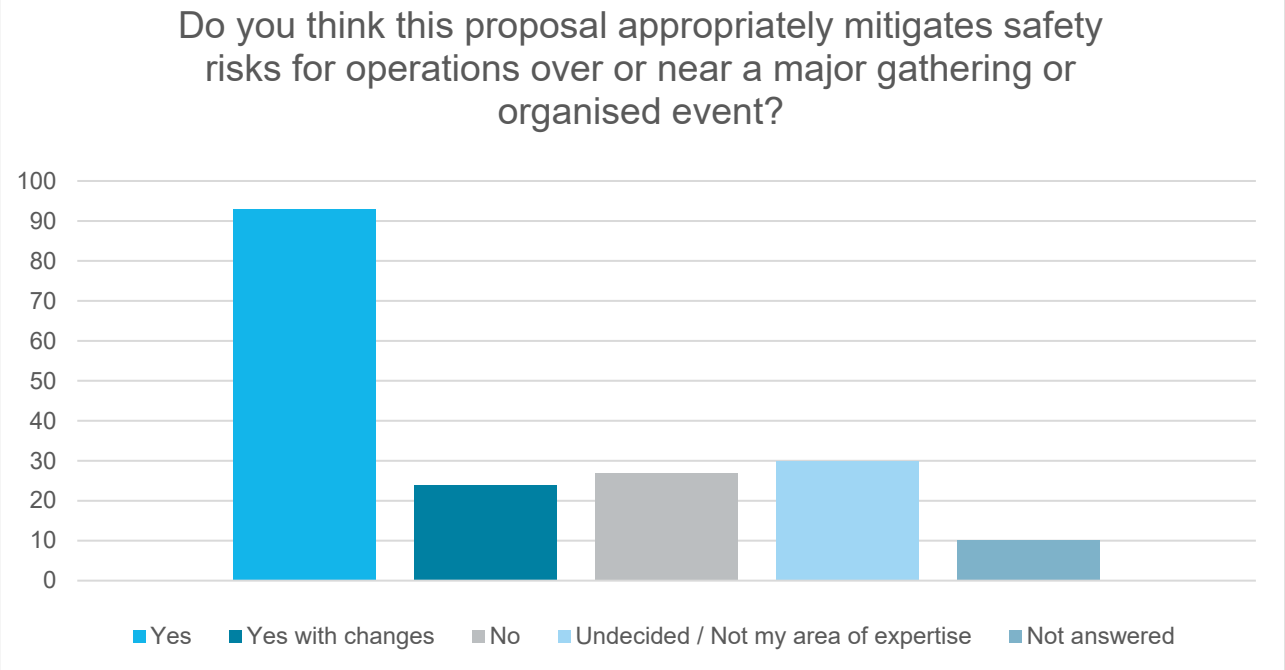
CASA acknowledges the broad support of the proposed requirement for an operator to specify when an OONP approval might be used in conjunction with another approval, for CASA assessment. We recognise that further clarification on the intent of this proposal is needed to clearly identify the areas of risk, associated with combining approvals.

Many comments referred to an operator's documented practices and procedures as an appropriate mitigator for bridging associated risk gaps. While CASA agrees updating the operators' documented practices and procedures will in most cases mitigate the risk, CASA must be satisfied changes to an operators DPPs do not have an adverse effect on aviation safety and align with the significant and non-significant change requirements.

CASA will review the proposal considering the feedback and ensure there is a clarified pathway with sufficient guidance for operators applying to CASA.

3.3.3 Proposal: Operations over or near a major gathering or organised event

Approximately half of respondents (93) answered that the proposal would appropriately mitigate safety risk for operations over or near a major gathering or organised event. With suggested changes, 24 respondents said the proposal would appropriately mitigate safety risks. Twenty-seven (27) responded the proposal would not appropriately mitigate safety risk, and 40 respondents were undecided or declined to answer.



Comments

Fifty-three (53) comments were received in response to this proposal.

Many respondents stated that densely packed crowds increase the risk when a drone is operating OONP and supported the proposal or supported it in principle. Several respondents disagreed, either stating that the number of people at an event did not increase risk or that drones do not pose a risk at events at all.

A key theme across comments was the requirement to notify CASA 7 days before operation at a major gathering or an organised event was impractical for events or drone operations that may be scheduled at short notice. Alternatives were suggested such as providing notice 24-48 hours earlier, or same-day notification. Other respondents highlighted the potential administrative burden of the notification process and believed that it would not impact on safety or were concerned it would be an additional approval process that may lead to further delays or CASA rejecting an operation.

One respondent proposed the definition should also extend to large private gatherings, while another suggested all major gatherings and organised events should be subject to temporary airspace restrictions rather than managing drone operations through OONP approvals.

There was strong support across multiple comments in relation to the requirement to be invited or contracted to operate by the event organiser, with respondents suggesting it would be appropriate and practical. Some respondents expressed concern that it may lead to event organisers refusing to allow drone operations or restrict the rights of the media.

Several respondents suggested more clarification is needed on the definitions within the proposal.

CASA response

CASA recognises this proposal received broad support, however, further consideration of definitions, notification mechanisms and timeframes, eligibility and other requirements are needed.

This proposal identifies the significant increase in risk and likelihood of a consequence to third parties on the ground should a drone fail when operating over or near a major gathering or organised event; the definition was intended to be outcome-based and qualitative in line with similar concepts internationally.

CASA acknowledges feedback regarding notification requirements, including that the notification timeframe may be too onerous and, the assumption that CASA may 'reject' an operation following receipt of a notification.

Notification to CASA is intended to provide awareness of OONP operations, in particular for high profile events that attract enquiries and media scrutiny. CASA requires awareness of these operations to respond to general or urgent enquiries from other government agencies such as law enforcement and the Department of Infrastructure, Transport, Regional Development, Communications, Sport and the Arts (DITRDCSA).

CASA does not intend for the notification process to provide a mechanism for CASA to reject or cancel a proposed operation after a notification has been submitted. As part of CASA's normal process, we may however, undertake ad hoc review and assurance activities of these notified OONP operations, to ensure operators hold the relevant approval, certification and licences to conduct the operation.

Should CASA become aware of any non-compliance, CASA is obligated to notify the operator. Ensuring regulatory compliance before operating remains the responsibility of the Chief Remote Pilot and holder of the ReOC.

It is acknowledged that event organisers may choose to restrict drone operations over or near an event. CASAs remit is aviation safety, and safety to people on the ground. The intent of the proposal is to reduce the likelihood of drone-to-drone conflict, drone to other airspace user conflict, and to reduce the consequences to people on the ground at the organised event.

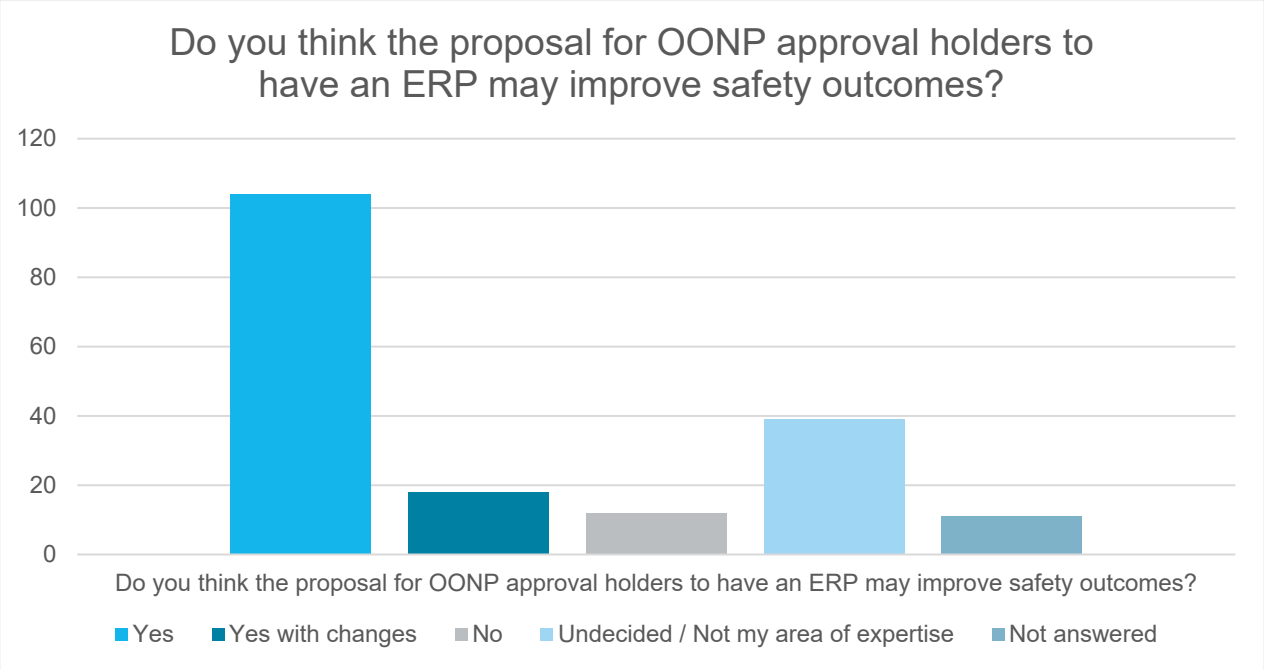
Event organisers are responsible for managing media footage and access to their event and are subject to all relevant federal or state and territory legislation, in particular media and access/equity to information.

Although a temporary restricted airspace (TRA) area can be established to manage drone operations over events where necessary in the interests of public safety, this approach relies on an event organiser or other appropriate person lodging an Airspace Change Proposal and undertaking an Airspace Risk Assessment for each event. Applying this process on a case-by-case basis would present significant practical and administrative challenges and would leave the increased ground risk at events without a TRA unaddressed.

CASA will continue to review this proposal, including definitions and requirements.

3.3.4 Proposal: Requirement for an emergency response plan for operations under an OONP approval

Over half of respondents (104) think the proposed requirement for an emergency response plan (ERP), that is commensurate with the complexity and risk of the operation, may improve safety outcomes. Eighteen (18) said that with changes, it may improve safety outcomes. Twelve (12) respondents did not think it would improve safety outcomes and 50 were undecided or declined to answer.



Comments

Forty (40) comments were received in response to this proposal.

Comments were generally supportive of the proposal, provided the requirement is risk-based and proportionate to the complexity of the operation. Comments suggested an ERP would improve consistency of emergency response and drive proactive safety thinking. Some respondents raised concerns around potential duplication of information across ReOC holder documentation or additional administrative burden if templates or guidance material is not provided. Other respondents questioned if an ERP could be reused for more than one operation, and if it must be a standalone document.

Multiple respondents disagreed with the proposal, with some commenting an ERP is too complex or burdensome, may be tokenistic or overly rigid, or that an ERP is unnecessary as a call to emergency services should be sufficient response.

CASA response

An ERP is intended to provide clear, pre-established procedures for managing emergencies that may result after an incident or accident with a drone, such as injuries or a fire. Its purpose is to protect people, limit damage, contain risks, and support an effective, coordinated response and recovery.

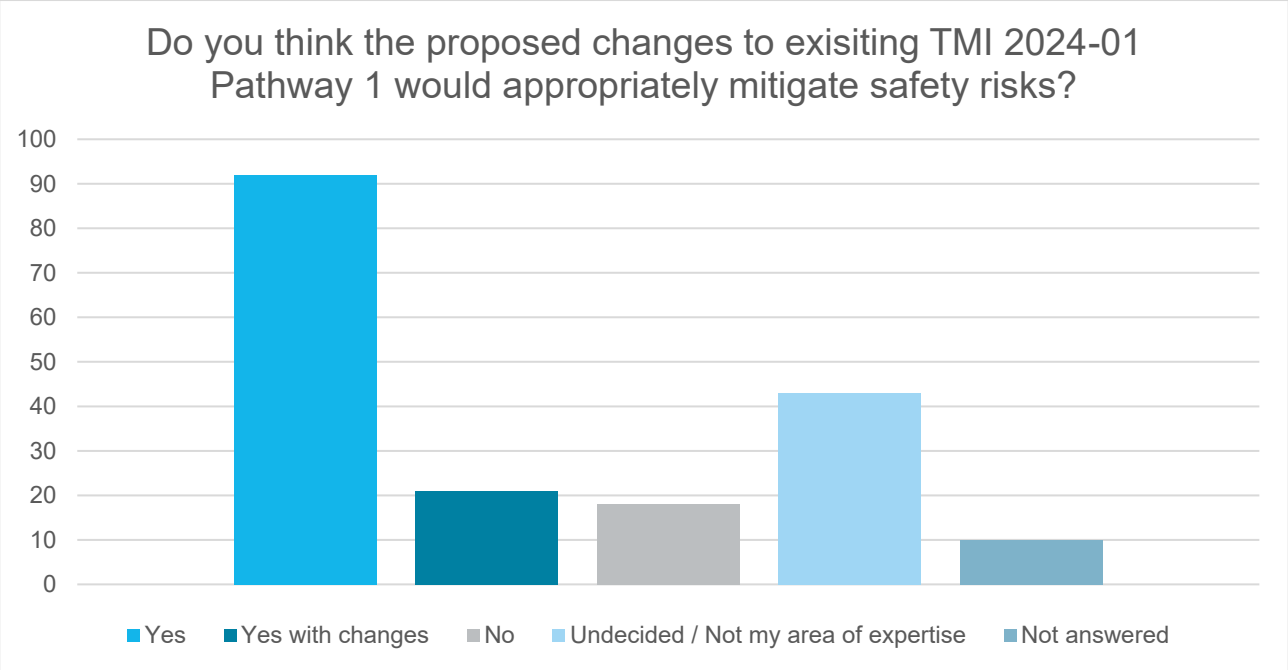
CASA recognises this proposal received broad support, however, the need for supporting guidance material has been clearly identified.

While a specific format would not be prescribed, CASA has already published a template ERP that operators may use to meet this requirement and reduce administrative burden. Operators that have already completed and established an ERP may continue to use their own template.

It is intended that an ERP would be scalable depending on the complexity of the operation, with more complex operations that increase risk to other aircraft or people, generally requiring a more complex ERP which forms part of a larger response management framework. An ERP may also be a standalone document, or incorporated into other documentation, and may be re-used if appropriate for the operation, but should be reviewed and updated as required.

3.3.5 Proposal: Refinement of existing Pathway 1 for OONP approvals

Half of respondents (92) thought the proposed changes to existing TMI 2024-01 *Pathway 1 - Informed consenting active participants* would appropriately mitigate safety risks. Twenty-one (21) thought it would appropriately mitigate safety risks with suggested changes. Eighteen (18) respondents thought the changes would not appropriately mitigate safety risks, and 53 were undecided or declined to answer.



Comments

Forty (40) comments were received in response to this proposal.

Of the comments received, there was general support for the proposal, however, concerns were raised in relation to the complexity and prescriptiveness of the proposed changes. The preference across these comments was for risk and performance-based controls.

Laceration protection considerations were generally supported, however, there was less support if this would result in mandatory propeller guards due to concern that, in some cases, fitment could reduce flight performance.

Multiple respondents expressed support for the inclusion of minors in this pathway when a lower weight drone is used, with one commenter suggesting a limit of 2 kg would be reasonable.

The requirement for the drone to maintain a safe distance from people was considered by some respondents to be ambiguous and open to interpretation, or potentially restrictive.

The inclusion of digital consent was widely supported and seen as practical and reducing administrative burden.

Some respondents commented that a CASA approval is unnecessary when criteria is met, particularly in controlled environments and when consent is given by people within 30 m of the drone.

CASA response

CASA acknowledges the general support for the proposal as well as the feedback from respondents, particularly in relation to the proposed outcome, risk and performance-based requirements such as the consideration of propeller guards and maintaining a safe distance.

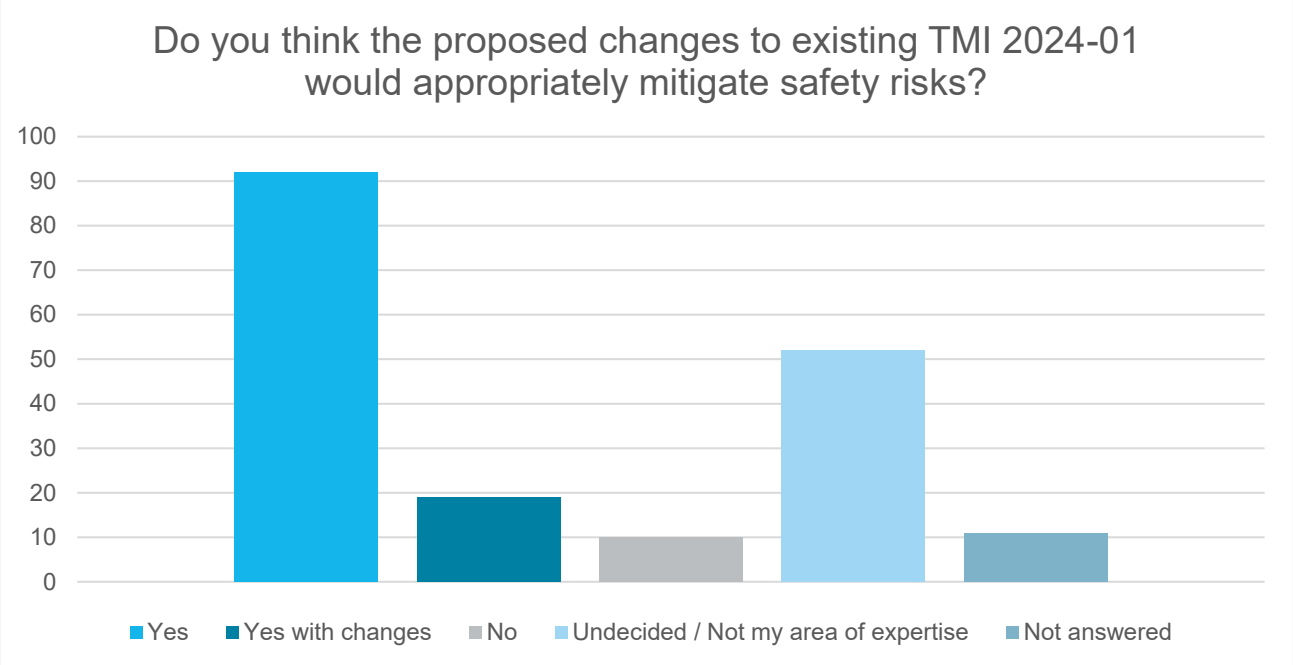
The proposal aims to move away from more prescriptive requirements to enable more flexibility, recognising ReOC holders' growing maturity in more complex operations and requiring appropriate risk-based decision making when planning these types of operations. This was supported by previous industry feedback received by CASA as part of the related Technical Working Group (TWG), outlining industry's preference to demonstrate compliance through outcome-based requirements.

CASA is committed to developing an appropriate pathway that considers the complexities of these operations while maintaining an acceptable level of safety to people within 30 m. It is recognised that guidance material would be needed to ensure all operators have access to appropriate documentation that would facilitate an acceptable level of understanding and reasonable means of compliance when followed.

It should be noted that an operator's use of consent from an active participant, and the required briefing, plays an active role in mitigating risk from uninvolved persons acting in an unpredictable manner particularly when the drone is operated within close proximity. For the purpose of issuing an OONP approval, CASA must be satisfied that the proposed operation would not pose an unreasonable risk to people, and active participant consent to operate near a person would not remove the requirement for an operator to assess and control the associated risks. Consistent with CASA's standard practice, we will continue to review these types of operations and where appropriate, make adjustments to pathways.

3.3.6 Proposal: Refinement of existing Pathway 2 - Unlikely to cause serious harm upon impact

Half of respondents (92) thought the proposed changes to existing TMI 2024-01 *Pathway 2 - Unlikely to cause serious harm upon impact* would appropriately mitigate safety risks. Nineteen (19) said that the proposal would appropriately mitigate safety risks with suggested changes. Ten (10) respondents stated the proposed changes would not appropriately mitigate safety risks, and 63 were undecided or declined to answer.



Comments

Thirty-five (35) comments were received in response to this proposal.

Some respondents commented that the changes would improve safety. Conversely, several respondents thought the proposal would not improve safety or that more information was required to make a determination.

Multiple respondents acknowledged the intent to improve safety but expressed concerns such as the ability for operators to meet the required standards for testing, perceived overly prescriptive requirements, and the practicality of determining wind speed at operating heights. Other comments highlighted that flexibility should be considered when using a parachute recovery system (PRS), for example not requiring a CASA assessment if manufacturer's requirements are met, and, the removal of sheltering as a means of meeting the kinetic energy threshold was potentially limiting.

Conflicting views were expressed on the proposed limitation on sustained operations over moving vehicles. Some respondents stated it was reasonable for CASA to consider sustained operations over moving vehicles, and this inclusion would improve safety. However, some respondents thought the proposed limitation would not adequately account for variations in operational details or it would not be practical to notify drivers of the intended drone operation to meet the relevant requirement.

Several comments expressed the requirements need to be simple and outcome-based, not overly complex.

CASA response

The intent of this policy would be to enable operations OONP where it is unlikely to cause serious harm upon impact. CASA has determined the most achievable method, which is supported by data and testing outcomes, is through applying the kinetic energy transfer limitations of 15-joules broadly, and 34-joules under certain conditions. The energy limits were determined based on the reduction to consequential impact with people or property on the ground and should not be confused with the Specific Operation Risk Assessment (SORA) methodology M2 medium mitigations that allow for a higher kinetic energy limit. The SORA methodology supports these mitigations in combination with a reduction in population density at risk, to achieve a target level of safety.

The 15 and 34 joules values are consistent with the values used by the United States of America's Federal Aviation Administration's (FAA) Part 107 Category 2 and Category 3 systems, which CASA now recognises and can be utilised for current and future applications.

In addition to recognising FAA Category 2 and 3 systems, CASA has also published a list of RPA and PRS combinations that have been assessed by CASA as compliant and can be used for this pathway.

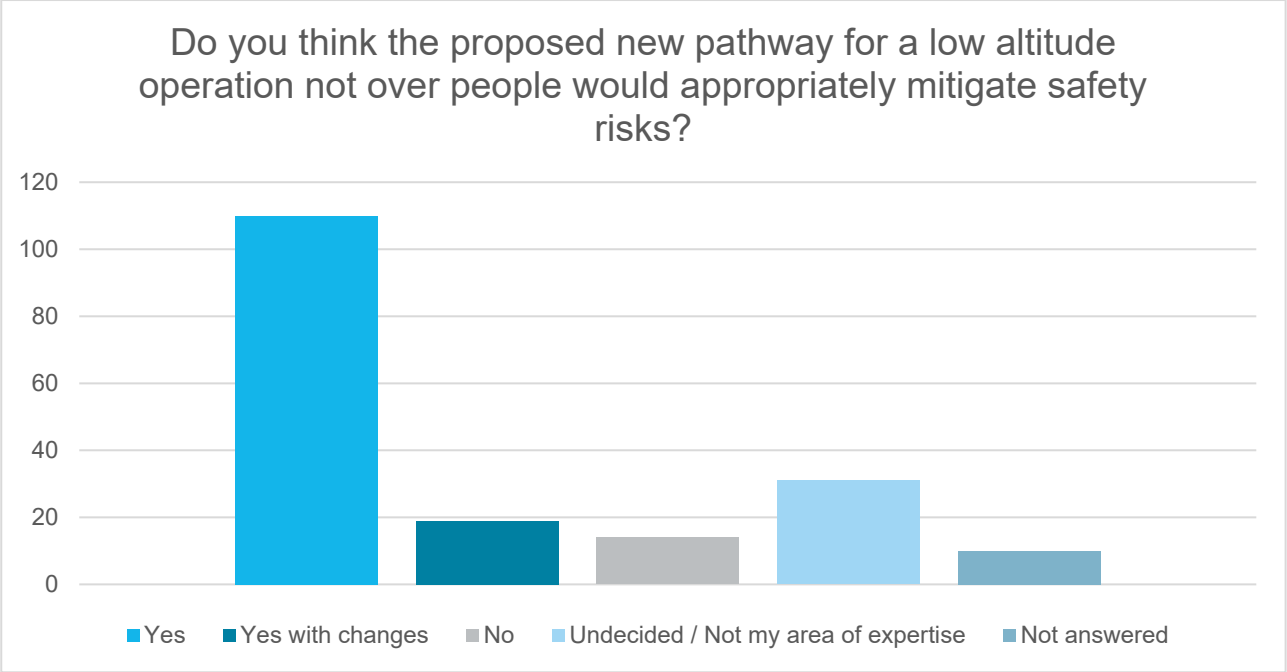
There are other ways an operator might demonstrate their drone meets the relevant kinetic energy transfer limit. An operator may demonstrate this through calculation of kinetic energy, considering the drone weight, speed, operating height etc. Unless evidence is provided, it will be assumed that all kinetic energy from an RPA is transferred to a person upon impact. An alternate method would be to comply with a means of compliance acceptable to CASA, which would provide a framework and support for new designs and evaluating existing designs to determine transferred kinetic energy levels in case of an impact with a person.

Wind speed is a critical determinate factor for these operations and calculations. In particular, when a PRS is relied on as the only risk mitigation measure, winds exceeding the PRS manufacturer specified operating limits may significantly impair parachute deployment performance and effectiveness. CASA will further consider operations using a PRS, wind speed monitoring requirements and potential means of compliance.

While CASA maintains it is appropriate to consider sustained drone operations over moving vehicles, as opposed to drone operations that transit quickly over moving vehicles and minimise exposure, the requirements in relation to this will be further reviewed.

3.3.7 Proposal: New pathway - Low altitude operations not over people

Over half of respondents (110) thought the proposed new pathway would appropriately mitigate safety risks. Nineteen (19) responded it would appropriately mitigate safety risks with suggested changes. Fourteen (14) respondents thought the proposal would not appropriately mitigate safety risks, and 41 were either undecided or declined to answer.



Comments

Thirty-five (35) comments were received in response to this proposal.

Multiple comments were supportive of the proposal with some comments describing the proposal as practical with appropriate risk controls.

Several respondents thought the proposed weight limit of 1.5 kg was too low and/or that the maximum operating altitude would be overly restrictive and should be increased to 20-40 m, or to align with the as low as reasonably practicable (ALARP) principle when transiting over obstacles.

Other comments stated that ballistic trajectory should also be considered; the proposal should also consider camera orientation, or the proposal was inconsistent with other pathways as it proposed different kinetic energy transfer limits.

Multiple comments were received that operations under this proposal should not require a CASA assessment or specific approval at all.

CASA response

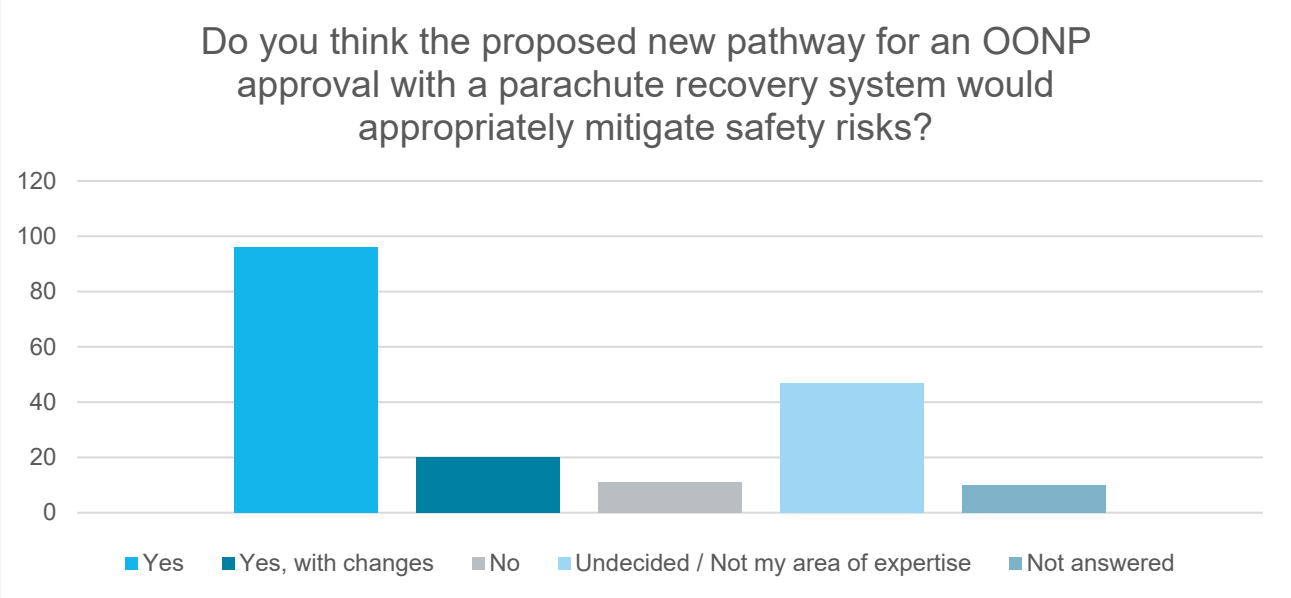
This proposal was designed to address a gap in drone operations that are conducted below the minimum parachute deployment height and cannot be conducted using drones that weigh 250 g or less, particularly for the use case of asset inspection such as powerlines. In these circumstances, the inability to use a PRS results in higher kinetic energy transfer levels should the drone fail and impact a person. Accordingly, CASA's approach focuses on reducing the likelihood of a person being impacted by eliminating the intentional overflight of people and includes certain controls to reduce the potential consequence of an impact.

CASA acknowledges the feedback received and will review the proposal, including the permissible drone weight limits and operating heights, to ensure the pathway remains practical and fit for purpose while maintaining an appropriate level of safety.

As each pathway and the associated proposed changes have been designed to manage risk differently, some inconsistencies or exceptions between pathways are to be expected and cannot always be eliminated. It should be noted that, operators may apply to conduct operations outside an established pathway if their proposed activity does not align with any of the existing pathways.

3.3.8 Proposal: New pathway – Operations with a parachute recovery system

Approximately half of respondents 96) agreed the proposed new pathway would appropriately mitigate safety risk. Twenty (20) said that, with suggested changes, it would appropriately mitigate safety risks. Eleven (11) respondents said it would not appropriately mitigate safety risks, and 57 were undecided or declined to answer.



Comments

Thirty-three (33) comments were received in response to this proposal.

Multiple respondents expressed agreement with the proposal for the use of a PRS or expressed agreement in addition to clear guidance provided.

Several respondents commented on the proposed requirement for the PRS to be deemed compliant to the relevant standard which is typically advised following a CASA assessment. Some responded that PRS should be assessed by CASA and deemed compliant with relevant standards as an enduring activity before operators apply, or alternatively, that operators should be able to use any PRS that meets manufacturer requirements and performance standards without a CASA assessment.

In relation to the proposed requirements around wind monitoring, comments were mixed. Some respondents thought it would strengthen safety outcomes, however, others suggested wind monitoring may be impractical.

Another comment included concern over how practical it may be for an operator to determine the kinetic energy transfer of a drone.

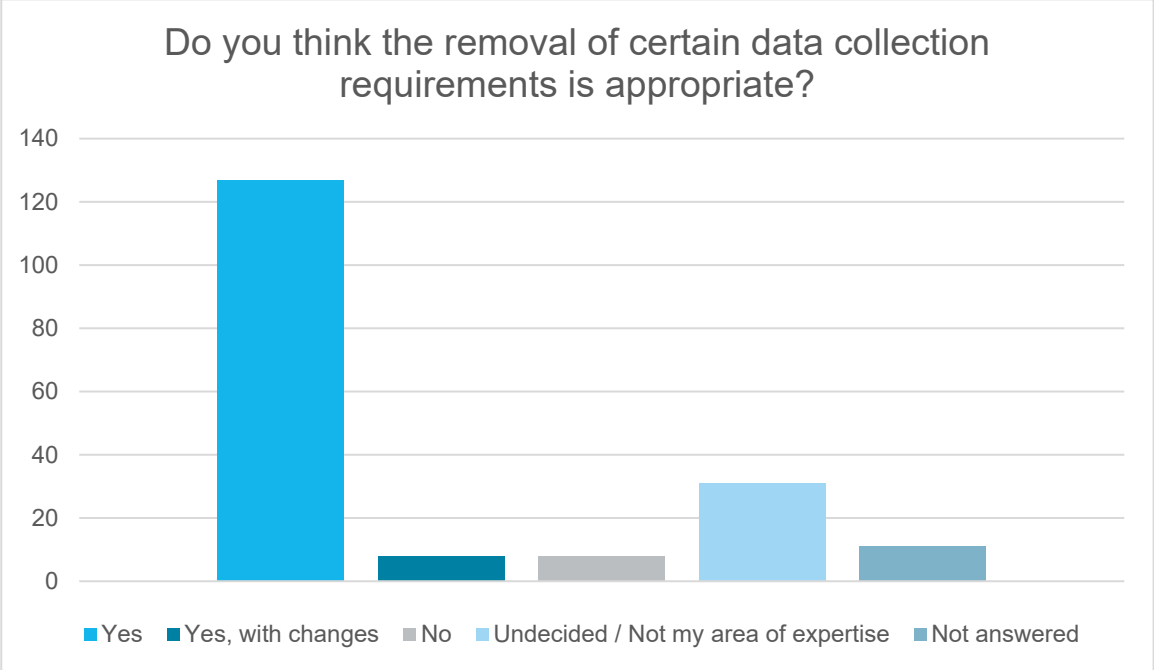
CASA response

This proposal is intended to enable OONP operations using a compliant PRS system with the intended benefit of reduced assessment burden; the ASTM standard used for this proposal only addresses the PRS reliability and performance, not the resulting kinetic energy transfer to a person. For simplicity and to account for variability, it is assumed the entire kinetic energy is transferred to a person upon impact. For this reason, the 34-joule total kinetic energy transfer limit was proposed, while restricting flight over gatherings of people, or major gathering and organised events.

CASA acknowledges the support for the pathway and the comments received. We will review this proposal taking feedback into consideration. As part of implementation and communication with industry, CASA will produce guidance material and supporting means of compliance such as the existing list of assessed and compliant RPA and PRS combinations already published on the CASA website. This should provide operators' the visibility of which systems have been assessed and deemed suitable under the relevant pathway.

3.3.9 Proposal: Removal of certain data collection requirements

The majority of respondents (127) said the proposed change to remove certain data collection requirements would be appropriate. Eight (8) said that it would be appropriate, with changes. Eight (8) respondents do not think it would be appropriate, and 42 were undecided or declined to answer.



Comments

Twenty-three (23) comments were received in response to this proposal.

Comments were broadly supportive of the proposal, particularly for respondents that thought data collection is already duplicative, impractical to collect, creates unnecessary administrative burden and/or does not clearly contribute to improved safety outcomes. A common view was that detailed post-flight data collection should only be required when an incident or safety issue occurs.

Some comments expressed caution or opposition, mainly due to concerns about the loss of safety data and CASA's ability to monitor risk and safety performance.

CASA response

The intent of this proposal is to remove data collection requirements that are impractical, duplicative, or provide limited regulatory value.

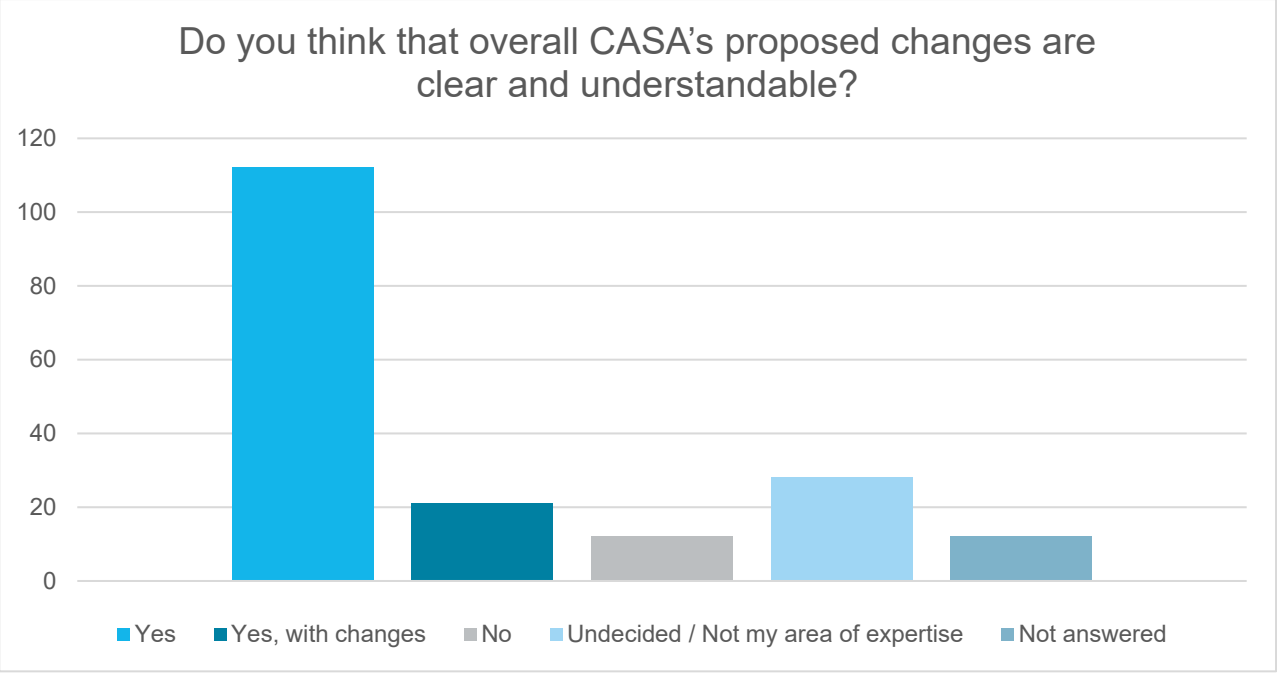
CASA acknowledges the comments received and the broad support for the proposal. In response to stakeholder feedback, CASA will consider clarifying the proposal through conditions on relevant instruments to ensure that existing record-keeping and reporting obligations, such as those under Chapter 10 of the Part 101 Manual of Standards (MOS) and the Australian Transport Safety Bureau (ATSB) reporting requirements for RPA, are recognised and not unnecessarily duplicated.

While this proposal seeks to reduce specific data collection requirements, CASA recognises the important role operational data has in supporting aviation safety and evidence-based regulation. As part of our ongoing regulatory reform activities, CASA will consider how data could be collected more effectively, including the format, method and timing of collection, while minimising regulatory burden on industry.

Moving forward, CASA intends to review its approach to data collection to ensure the information gathered is targeted, meaningful and proportionate. This would support improved safety outcomes and help validate the development and assessment outcomes that underpin existing policy, while also providing an evidence base for the development of future policy and regulatory initiatives.

3.4 Question: Do you think that overall CASA's proposed changes are clear and understandable?

A majority of respondents (112) agreed CASA's proposed changes were clear and understandable. Twenty-one (21) said the changes were clear and understandable, with specified changes. Twelve (12) respondents said the changes were not clear and understandable, and 40 were undecided or declined to answer.



Comments

Thirty-two (32) comments were received in response to this question.

Overall, comments expressed mixed views. While multiple respondents stated the proposal's intent and overall direction is understandable and proportionate, others thought the proposed changes may be too complex, may create additional administrative burden, or lack sufficient definitions.

A common sentiment expressed is practical guidance material is required.

CASA response

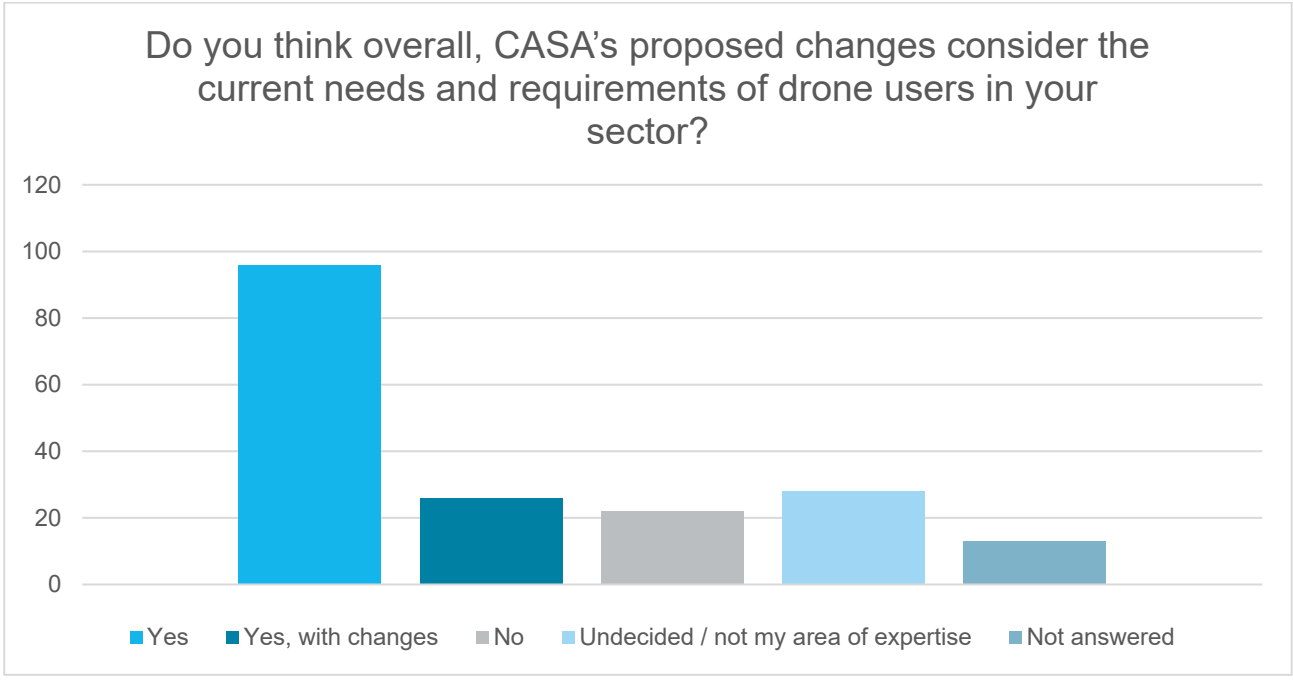
CASA continues to refine its approach to developing assessment and guidance material while balancing the needs of an emerging industry that is evolving more rapidly than the current regulatory framework.

CASA is moving towards a more outcomes-based regulatory approach, supported by prescriptive requirements where necessary. This approach is intended to provide greater flexibility for emerging technologies to operate within the existing regulatory framework, reducing the need for frequent policy and regulatory updates.

Following consultation feedback review and amendments, CASA intends to implement these proposals through a comprehensive support package, including guidance material for all pathways and general approvals, updated assessment criteria, inspector training, improved website content, plain-English guidance, revised application forms and commencement and transitional advice for those intending to undertake OONP activities, those that already hold an OONP approval, and those whose OONP approval may expire before the new pathways commence.

3.5 Question: Do you think overall, CASA's proposed changes consider the current needs and requirements of drone users in your sector?

Approximately half of respondents (96) said the proposed changes did consider the needs and requirements of their sector, with 26 suggesting they did if specified changes are made. Twenty-two (22) said the changes did not consider their sector's current needs and requirements, with 41 respondents undecided or declining to answer.



Comments

Twenty-one (21) comments were received in response to this question.

Multiple respondent comments:

- Supported the move toward more risk-based and clearer approval pathways.
- Welcomed pathways for low-altitude operations, active participants, parachute recovery systems, and controlled operations near people.
- Believed the proposal is a step in the right direction compared with the current framework.

Conversely, other comments expressed concerns that:

- The proposal remains too approval-heavy and reliant on bespoke assessments.
- Some requirements may not be proportionate to risk.
- Additional approvals, licensing requirements and operational restrictions may increase cost or compliance burden without corresponding safety benefits.
- Industry consultation may not have been sufficient.
- The proposal does not adequately reflect some drone technologies, specialised sectors and/or operational realities.

CASA response

CASA acknowledges the comments and constructive feedback provided from the various sectors of industry and wider public. We are committed to developing policy and guidance material in plain English that are clear, practical, and easy to understand, while supporting effective operational outcomes. However, expectations should be managed, as more complex operations inherently involve greater risks, which often require technical controls and a corresponding level of organisational capability and maturity for effective management.

CASA notes feedback that the proposal does not consider every drone technology, specialised sector, or operational reality. An operator who does not think their operation fits within a defined pathway can still apply for an approval by submitting a suitable safety case, commensurate with the complexity and risk, and with supporting evidence demonstrating how their specific operation can be safely achieved.

3.6 Question: Do you have any other comments on the proposed policy, including any safety impacts and how it could affect you, your work or business, or your community?

Comments

One hundred and nine (109) comments were received in response to this question.

Strong support was expressed for a risk-based, proportionate framework that moves away from general restrictions towards regulation based on actual risk, drone size and energy, and with safety controls in place. Several respondents called for greater discretion for trained and competent drone operators.

One significant concern expressed was the need to reduce red tape and administrative burden, particularly in relation to approval processing timeframes and cost. Another concern noted a lack of visible enforcement for non-compliant operators.

The need for plain English guidance for drone operators, including examples and scenarios, and simplified policy and processes was reiterated. Suggestions were also received to increase public awareness of drone rules and operations for social acceptance.

One comment highlighted the need for more iterative industry engagement during policy development to help identify operational challenges.

Some respondents felt the proposals were too permissive and unsafe, stating that restrictions should increase not decrease.

While not specifically related to the proposals in this consultation, multiple respondents commented a need for de-regulation or further enablement for drones 250 g or less, as well as the general enablement of drone operations beyond visual line of sight and at night.

Additionally, air risk was raised by several respondents with concerns around conflict between airspace users.

Other concerns were expressed in relation to agricultural spraying and chemical exposure, as well as drone delivery services and the accessibility of food or drink to minors.

Some respondents commented the proposal could lead to the malicious use of drones, including stalking, surveillance or terror-related incidents.

CASA response

CASA received substantial feedback in response to this question. While CASA is committed to considering all submissions, concerns relating to privacy, security, noise, chemical exposure, food and beverage sales to minors, or criminal activity, are outside CASA's regulatory remit and legislative powers. As such, CASA cannot address these matters through this policy proposal. Respondents with concerns across these areas are encouraged to raise them with the appropriate authorities, such as local police and law enforcement agencies, and the relevant government departments and agencies that are responsible for the related legislation and regulation activities.

Policy proposal PP2609US seeks to reduce administrative and regulatory burden through a range of initiatives, including the general enablement of OONP using drones 250 g or less, or where a physical barrier separates the drone from people, as well as clarifying application processes.

As noted in CASA response sections, this policy proposal does not address all sectors and unique use cases. The aim is to identify the most common operational scenarios and develop appropriate guidance and assessment frameworks that allow the majority of industry to apply for an approval from CASA in a consistent, fair and standardised manner while ensuring an appropriate level of safety is maintained.

CASA appreciates the number of responses, comments and interest in the proposed policy for OONP and the meaningful insights and contributions provided. We will use this constructive feedback to develop and produce policy that enables industry to expand and mature while reducing regulatory burden on low-risk operations and where appropriate apply general or broad approval or exemption pathways.

4 Future direction

CASA will continue to refine elements of the OONP proposals in response to stakeholder feedback. Following finalisation of the pathways, CASA will develop new guidance material and will update existing guidance to support implementation by industry. This will include the development and public consultation of an annex to advisory circular AC 101-01 for OONP applications and assessment pathways. CASA will also communicate transition arrangements for OONP approvals and commencement timeframes to industry well in advance of implementation.

It is anticipated that all policy proposals will commence concurrently. However, where there is a clear benefit to earlier implementation such as OONP using drones that weigh 250 g or less, or operations where a physical barrier separates the drone from people, CASA may elect to implement specific policy proposals separately.