

EXPLANATORY STATEMENT

Issued by the authority of the Deputy Prime Minister and Minister for Infrastructure and Transport and Regional Development

Civil Aviation Act 1988

Civil Aviation Safety Amendment (Part 133) Regulations 2018

The *Civil Aviation Act 1988* (the Act) establishes the regulatory framework for maintaining, enhancing and promoting the safety of civil aviation, with particular emphasis on preventing aviation accidents and incidents.

Subsection 98(1) of the Act provides, in part, that the Governor-General may make regulations, not inconsistent with the Act, prescribing matters required or permitted by the Act to be prescribed, or necessary or convenient to be prescribed for carrying out or giving effect to the Act. Subsection 98(1) also provides that the Governor-General may make regulations for the purpose of carrying out and giving effect to the provisions of the Convention on International Civil Aviation (the Chicago Convention) relating to aviation safety, and in relation to the safety of air navigation, being regulations with respect to any other matters to which the Parliament has power to make laws.

Subsection 9(1) of the Act specifies, in part, that the Civil Aviation Safety Authority (CASA) has the function of conducting the safety regulation of civil air operations in Australian territory by means that include developing and promulgating appropriate, clear and concise aviation safety standards and issuing certificates, licences, registrations and permits.

The *Civil Aviation Safety Amendment (Part 133) Regulations 2018* (Part 133) make various amendments to the *Civil Aviation Regulations 1988* (CAR) and *Civil Aviation Safety Regulations 1998* (CASR) primarily to provide for the conduct of Australian air transport operations in rotorcraft.

For the purposes of the CASRs, a rotorcraft is defined as an aircraft that is a helicopter, a gyroplane or a powered-lift aircraft.

An air transport operation means an operation in an aircraft that is conducted for hire or reward or is otherwise publicly available and that is a passenger transport operation, a cargo transport operation or a medical transport operation.

Part 133 provides for air transport operations in rotorcraft, a regulatory framework for the purposes of the safety of passengers carried by these operations. Part 133 further provides the safety of other airspace users and persons and property on the ground potentially impacted by these operations.

The premise underpinning the replacement of the current long-standing legislative arrangements in CAR is that Part 133 improves aviation safety through the introduction of a consistent, dedicated framework for rotorcraft air transport operations which is broadly based on the Standards and Recommended Practices (SARPs) of the International Civil Aviation Organisation (ICAO) and aligned where possible with other leading aviation nations' legislative schemes regarding these types of operations. It also reduces, where practicable, the differentiation in operating standards between today's regular public transport and charter operations.

The inclusion of medical transport operations in the air transport category allows Part 133 to provide the operating rules for that industry sector, which were formally categorised as aerial work operations, thus enhancing the regulatory oversight of this vital aviation service to the community.

The requirements for these operational enhancements are set out in Part 133 of CASR and the associated Part 133 Manual of Standards (MOS).

Part 133 uses a number of new defined terms which take effect on 25 March 2021. The new definitions will be included in the CASR Dictionary following the making and registration, planned for February 2019, of the *Civil Aviation Safety Amendment (Operations Definitions) Regulations 2019* (available in draft on the CASA Part 133 webpage at www.casa.gov.au/standard-page/project-os-9945-casr-part-133-australian-air-transport-operations-rotorcraft) until registration on the Federal Register of Legislative Instruments.

Criminal law issues

There are 60 strict liability offences in Part 133, which are outlined in the Statement of Compatibility with Human Rights at Attachment B.

Consistent with the principles set out in *A Guide to Framing Commonwealth Offences, Infringement Notices and Enforcement Powers* (September 2011) (the AGD Guide) and the Sixth Report of 2002 of the Senate Standing Committee for the Scrutiny of Bills, *Application of Absolute and Strict Liability Offences in Commonwealth Legislation* (26 June 2002), the strict liability offences are considered reasonable, necessary and proportionate to the objective of ensuring aviation safety. In this regard, the offences are regulatory in nature (as contemplated in section 2.2.6 of the AGD Guide), in other words their aim is to insist on reasonable compliance with regulated safety standards by those conducting activities which are otherwise intrinsically or potentially unsafe unless such high standards of compliance are met. Not having to prove fault in the relevant circumstances aims to provide a strong deterrent. To this extent, and in this context, they are consistent with other safety-focused regulatory regimes and do not unreasonably or impermissibly limit the presumption of innocence. The offences are designed to achieve the legitimate objective of ensuring the integrity of the overall aviation safety regulatory scheme by promoting compliance and deterring non-compliance.

The rationale is that people who perform activities that engage with safety risk should be aware of their duties and obligations. In the context of the operating rules for air transport operations using rotorcraft, a defendant can reasonably be expected to know what conduct is required by the law, and the mental, or fault, element can justifiably be excluded.

For strict liability offences in the Regulations, the prosecution will have to prove only the conduct of the accused. However, where the accused produces evidence of an honest and reasonable, but mistaken, belief in the existence of certain facts which, if true, would have made that conduct innocent, it will be incumbent on the prosecution to establish that there was not an honest and reasonable mistake of fact.

The Regulations also contain 12 provisions that reverse the evidential burden of proof in relation to prescribed defences to strict liability offences (“offence-specific defences”). Consistent with section 4.3.1 of the AGD Guide, the provisions have been included in the Regulations because they relate to matters that are peculiarly within the knowledge of a defendant and/or would be significantly more difficult and more costly for the prosecution to disprove than for the defendant to establish.

Details and justification of the offence-specific defences are provided in the Statement of Compatibility with Human Rights at [Attachment B](#).

In practice, any enforcement action contemplated by CASA is subject to the provisions of CASA's "just culture" policy as set out in CASA's Regulatory Philosophy.

Consultation

CASA has publicly consulted on the policies and regulations contained within Part 133 on a number of occasions with the latest phase of public consultation conducted over a period of four weeks from 23 July to 21 August 2018 where the updated versions of CASR Part 133 and the Part 133 MOS were released via the consultation hub on the CASA website.

Prior to this period of consultation in June 2018, the Aviation Safety Advisory Panel (ASAP) convened a technical working group (TWG) to evaluate drafts of the Part 119 regulations, the Part 133 regulations and the Part 133 MOS. The TWG made several suggestions and highlighted issues to be considered prior to public consultation, the majority of which CASA addressed in the consultation draft prior to its release.

CASA took account of the consultation input and made a number of changes to the Regulations to modify provisions where necessary to clarify intent and minimise administrative burdens. In October 2018 a meeting of the TWG was convened to consider CASA's response to the 2018 consultation input.

The TWG endorsed CASA's actions and responses and indicated its support for CASA to make the Regulations, subject to CASA finalising the Part 133 MOS in accordance with the draft summary of comments and CASA developing additional guidance material for operators not only on the Regulations but also how the complete rule-set will function holistically. The ASAP accepted the working group's recommendations and indicated its support for making Part 133 in its current form, in a letter dated 2 November 2018.

Incorporation by reference

In accordance with paragraph 15J (2) (c) of the *Legislation Act 2003* and subsection 98 (5D) of the Act, the legislative instrument applies, adopts or incorporates matters contained in the following instruments:

- Annex II to the Chicago Convention - Rules of the Air (Annex 2)
- ICAO Document 8168 (PANS-OPS)
- the exposition of a Part 133 operator
- flight manual instructions of aircraft operated under Part 133
- the Aeronautical Information Publication (AIP)
- the Part 61 Manual of Standards (Part 61 MOS)
- the Part 91 Manual of Standards (Part 91 MOS)
- the Part 133 Manual of Standards (Part 133 MOS).

Under subsection 98 (5D) of the Act, a non-legislative instrument may be incorporated as in force or existing at a particular time or from time to time, including a non-legislative instrument that does not exist when the legislative instrument is made.

The following table contains a description of the documents incorporated by reference into the legislative instrument, the organisation responsible for each document and how they may be obtained.

Document	Description	Manner of incorporation	Source
Annex 2, Rules of the Air, to the Chicago Convention	General rules, visual flight rules and instrument flight rules and applies to a contracting State to the Chicago Convention without exception over the high seas and over national territories, to the extent that they do not conflict with the rules of the State being overflown	As the Annex is in force from time to time, in accordance with clause 15 of Part 2 of the CASR Dictionary	This document is publicly available but subject to copyright that belongs to ICAO. It is made available by ICAO for a fee (https://store.icao.int/) – see below for more information)
ICAO Document 8168 (PANS OPS)	International operational procedures recommended for the guidance of flight operations personnel	A reference in the regulations to an Annex to the Chicago Convention is defined in item 15 in Part 2 of the CASR Dictionary as being a reference to that Annex as in force from time to time. Analogously with the definition of Annex and the definition in Part 1 of the CASR Dictionary of other AIS applicable ICAO documents as being, relevantly, those in force from time to time, a reference in the Regulations to ICAO document 8168 is also taken to be a reference to the document as in force from time to time.	This document is publicly available but subject to copyright that belongs to ICAO. It is made available by ICAO for a fee (https://store.icao.int/) – see below for more information)

Document	Description	Manner of incorporation	Source
Flight manual instructions of aircraft	“Aircraft flight manual instructions” will be defined to comprise the flight manual, checklists of normal, abnormal and emergency procedures for the aircraft and any operating limitation, instructions, markings and placards relating to the aircraft. The instructions comprise information required to safely operate the specific aircraft	As the instructions exist from time to time, consistent with the definition of “flight manual” in the CASR Dictionary	Publicly available but not for free. The aircraft flight manual instructions for an aircraft is proprietary to the owner of the aircraft design (usually the manufacturer). The incorporated requirements of such instructions are at the aircraft-specific level, and instructions are required to be provided to owners of aircraft
Exposition of a Part 133 operator	Set of documents for the use and guidance of the operations personnel of the operator. It is prepared by the relevant operator and given to CASA	As the exposition is changed from time to time, in accordance with the definition of “exposition” to be inserted into CASR by the Civil Aviation Safety Amendment (Operations Definitions) Regulations (draft regulation is available at www.casa.gov.au/stand-ard-page/project-os-1026-casr-part-138-aerial-work-operations-aeroplane-and-rotorcraft)	Not publicly or freely available. The exposition of an operator is a proprietary document prepared by, and used exclusively by, the operator and will generally include commercial in confidence information about the operator’s business. The incorporated requirements of an exposition are at the operator-specific level and apply only to the operator and its personnel. Further, the operator is under obligations to make the exposition available to its personnel who have obligations under the exposition

Document	Description	Manner of incorporation	Source
AIP	The AIP is published by Airservices Australia (AA) as an Aeronautical Information Service provider, under the <i>Air Services Regulations 1995</i> , to disseminate information relevant to aviation participants on matters essential to safe air navigation that are of lasting relevance. Some parts of the AIP are underpinned by legislative instruments, while other parts are not	The AIP is incorporated into Part 133 as the AIP exists and is published by AA from time to time	The AIP is freely available on the AA website at: https://www.airserviceaustralia.com/aip/aip.asp
Part 61 MOS	Legislative instrument that prescribes matters for Part 61 of CASR (flight crew licensing)	As the MOS is in force from time to time, in accordance with section 10 of the <i>Acts Interpretation Act 1901</i> and section 13 of the <i>Legislation Act 2003</i>	The MOS is freely available on the Federal Register of Legislation
Part 91 MOS	Legislative instrument that prescribes matters for Part 91 of CASR (general operating rules)	As the MOS is in force from time to time, in accordance with section 10 of the <i>Acts Interpretation Act 1901</i> and section 13 of the <i>Legislation Act 2003</i>	When made, the MOS will be freely available on the Federal Register of Legislation
Part 133 MOS	Legislative instrument that prescribes matters for Part 133 of CASR (air transport operations in rotorcraft)	As the MOS is in force from time to time, in accordance with section 10 of the <i>Acts Interpretation Act 1901</i> and section 13 of the <i>Legislation Act 2003</i>	When made, the MOS will be freely available on the Federal Register of Legislation

In relation to Annex 2, ICAO Document 8168 and aircraft flight manual instructions, the cost of obtaining a copy is a matter for a person wishing to review the matter to which the document relates. CASA has no effective control over those costs. However, by prior arrangement with CASA where the document is available, a copy of the document can be made available for viewing free of charge at any office of CASA.

In the case of Annex 2, ICAO Document 8168, expositions of operators and aircraft flight manual instructions, CASA considers it extremely unlikely that the relevant owner of the document would sell CASA the copyright at a price that would be an effective and efficient use of CASA funds, or otherwise permit CASA to make the document freely available. CASA has incorporated the documents in the instrument because they are appropriate and necessary to give effect to the safety regulatory scheme under Part 133, and because no other, freely available document is available that serves the purpose.

Regulation Impact Statement

A Regulation Impact Statement (RIS) was prepared that identifies the Regulation's positive net benefits. The RIS was assessed as adequate by the Office of Best Practice Regulation (OBPR ID: 24505). A copy of the Statement is set out in [Attachment A](#).

Statement of Compatibility with Human Rights

A statement of Compatibility with Human Rights is set out in [Attachment B](#).

Commencement and making

The Regulations are a legislative instrument for the purposes of the *Legislative Instruments Act 2003*.

The Act specifies no condition that needed to be satisfied before the power to make the Regulations may be exercised.

The provisions of the *Civil Aviation Safety Amendment (Part 133) Regulations 2018* commence on 25 March 2021.

Details of the Regulation are set out in [Attachment C](#).

Transition period

To avoid the undesirable situation of different air operators operating to different rulesets through a staged transition period compliance will be expected from commencement of the new regulations on 25 March 2021.

Authority: Subsection 98(1) of the
Civil Aviation Act 1988

Regulation Impact Statement for CASR Parts 119, 121, 133, 135 and 138

Summary

The current regulations applying to commercial passenger, cargo and aerial work operations have not been comprehensively reviewed or updated in over 20 years. During that time there has been considerable technological change and changes to International standards. Combined with recent operational experience within Australia and Australian safety data trends and disparities between types of operations the Australian public sees as largely similar, it is timely to review and update the regulatory requirements.

There are a number of safety improvements identified by CASA that are likely to be beneficial. The most significant improvements relate to businesses undertaking charter flights.

Within commercial passenger operations, the accident rate for low capacity charter is markedly higher than low capacity regular public transport (RPT) flights. The accident rate disparity is approximately 11 to 1 for small aeroplanes.

The ATSB has found that a significant contributing factor to accidents involving charter aircraft has been organisational failures and under developed safety management systems.

The preferred option would create a single regulatory standard for businesses carrying fare paying passengers and cargo. This will remove the current differential in regulatory standards between businesses operating scheduled flights that are publicly available and charter flights. The new single standard will be largely based on the current standards applying to RPT operators and will require businesses currently conducting charter flights to implement;

- *A safety management system (SMS)*; the important elements involve having a safety manager who is responsible for safety and ensuring that safety risks are identified and resolved
- *Improved staff training and management of competency*; with pilots of small aircraft required to undertake bi-annual or annual training and checks for competency

The preferred option would also make changes to the requirements for the fitment of safety equipment, including Terrain Awareness and Warning Systems (TAWS) and weather radar, however, there will not be significant cost impacts associated with these changes.

The aerial work regulations will be streamlined to remove the need for time limited exemptions and clarify the aircraft performance requirements when using helicopters for particular aerial work operations.

Overall the changes within the preferred option are estimated to have a 10-year annualised cost impact of \$6.51m.

Background/Problem

The current regulatory requirements that apply to businesses seeking to operate commercial passenger carrying, cargo and aerial work operations are primarily contained in the *Civil Aviation Act 1988*, *Civil Aviation Regulations 1988* and the Civil Aviation Orders. The operator must be issued with an Air Operator's Certificate (AOC) by CASA under the Act.

To apply for an AOC an applicant must provide an operations manual that outlines the operational procedures of the business including;

Key personnel being a CEO and Head of Flying Operations and if required the Head of Aircraft Airworthiness and Maintenance Control;

- The employment of suitably qualified pilots assessed by the operator;
- Aircraft equipped with the necessary navigation and safety equipment;
- Management of the continuing airworthiness of aircraft and maintenance; and
- Organisational requirements if required, for an SMS, training and checking and management of pilot fatigue.

Whilst the operations manual is a universal requirement for AOC operators, the specific operational requirements are differentiated both by the nature of the operations and the type of the aircraft used by the business.

CASA undertakes initial entry control to issue an AOC. CASA also undertakes ongoing surveillance to ensure ongoing compliance. The operations manual is an important document which is required to be complied with by the operator's personnel. CASA also has regard to it for surveillance to ensure that the business is following the procedures set out in their operations manual. The current compliance costs with the initial AOC requirements are estimated to be in order of \$70 000 for a typical business, with ongoing compliance costs estimated to range from \$23 000 for a small single pilot operator to \$245 000 for a large charter business employing more than 20 pilots (Appendix 2).

Problem

Whilst the current Act and regulatory requirements have evolved over time, any changes have been *ad hoc* focused on one issue or a limited set of issues and there has been no holistic and comprehensive review within the last 20 years in the light of advancement in technology, changes to international standards and operational experience within Australia.

There are different standards based on whether the flights are charter or RPT. This can result in the same aircraft carrying the same number of passengers (or cargo) having different regulatory standards.

Some regulatory requirements are not aligned to international standards. Australia is subject to audits from the International Civil Aviation Organization (ICAO) and from ICAO member States, including the USA. Whilst there is no immediate threat, failure to maintain parity with international standards over the medium to longer-term may result in Australia's ability to participate in international markets being compromised.

Advancement in technology

In some cases, the current regulations have not fully taken into account the advancements in technology, such as the expansion in the number of flight data recorder parameters and an increase in the sampling rate of those parameters.

Safety

In reviewing the operational experience within Australia, it is apparent that the accident rate within commercial air transport operations is highest for lower capacity aircraft conducting charter flights (ATSB 2018, p.18).

Over the last ten years for aerial work operations there were 326 accidents and 55 deaths. There have been 148 accidents and 16 deaths through the operation of low capacity charter aircraft (ATSB 2018, p. 10), compared to 4 accidents and 2 deaths in low capacity RPT. The accident rate for low capacity charter flights is higher than for low capacity RPT flights (ATSB 2018, p. 17 - 18).

In an analysis of the cause of charter accidents the ATSB found that the most common were: mechanical problems with the aircraft's landing gear (20 per cent), wheels-up, landing (12 per cent), partial and complete power loss/engine failure (14 per cent),

loss of aircraft control (11 per cent), and fuel-related accidents (7 per cent) (p. 17, ATSB 2007). However, in terms of fatal accidents the most likely occurrences were collisions, loss of control and power loss occurrences (p. 19 ATSB 2007). Table 1a provides examples of the types of fatal accidents within the charter sector. (ATSB 2007, p. 54)

In explaining the high accident rate, the ATSB notes that charter flights are generally shorter and that can provide part of the explanation as to why the charter sector has a higher accident rate per flight hour, because in part charter flights have greater exposure to approach and landing accidents per hour flown (ATSB 2018, p. 18).

It is CASA's assessment that part of the disparity in the accident rate between RPT and charter is due to differences in the type of aircraft and their reliability. To highlight this point approximately 62% of the aircraft registered to RPT operators are powered by more reliable turbine engines compared to only 16% for charter operators.

Mitigators

In addition, it is generally accepted that aircraft accidents rarely have one cause and even if an accident is attributed to pilot actions, it is important to consider the operational environment in which the pilot operates. The US Federal Aviation Administration (FAA) researchers note:

It is generally accepted that like most accidents, those in aviation do not happen in isolation. Rather, they are often the result of a chain of events often culminating with the unsafe acts of aircrew (p.1 Wiegman et al, 2005)

Table 1a: Fatal Charter Accidents reported by the ATSB

The fatal charter accidents included:

- A Partenavia P.68 aircraft impacting terrain while on approach to land (1998).
- A Bell 206L LongRanger helicopter that collided with the sea due to a loss of visual contact in heavy rain (1999).
- Hypobaric incapacitation of the pilot and passengers of a Beech Super King Air 200 following a failure of the aircraft's pressurisation and supplemental oxygen system (2000).
- In-flight structural failure and breakup of a Piper Aerostar 600A aircraft during attempted recovery from a spiral manoeuvre (2000).
- Fuel starvation or interruption to the engine of a Cessna 210 Centurion aircraft (2001).
- A Beech C90 King Air aircraft that suffered a loss of control and impacted power lines following an uncontained engine failure (2001).
 - A Piper PA-32 Seminole aircraft that suffered abnormal engine performance shortly

after take-off, and subsequently impacted with terrain (2002).

- A Robinson R44 helicopter that was operating with a maximum take-off weight and centre of gravity outside limits, leading to an in-flight loss of control and collision with terrain (2003).
- In-flight loss of control accidents including a Britten Norman BN-2A Islander aircraft that crashed on final approach due to an engine failure (1999), a Cessna 206 Stationair aircraft conducting manoeuvres in darkness with a lack of visual cues (2000), a Cessna 210 Centurion aircraft conducting aerial manoeuvres (2001), a Cessna 206 flying at low level over water in severe weather conditions (2002), a Cessna 172 Skyhawk aircraft that suffered carburettor icing (2003), and a Beech 58 Baron aircraft that lost control for unknown reasons (2006).
- Collision with terrain accidents (Cessna 185 Skywagon in 1998, Aero Commander 500-S in 2001, Cessna 210 Centurion in 2002, Piper PA-31 Navajo in 2005, Cessna 210 in 2007, Robinson R44 in 2007).

Source: ATSB 2007, p.54

This approach to safety highlights the importance of creating the appropriate organisational safeguards to mitigate against human error. SMS and training in human factors is an important mechanism for ensuring that an operational environment within a business is created that minimises the risk of accidents. The ATSB analysis of aviation accidents has found that poor or non-existent SMSs are a contributing factor to a number of aviation accidents and has advocated for the introduction of SMS for the aviation industry (ATSB 2008).

It is CASA's assessment that in part the accident rate can be attributed to differences in the safety processes adopted by charter operators, with all RPT operators having an SMS, compared to approximately 40% of charter operators.

An important mitigator against accidents is also requiring pilots to be trained to avoid loss of control and to deal with emergencies such as engine failures. Pilot training and competency is maintained at two levels, through the general requirements applying to all pilots under Part 61 of the *Civil Aviation Safety Regulations 1998* (CASR) and through the operator providing training to a company pilot, which can be through a training and checking organisation.

Aircraft safety equipment can contribute to avoiding accidents. The ATSB found in analysing a collision with terrain accident at Lockhart River in 2005, that resulted in 15 fatalities that the accident was most likely a controlled flight into terrain accident and that had the aircraft been fitted with TAWS it is probable that the accident would not have occurred (ATSB 2007a, p. xiv).

Objective

The primary objective is to review the existing regulatory requirements with the intention of proposing regulatory options that are beneficial to society by reducing the risk of aircraft accidents. The factors that need to be considered in proposing options for change are: safety, regulatory impact and alignment with international standards.

Options

Option 1

Option 1 is to maintain the current distinction between businesses operating RPT and charter services in terms of organisational requirements. The specific operating requirements for aircraft used by AOC holders, including large aeroplanes, small aeroplanes and rotorcraft would remain unchanged.

Organisational requirements

An SMS is an organised approach to managing safety, the key elements include:

- establishing safety policy at the company's management level,
- collecting safety information,
- identifying safety hazards,
- analysing safety risks,
- performing safety investigations,
- developing corrective actions,
- providing safety training;
- monitoring safety performance;
- creating a continuous improvement environment; and
- safety communication.

Under option 1 all RPT operators are required to have an SMS, however, charter and Aerial work operators are not required to have an SMS.

The training and checking organisation is a system of regularly checking the competency of pilots to operate the aircraft and handle and emergencies and to provide relevant training, referred to as proficiency checks.

Under option 1 all RPT operators and charter operators with aircraft Maximum Take-Off Weight (MTOW) >5700kg are required to have a training and checking organisation. Currently charter and aerial work operators operating aircraft MTOW <5700kg are not required to have a training and checking organisation unless directed by CASA.

Terrain Awareness and Warning System

TAWS fitted to an aircraft provides pilots with predictive warning if they are at risk of collision with terrain. TAWS is seen as the most effective way of reducing the risk of controlled flight into terrain accidents and is an ICAO standard for certain aircraft.

The current Australian requirement is for TAWS to be fitted to aeroplanes with a turbine engine(s) operating under Instrument Flight Rules (IFR) and carrying 10 or more passengers or with a MTOW greater than 15000kg.

Weather radar

A weather radar is capable of giving pilots the latest weather information during the flight and will reduce the risk of the flight crew operating in dangerous weather conditions, such as hail, lightning and thunderstorms.

The current requirement is for a weather radar to be fitted to aircraft operating under IFR with 2 pilots that are:

- pressurised with piston engine(s); or
- pressurised with turbine engine(s); or
- unpressurised with turbine engine(s) weighing more than 5700kg.

The requirements under option 1 are summarised in Table A.

Option 2

Option 2 will introduce revised organisational requirements applying to all businesses and revised aircraft operational requirements. The option would revise the operational classifications to eliminate the differences between the current regular public transport, charter and aerial work ambulance flight categories by forming an air transport category. There would be other minor changes to the naming of classifications (Figure 1).

Figure 1: Operational Classifications

Present Classifications	Proposed Classifications
Regular Public Transport	Air Transport
Charter	
Aerial work: Ambulance flights	
Aerial work: other	Aerial Work
Private	General Aviation

Option 2: Organisational Requirements

Option 2 would require all air transport operators to implement:

- An exposition, which is a document or collection of documents that describes the way in which the organisation operates and the procedures they use to meet the requirements of the regulations.
- A SMS will be required by air transport operators and some aerial work operators; and
- Improved staff training and management of competency, with a training and checking system required by air transport operators and some aerial work operators

Option 2 would remove the requirement for aerial work operators to possess an AOC – instead replacing the AOC for aerial work with an aerial work certificate. This replacement permits CASA to remove the requirements for AOCs specified by the *Civil Aviation Act 1988* for certain types of aerial work operators.

Improved staff training and management of competency

Option 2 will require air transport and select aerial work operators to provide a formal training and checking system for flight crew, either internally or contracted to a flight training organisation (approved under CASR Part 142). This will only be a new requirement for

organisations operating aircraft below an MTOW of 5700kg that have not been directed by CASA to have a training and checking organisation. The number of proficiency checks required will depend on the types of operations being conducted by the operator.

Option 2: Aircraft equipment and operational requirements

Option 2: would expand the requirement for TAWS and weather radar to primarily base the requirements on aircraft weight consistent with the standards published by ICAO.

Option 2 will require TAWS to be fitted to aeroplanes weighing more than 5700kg operating under IFR or Night Visual Flight Rules (VFR) for air transport flights. This change will result in an expansion of the requirement to night VFR operations, however, it will not include freight only operations in aeroplanes below 8618kg. It will capture freight only operations in aeroplanes between 8618kg and 15000kg that are not currently captured. The requirement will also apply to aircraft that have a weight greater than 5700kg, but are certified to carry less than 10 passengers.

Option 2 will require a weather radar to be fitted to aeroplanes that operate IFR or night VFR that are:

- pressurised turbine of any weight (single or 2 pilot); or
- pressurised piston weighing more than 5700kg and 2 pilot.

This will expand the requirement from operations under the IFR to capture night VFR operations and it will expand the requirement to include single pilot aeroplanes that are pressurised with a turbine engine(s). However, the proposed change will remove the requirement from aircraft that are unpressurised with turbine engine(s) weighing more than 5700kg. It will also remove the requirement from pressurised aircraft with a piston engine(s) weighing less than 5700kg required to be operated by 2 pilots. The intention of the change is to only apply the requirement to the aircraft that are most likely to be exposed to hazardous weather conditions, with storms carrying the greatest risk to aircraft occurring within the cruising altitude of pressurised aeroplanes.

Option 3

Option 3: Organisational Requirements

Option 3 would require all AOC holders to implement:

- An exposition;
- An SMS; and
- A training and checking system

Option3: Aircraft equipment and operational requirements

Option 3: would expand the requirement for TAWS and weather radar to primarily base the requirements on aircraft weight and passenger capacity consistent with the recommendations published by ICAO.

Option 3 will require TAWS to be fitted to aeroplanes weighing more than 5700kg operating under IFR or night VFR for air transport flights or carrying more than five passengers. This change will result in an expansion of the requirement to night VFR operations, however, it

will not include freight only operations in aeroplanes below 8618kg. It will capture freight only operations in aeroplanes between 8618 and 15000kg that are not currently captured.

Option 3 will require a weather radar to be fitted to aeroplanes that operate IFR or night VFR that are:

- MTOW>5700kg; or
- Have a capacity to carry more than five passengers.

The requirements under Option 3 are summarised in Table A relative to Option 1 (status quo) and Option 2.

Table A: Requirements by Option1

Requirement	Option 1 (status quo)	Option 2	Option 3
<i>Exposition</i>	<i>no AOC holders</i>	<i>Air transport</i>	<i>Air transport and aerial work</i>
<i>SMS</i>	<i>RPT</i>	<i>Air transport (RPT, charter, ambulance) and complex aerial work</i>	<i>Air transport and aerial work</i>
<i>Training and checking</i>	<i>MTOW>5700kg</i>	<i>Air transport (RPT, charter, ambulance) and complex aerial work</i>	<i>Air transport and aerial work</i>
<i>Weather Radar</i>	<i>IFR, two pilot and pressurised</i>	<i>IFR, pressurised and MTOW>5700kg</i>	<i>IFR, passenger seats>5 and MTOW>5700kg</i>
<i>TAWS</i>	<i>IFR & Seats >9</i>	<i>IFR & MTOW>5700kg</i>	<i>IFR, passenger seats>5 and MTOW>5700kg</i>
<i>Helicopter TAWS</i>	<i>No requirement</i>	<i>Passenger seats>9</i>	<i>Passenger seats>9</i>

1: In addition, Options 2 and 3 would require a Life Raft and First Aid kit to be carried for selected flights

Requirements common to Options 2 and 3

In addition to the major organisation requirements of an Exposition, SMS and training and checking system, and the aircraft specific requirements for TAWS and weather radar there are other less significant requirements that are common to both Options 2 and 3.

Life raft

Under Options 2 and 3 operators will be required to carry a life raft if they are operating for a significant distance over water. The requirement is risk based, with the requirement for a life raft based on the reliability of the aircraft. Aeroplanes with two engines are not required to carry a life raft unless they are beyond 100 nautical miles or 30 minutes flying time at normal cruising speed from land. Single engine aircraft will require a life raft when the flight over

water is greater than the gliding distance to a forced landing site, plus the distance the aircraft travels in 5 minutes at normal cruising speed. The relevant staff must also be trained to operate the life raft, with life raft training required every 3 years.

Minimum Equipment List

Under Options 2 and 3 aircraft will be required to be operated in accordance with a Minimum Equipment List (MEL) if the aircraft is operated internationally or if the aircraft is operated within Australia under the IFR and the manufacturer provides a Master MEL for that aircraft. The minimum equipment list outlines the conditions under which the aircraft can be operated without a serviceable part. For example, if the fuel gauge is inoperative then the aircraft may be operated if the fuel level is measured using a dipstick.

There are efficiency benefits for aircraft operators in having a MEL and many operators have one without regulatory compulsion. The safety benefit is clarity and consistency of the condition in which the aircraft is safe to operate. MELs are currently required under the regulations for smaller aeroplanes used in regular public transport operations but not for aircraft used in 'on-demand' charter operations.

Larger aeroplanes

Requirement for two pilots

Option 2 and 3 will require all aeroplanes weighing more than 8618kg or carrying 10 or more passengers to be operated with two pilots when undertaking air transport flights, however, certain aircraft (single engine that have a weight of 8618kg or less and a seating capacity of 10 or more) will be permitted to carry the maximum number of passengers their aircraft can fit with a single pilot if operated under day VFR conditions.

The current requirement is for all high capacity (not the same as larger aeroplanes) RPT flights to be operated with 2 pilots, for low capacity RPT to conduct operations with 2 pilots when carrying greater than 9 adult passengers and for charter flights to be operated with the number of pilots specified by the aeroplane flight manual. Accordingly, for all current high capacity RPT operators there will be no change in this requirement. However, this will represent a new requirement for current charter operators of single pilot certificated aeroplanes with a passenger seating capacity of more than 10 that operate under IFR.

Underwater locating device

To be consistent with international standards, aircraft with a weight greater than 27 000kg will be required to be fitted with an underwater locating device attached to the aircraft frame. The frequency omitted by this beacon will be different to the frequency of the beacon attached to the flight data recorder and will increase the probability of locating aircraft wreckage in oceanic areas. The impact of the requirement is minimised by imposing the requirement on aircraft that operate over oceans.

Flight data recorder parameters

The current requirements for the parameters and sampling rates that apply to flight data recorders are not consistent with international standards. This situation requires CASA to issue exemptions to aircraft that are fitted with flight data recorders that meet the ICAO standard, but exceed the current outdated Australian requirements.

First aid kit

Operators of all aircraft within air transport will be required to carry a first aid kit for treating passengers.

Requirements for businesses operating helicopters

Option 2 and 3 would introduce the ICAO standard performance model, appropriately adjusted for Australia and based on a 3 Tier Performance class system, that sets the number of passengers that can be carried by each type of rotorcraft in passenger transport.

Performance classes

- Performance class 1 – mandatory for > 19 passengers – can continue flight after a critical failure.
- Performance class 2 – minimum mandatory standard for operations with between 10 and 19 passengers – can continue flight after a critical failure except if this occurs during take-off or late in the landing phase.
- Performance class 3 – limited to 9 or less passengers – in the event of a critical failure may or will be required to make a forced landing.

In addition to the performance classes, Option 2 and Option 3 would introduce:

- A requirement that operations over water have flotation equipment, unless the rotorcraft is capable of operating with one engine inoperative or the flight is in an access lane, or no more than 2 minutes from a safe landing area and are complying with Air Traffic Control instructions.
- Helicopter TAWS (HTAWS) to be fitted to helicopters conducting passenger transport and medical transport flights (excluding freight only flights) operating under the IFR and having a maximum operational seating capacity of more than 9.

Aerial work

Option 2 and 3 will consolidate the existing rules governing aerial work operations into one regulatory part, CASR Part 138. Whilst Part 138 will largely adopt the current requirements applying to aerial work operations there will be some changes that could be viewed as new requirements, these include:

- Reclassification of aerial work operations; The reclassification of aerial work operations will reduce the number of aerial work purposes from the current 41 to three;
- Introduce an operating certificate and remove the need for an AOC described in the background section of this document; The introduction of the Part 138 Certificate will remove the requirement for operators to obtain and maintain an AOC. The requirements of the Certificate will be graduated depending on the complexity of the operation;
- Require a SMS for complex operations; an SMS will be required for complex operations that involve marine pilot transfer and certain of the more complex emergency service operations;
- Require a training and checking system for complex operations that involve marine pilot transfer, and certain of the more complex emergency service operations and when aerial work is conducted in some of the more complex aircraft types;

- Incorporate current exemptions into regulation; A number of aerial work operations are not permitted by the existing regulations and are only permitted by CASA issuing a general or individual exemption; and
- Introduce aircraft performance requirements by risk of operation, Part 138 will introduce performance requirements for operations based on the potential for risk to third party individuals and for operations where aerial work passengers are carried. The requirements will potentially impact on a limited number of Search and Rescue, marine pilot transfer and police/ fire fighting operations using large and complex aircraft.

Impact

The major cost impacts for Option 2 and Option 3 are the organisational requirements of an Exposition, an SMS and training and checking system that will be new requirements for existing charter operators. The following sections outline the cost impact by requirement with a total estimated cost impact for each option provided in a summary section.

Impacted Operators

In order to analyse the nature of the impacted operators CASA has analysed a range of data sources with a focus on the number of pilots employed by the operator and the number of aircraft and aircraft types registered to that operator.

There are currently 786 businesses that hold an AOC to conduct RPT, charter, or aerial work operations using an aeroplane or rotorcraft. There is a significant proportion of operators with an AOC for multiple activities the key points being:

- All RPT operators also hold a charter authorisation on their AOC;
- Of the 505 operators authorised for charter operations, 460 are also authorised in at least one aerial work function; and
- There are only four aerial work operators that are authorised for the air ambulance function that do not currently hold a charter authorisation on their AOC.
- There are 240 aerial work operators (excluding ambulance function) that do not hold a charter authorisation on their AOC.

Table 1: Number of current operators

	<i>Approved operators</i>
<i>RPT</i>	37
<i>charter only</i>	45
<i>Charter and aerial work</i>	460
<i>Aerial work (ambulance, excluding charter)</i>	4
<i>Aerial work (other, excluding charter)</i>	240

Exposition

In order to meet the exposition requirement operators are likely to be able to use material from their existing manuals, however, it is likely that the operators will need to review these manuals to confirm compliance with the new regulations and identify this compliance for

CASA. However, CASA is not proposing that operators will be required to modify their existing manuals to some different form of “exposition standard”.

Feedback from organisations that have been required to prepare an entirely new exposition for CASA acceptance (including Flight Training Organisations approved under CASR Part 142 and Maintenance Organisations under CASR Part 145) is that preparing the exposition, including learning about the requirement, interacting with CASA staff and going through the application process requires the full-time effort of one person for approximately one month.

For the exposition requirement under CASR Part 119, CASA has sought to implement the requirement in a more flexible way to reduce the impact on operators when compared to the implementation of previous CASRs. For existing AOC holders with simple operations there will be the ability to provide a short document that essentially identifies the suite of manuals that constitute the operator’s exposition. Operators will need to, as a minimum, compare their existing manuals to the new regulatory requirements, make any necessary adjustments (the main common refinements will be the necessity for all air transport operators to possess an approved change management process and include a training and checking and an SMS outlined below) and then inform CASA about these refinements.

This refined approach to the implementation of the exposition requirement will reduce the amount of time that the operator needs to comply with the requirements relative to the compliance time experienced by Part 145 or Part 142 operators. In addition, the change management process will reduce the time that operators interact with CASA for manual amendments, which is approximately once per year for the average operator. Based on five days of full-time effort the exposition requirement is estimated to cost each operator approximately \$2 500 when based on a wage rate of \$500 per day (Table 2). For the more complex RPT operators it is estimated that they will require further time to develop an exposition, estimated at 20 days and a cost of \$10 000 (Table 2).

Table 2: Exposition Cost

Operator size	Full-time effort (days)	Cost per operator	Number of operators	Cost by type of operator
Current RPT	20	\$10 000	37	\$0.37m
Current charter	5	\$2 500	505	\$1.26m
Ambulance only	5	\$2 500	4	\$0.01m
Total for Option 2				\$1.64m
Aerial work	5	\$2 500	240	\$0.6m
Total for Option 3				\$2.24m

Safety Management System (SMS)

The cost impact of the requirement to develop and maintain a SMS will depend on the operator's current approach to the management of safety. All current RPT operators are required to have a SMS, and there is a significant voluntary compliance among existing charter operators with the SMS requirement. A 2011 CASA survey found that of the current charter operators 40% reported having a fully implemented SMS, 38% have a SMS under development and 22% have no SMS. In addition, analysis of a 2006 CASA surveillance tool found that approximately 45% of charter operators and 35% of aerial work operators have an SMS. Given the lack of recent evidence and to be conservative CASA has assumed that 40% of existing charter operators and 30% of aerial work operators have an SMS. This will result in 305 existing charter operators requiring to implement a SMS under Option 2 and a further 168 aerial work operators under Option 3.

The experiences of other aviation organisations developing a CASA approved SMS indicates that it would take one staff member within a small organisation approximately 1 week of full-time work to utilise the CASA material to develop the SMS structure, processes and a manual, including the associated forms and spreadsheets. For medium and large operators this initial set up would take approximately 2 weeks (Table 2). The operator would also be required to provide initial SMS training to their staff which would involve approximately 4 days of training per staff member. The total cost for SMS implementation is estimated at \$3.77m (Table 3) for Option 2. The total for Option 3 includes the additional cost for aerial work operators resulting in a total cost of \$4.87m for Option 3. The assumptions underlying the estimation method for the SMS compliance costs are outlined in Appendix 3.

Table 3: SMS set up costs

Operator size	Set up, manual, training, spreadsheet	Number of staff requiring training	Total training cost (based \$ 1000 training cost per staff member)	Total upfront cost per operator (set up plus staff training)	Number of operators	Total cost by size of operator
Single pilot	1 week valued at \$2 500	1	\$1 000	\$3 500	83	\$0.29m
Small	1 week valued at \$2 500	4	\$1,000	\$6 500	105	\$0.69m
Medium	2 weeks valued at \$5000	14	\$1 000	\$19 000	96	\$1.83m
Large	2 weeks valued at \$5 000	41	\$1 000	\$46 000	21	\$0.97m
Total for					305	\$3.77m

Option 2						
Aerial work	1 week valued at \$2 500	4	\$1 000	\$6 500	168	\$1.09m
Total for Option 3						\$4.87m

Ongoing SMS requirements

Feedback from organisations currently operating a SMS indicates that for the ongoing management of the SMS, the nominated safety manager would likely spend approximately 3 days per year to update and maintain the processes of the SMS.

For the medium to large sized charter operators there will be increased on-going time costs due to maintenance of the SMS processes (hazard/incident reporting, internal audit, safety meetings and safety investigations) which will be undertaken by the person in the safety manager role for approximately 5 to 10 days each year plus an additional 2 days of training for this SMS manager. The assumptions underlying these estimates are outlined in Appendix 2 and on a wage rate of \$500 per day which results in an annual estimated compliance cost of \$0.76m for Option 2 and \$1.09m for Option 3 (Table 4).

Table 4: SMS ongoing maintenance costs

Operator size	SMS maintenance	Training for the SMS manager	Total days per year	Cost (based on a wage rate of \$500 per day)	Number of operators	Cost by type of operator
Single pilot	1 day	1 day	2	\$1 000	83	\$0.08m
Small	2 days	2 days	4	\$2 000	105	\$0.21m
Medium	5 days	2 days	7	\$3 500	96	\$0.34m
Large	10 days	2 days	12	\$6 000	21	\$0.13m
Total for Option 2					305	\$0.76m
Aerial work	2 days	2 days	4	\$2 000	168	\$0.34m
Total for Option 3						\$1.09m

For all operators there will be a requirement to provide refresher training on the principles of the SMS and Human Factors and Non-Technical Skills (HF and NTS) to staff, which as outlined in Appendix 3 is based on one day of training per staff member. Based on the number of staff employed by operators this is estimated to cost \$1.36m annually for Option 2 and \$1.69m for Option 3 (Table 5).

Table 5: Ongoing costs for staff training in SMS, HF and NTS

Operator size	Number of staff requiring training	Annual training cost per staff member	Annual training cost per operator	Number of operators	Total cost by size of operator
Single pilot	1	\$500	\$500	83	\$0.04m
Small	4	\$500	\$2 000	105	\$0.21m
Medium	14	\$500	\$7 000	96	\$0.67m
Large	41	\$500	\$20 500	21	\$0.43m
Total for Option 2				305	\$1.36m
Aerial work	4	\$500	\$2 000	168	\$0.34m
Total for Option 3					\$1.69m

Safety benefit

These new organisational requirements are important safety enhancements and would bring the regulatory requirements for charter operators in line with current requirements for RPT operators, implement recommendations from the ATSB and comply with international standards set by the ICAO. Within Australia and internationally a leading causal factor of aircraft accidents are human factors and deficient organisational practices. This is why Australia introduced the SMS and HF & NTS requirements for RPT operations in 2009 and why other countries have adopted similar requirements for their entire passenger air transport sector consistent with this proposed option.

Training and Checking

Part 119 will require operators to provide a formal training and checking system for flight crew, either internally or contracted to an approved flight training organisation. Of the 509 AOC holders that CASA estimates will move to the air transport classification, 105 currently have a training and checking organisation approved by CASA.

Pilots of current charter aircraft of MTOW<5700kg that conduct IFR operations will be required under options 2 and 3 to undertake bi-annual training and checks of competency. Under current regulations, these pilots employed by a charter business are only required to undertake an annual check of competency, whereas there is a bi-annual requirement if the same pilot is employed by an RPT operator.

Pilots of current charter aircraft of MTOW<5700kg that conduct VFR operations will be required to undertake an annual check of competency. Under current regulations, these pilots employed by a charter business are only required to undertake a Part 61 flight review once every two years, which is the same requirement for Private Pilots. Pilots currently conducting RPT operations are required to undertake bi-annual checks.

It is assumed for this analysis that the training and checking function would need to be contracted out to a Part 142 operator. The costs associated with this would involve the

development of a training and checking system and documentation and competency checks. The costs are likely to be in the range of \$10 000 for production of the documentation based on the feedback of operators who have recently acquired one (Table 6). This will result in a \$4.04m industry wide cost when based on 404 air transport operators requiring the system under Option 2 or \$6.44m with an additional 240 aerial work operators under Option 3 (Table 6).

Table 6: Training and Checking Requirement set up costs

Operators	Training and Checking system	Number of operators	Cost by type of operator
Option 2	\$10 000	404	\$4.04m
Option 3	\$10,000	644	\$6.44m

The costs of undertaking proficiency checks of pilots will vary according to the type of aircraft. As outlined in Appendix 4 the cost is likely to be \$1015 for single engine aircraft and \$1165 for multiple engine aircraft. To be conservative CASA has assumed that the multiple engine aircraft cost will apply to all additional checks. This results in an industry cost of \$3.98m for the 404 operators under Option 2 or including aerial work operators under Option 3 will result in an estimated cost of \$4.07m (Table 7). The average number of pilots employed by the impacted operators is based on the reported pilot numbers to a CASA AOC holders survey in 2014.

Safety benefit

The increased frequency of proficiency checks will enhance safety by ensuring that pilots have demonstrated competency for their specific operations and provide a training opportunity for those pilots.

Table 7: Training and checking requirement ongoing costs

Operators	Cost per check	Number of pilots	Check cost per year	Number of operators	Cost by type of operator
Single Pilot	\$1,165	1	\$1,165	128	\$0.15m
2 to 5 pilots	\$1,165	3.5	\$4,078	168	\$0.68m
6 to 20 pilots	\$1,165	11.5	\$13,398	75	\$1.01m
20+	\$1,165	33	\$38,445	32	\$1.25m
Total Option 2					\$3.09m
Aerial work	\$1,165	3.5	\$4,078	240	\$0.98m
Total for Option 3					\$4.07m

Aeroplane specific requirements

Terrain Awareness and Warning System (TAWS)

The new requirement will impact primarily on aeroplanes weighing more than 5700kg with a piston engine(s) and aeroplanes with turbine engine(s) weighing more than 5700kg, but carrying less than 10 passengers. The other potential impact is on non-IFR that operate night VFR and current medical transport only aircraft weighing more than 5700kg.

There are currently 348 aeroplanes on the Australian aircraft register that are piston powered with an MTOW greater than 5700kg or are turbine powered with a MTOW less than 15000kg, but greater than 5700kg.

Of the aircraft on the aircraft register, 132 are registered to an operator authorised to conduct RPT, charter or air ambulance operations. As the current TAWS fitment requirement applies to aircraft operated carrying more than 10 passengers in RPT or charter it is necessary to consider the seating configuration of the aircraft. It is estimated that of the current 132 aircraft registered to an RPT or charter operator, 65 are configured with more than 10 seats and would currently be required to be fitted with TAWS. These include aircraft such as the Beechcraft 1900, Dornier 228 and 328, Embraer 120 and Fairchild Metroliner SA227 (excluding those in freight configuration).

The TAWS requirement will therefore potentially require 67 aircraft currently on the aircraft register to be fitted with TAWS in order to operate within the air transport category. CASA has contacted a sample of the operators of these aircraft and determined that there is already TAWS fitted to 49 aircraft. This results in approximately 18 aircraft that would be required to be fitted with TAWS at an estimated cost of \$21 000 per aircraft (Table 8).

For option 3, TAWS would be required for aircraft with 6 or more passenger seats. The types of aircraft that are within this category include, the piston powered AeroCommander 680, Beech 95 and Cessna 421 and the turbine powered aeroplanes that include the Cessna 208, Fairchild SA 226 and Pilatus PC 12. CASA estimates that there are approximately 323 of these types of aircraft. Based on 323 aircraft within the six to nine seat range and the 18 aircraft with MTOW>5700kg of option 2 this would result in an estimated cost impact of \$7.2m for 341 aircraft (Table 8).

Table 8: Terrain Awareness Warning System costs

	Purchase¹	Number of aircraft	Total upfront cost
<i>Option 2</i>	\$21,000	18	\$0.38m
<i>Option 3</i>	\$21,000	341	\$7.2m

1: Estimated fitment cost based on feedback from two Avionics Businesses and a small sample of operators who have recently fitted GNSS to their aircraft with ADS-B. The cost is based on a unit cost of \$12 000, \$2000 for installation, \$4000 for an Engineering Order and Supplementary Type Certificate if required and \$1000 for training of an average of 3 pilots per operator.

Weather Radar

CASA has analysed the operators and aircraft likely to be affected by the change to requirement for the fitment of weather radar. The impact of the new requirement will be on single pilot pressurised turbine powered aeroplanes that are currently not required to be fitted with a weather radar when operated in RPT, charter or air ambulance. These aircraft undertaking flights in the air transport category under option 2 will require a weather radar.

Currently there are 304 aeroplanes that are registered to an RPT, charter or ambulance flight operator that are turbine powered, pressurized and could be operated with a single pilot. The most common types of aircraft are the King Air B200, Cessna Citation, Cessna Conquest, Global Express, PC12, Lear Jet 35s and single pilot Metro Liners.

CASA has analysed a random sample of 30 of the 304 aircraft to determine if a weather radar is currently fitted. Based on information contained in the maintenance control and operations

manuals of the aircraft, or from contacting the operator, CASA estimates that 237 of the 304 aircraft are already fitted with a weather radar. For the remaining 67 aircraft it is possible some of these are already fitted with weather radar, however, to be conservative CASA has estimated that there are 67 aircraft that would be required to be fitted with a weather radar.

The cost of fitting weather radar is estimated at \$34,000 based on feedback from an avionics business that fits weather radar and from a small number of operators that have recently fitted a weather radar to their aircraft. This results in an estimated industry wide cost impact of \$2.28m for this Option 2 (Table 9). Under option 3, with an additional 323 aircraft within the six to nine seat category the estimated cost is \$13.26m (Table 9).

Table 9: Weather radar costs

	Purchase¹	Number of aircraft	Total upfront cost
Option 2	\$34,000	67	\$2.28m
Option 3	\$34,000	390	\$13.26m

1: The cost is based on a unit cost of \$25 000, \$2000 for installation, \$4000 for an Engineering Order and Supplementary Type Certificate if required and \$1000 for training of an average of 3 pilots per operator.

Weather radar provides for a significant improved ability for aircraft to avoid entering a thunderstorm or areas of severe turbulence associated with thunderstorms that in the worst scenario can lead to structural damage to an aircraft that results in an accident and loss of life.

Common requirements Options 2 and 3

Two pilots for 10 plus seat aircraft

Aircraft types impacted

The requirement for two pilots when operating a 10 plus seat aircraft will be a new requirement that will potentially impact on an aircraft with a single engine weighing less than 8618kg that are capable of carrying more than 9 passengers. Based on the current aircraft registered in Australia the only aircraft that is within this category is the Cessna 208B, known as the Grand Caravan. There are currently 71 Cessna Grand Caravans registered, with 35 registered to operators authorised for RPT, 23 to charter operators and 13 in aerial work or private.

The current RPT and aerial work operators will not be impacted by this requirement and the evidence from existing charter operators is that these aircraft are operated under the VFR and therefore would not be impacted by the requirement, or if they are operated under IFR they are already operated with two pilots.

Life Raft

A small number of businesses (approximately 20) operating 40 single engine aircraft up to 25 miles from land would be required to fit a life raft costing approximately \$4 000 per aircraft, with an approximate industry wide cost of \$160 000. These operators would also need to provide 3 yearly proficiency training and checking of staff, with the training estimated to cost \$1 100 per person, with annualised industry cost of approximately \$20 000.

The life raft requirement would increase the likelihood of passengers surviving a ditching of an aircraft. There have been a number of accidents involving the ditching of an aircraft for

which the passengers survive the initial ditching and having the life raft will increase their chances of survival.

Requirement for a first aid kit

A first aid kit will be required to be carried in each aircraft. A first aid kit meeting the regulatory requirements costs \$50. During consultation with affected aircraft operators, the evidence indicates that at least half already carry a first aid kit meeting the regulatory requirements. If half of the 1750 small aeroplanes are required to be fitted with a first aid kit costing \$50 this will have an industry wide cost of \$43 750.

Rotorcraft Impact

Helicopter Terrain Awareness and Warning System (HTAWS)

The option 2 requirement will require helicopters that have the capacity to carry 10 or more passengers that are operated within air transport under the IFR to be fitted with an HTAWS. There are currently 1404 helicopters on the Australian aircraft register that are registered to an operator currently undertaking charter or ambulance flights. Of these aircraft CASA has identified 196 that would have the potential for a maximum operator seating capacity of 10 or more, with these 196 consisting of 14 models (Table 10).

Of the 196, based on current usage approximately 84 are not used under the IFR for an air transport flight and therefore would not be impacted by this requirement. Of the remaining 112, based on industry feedback, 74 are already fitted with HTAWS, this leaves 38 helicopters, of which some may be operated in the air transport category. Based on feedback from the operators of these aircraft, approximately 26 are not used in air transport and therefore CASA estimates that approximately 12 Helicopters would require the fitment of HTAWS.

The estimated cost for the fitment of HTAWS is estimated at \$48 000 based on feedback from avionics businesses that fit HTAWS to these types of aircraft. That is a unit cost of \$35 000, installation of \$7000 including an Engineering Order and STC if required, plus training of 6 pilots at average cost of \$1 000 per pilot. Based on 12 aircraft this results in an estimated cost of \$0.58m.

Table 10: Helicopters with a seating capacity of 10 plus

Model	Number	Seats	Used in air transport IFR	HTAWS fitment
<i>Augusta AW139</i>	45	15	Yes	100%
<i>Bell 412</i>	30	14	Yes (but MOPSC<=9)	
<i>Kawasaki BK117</i>	29	10	Yes (but MOPSC<=9)	
<i>Sikorsky S-92</i>	22	19	Yes	100%
<i>Sikorsky S-76</i>	14	12	some	
<i>Bell 212</i>	12	15	some	
<i>Bell 205</i>	12	14	No	

<i>Eurocopter EC225</i>	10	19	No	
<i>Eurocopter AS365</i>	11	12	Yes (but MOPSC<=9)	
<i>Bell 214B</i>	3	12	No	
<i>Augusta AW189</i>	3	19	Yes	100%
<i>Eurocopter AS.332L</i>	2	19	Yes	100%
<i>Eurocopter EC 175</i>	2	16	Yes	100%
<i>Bell 412EPI</i>	1	13	Yes	

Performance classes

The introduction of performance requirements for rotorcraft formalise the current requirements specified in the Rotorcraft Flight Manual into regulation. The regulations replace the current policy letter requiring operators to insert a performance supplement in their operational documentation. There are likely to be no additional costs as the new legislative requirement will replace an existing policy letter.

Overall impact

Costs

The overall cost impact for the changes is annualised over a 10-year period to be \$6.51m for Option 2 and \$10.35m for Option 3 (Table 11).

The impact of Option 2 on a typical business is primarily based on the requirement for an existing business undertaking charter flights to implement an SMS and training and checking for their pilots, indeed over 90% of the estimated \$6.51m cost is attributed to these two requirements. Option 3 includes additional costs primarily due to broader application of requirements for SMS, training and checking, TAWS and weather radar.

For a small charter operator the upfront cost is estimated at \$6500 to implement a SMS and \$10 000 to implement training and checking. In order to see these costs in context, CASA has estimated the existing compliance costs with the initial AOC requirements to be in order of \$70 000 for a typical business (Appendix 2).

The ongoing compliance cost estimated for a small operator is \$2000 for SMS and \$2000 for training and checking. To put this compliance cost in perspective, CASA has estimated the current compliance cost for these operators to be approximately \$23 000 (Appendix 2).

Table 11: Total Cost for Option 2 and Option 3 by requirement

<i>Requirement</i>	Option 2		Option 3	
	One off upfront cost	Annualised cost	One off upfront cost	Annualised cost
<i>Exposition</i>	\$1.64m	\$0.16m	\$2.24m	\$0.22m
<i>SMS (upfront)</i>	\$3.77m	\$0.38m	\$4.87m	\$0.49m
<i>SMS (annual maintenance)</i>	\$0.76m	\$0.76m	\$1.09m	\$1.09m

<i>SMS (annual training)</i>	\$1.36m	\$1.36m	\$1.69m	\$1.69m
<i>Training and checking manual</i>	\$4.04m	\$0.40m	\$6.44m	\$0.64m
<i>Training and checking (annual)</i>	\$3.09m	\$3.09m	\$4.07m	\$4.07m
<i>TAWS</i>	\$0.38m	\$0.04m	\$7.161m	\$0.72m
<i>HTAWS</i>	\$0.58m	\$0.06m	\$0.58m	\$0.06m
<i>Life Raft fitment (upfront)</i>	\$0.16m	\$0.02m	\$0.16m	\$0.02m
<i>Life Raft training (annual)</i>	\$0.02m	\$0.02m	\$0.02m	\$0.02m
<i>First Aid Kit</i>	\$0.04m	\$0.00m	\$0.04m	\$0.00m
<i>Weather radar</i>	\$2.28m	\$0.23m	\$13.26m	\$1.33m
<i>Total</i>		\$6.51m		\$10.35m

Appendix 3 provides further information on how the cost estimates were derived for the safety management system and training and checking requirements.

Safety benefits

Options 2 and 3 will reduce the risk of accidents. As highlighted by the ATSB the cause of accidents is difficult to attribute to a single factor, therefore it is difficult to make estimations as to the extent of the risk reduction. Individually, the equipment fits will reduce the risk of accidents and/or mitigate the extent of the injuries:

- TAWS will reduce the risk of controlled flight into terrain accidents
- Weather radar will reduce the risk of accidents from pilots flying into adverse weather conditions
- Life raft improve the chances of survival should an aircraft ditch

The requirements for an SMS will address the organisational settings that provide a mitigation against organisational factors that can attribute to accidents.

The increased frequency of proficiency checks will enhance safety by ensuring that pilots have demonstrated competency for their specific operations and provide a training opportunity for those pilots.

In terms of the scale of the potential safety benefits, the ATSB estimates that each year for charter operators there are approximately 15 accidents, resulting in 1.6 fatalities, 2 serious injuries and 15 written-off or substantially damaged aircraft. Using a value of statistical life of \$4.5m, a serious injury value of \$0.26m and an average aircraft value of \$1m¹, these accidents result in a \$22.5m cost to society each year.

The US experience provides an illustration of the possible safety improvements for establishing common safety standards of charter and scheduled services. In the US scheduled (Part 135 Commuter) and charter operators (Part 135 On Demand) are required to meet the same regulatory standards. In the US the charter accident rate is only 1.2 times higher than

¹ Based on the 2014 VSL published by OBPR (PM&C 2014) and indexed by CPI. Serious injury value of 5.75% of VSL based on Table 2-2 (FAA 2004). Aircraft value is a CASA assumption based on Table 5-5 (FAA 2004).

the scheduled service accident rate, instead of 4.5 times higher as is currently the case in Australia.

If imposing the same regulatory standards on charter operators in Australia was to reduce the charter accident rate so that it was only 1.2 times higher than the scheduled service accident rate this benefit would amount to a 75% reduction in the charter accident rate. With the average annual cost of charter accidents valued at approximately \$22.5m, this equates to a safety benefit of \$16.9m.

Consultation

Formal Consultation

CASA has developed this regulatory proposal working with the aviation industry over a five-year period. CASA formed an industry working group consisting of affected businesses and associations representing those businesses and pilot associations to assist in reviewing the existing regulations and proposing revised regulations.

A notice of proposed rule-making was published for each Regulatory Part outlining the broad changes over the current operational parts and the proposed terminology to be used in the regulations in order to seek feedback from stakeholders.

In response to the consultation CASA made a number of changes to the proposed regulatory requirements. The initial consultation proposed TAWS and weather radar applicability requirements consistent with Option 3, that is aircraft carrying 6 or more passengers. In response to the initial consultation, CASA revised the requirements to base the requirement on an MTOW > 5700kg, with this requirement consulted on in 2018.

Informal consultation

CASA has presented the draft options to affected businesses through informal consultation. Some of the key comments made during this consultation from affected businesses were that:

- Charter businesses are operating in a difficult market place with many not profitable
- The proposed option would impose a cost on charter businesses which may result in some choosing to withdraw from the charter flight industry
- Strict liability offences in the regulations is unnecessary (CASA has responded to industry comments about strict liability by publishing an explanation of strict liability provisions and how they are administered (treated) by CASA).

Strict liability offences arise in a regulatory context where, for reasons such as public safety and the public interest in ensuring that regulatory schemes are observed, the sanction of criminal penalties is justified. They also arise in a context where a defendant can reasonably be expected to know what the requirements of the law are, and the mental, or fault, element can justifiably be excluded.

The rationale is that people who owe general safety duties should be expected to be aware of their duties and obligations.

For strict liability offences in this regulation, the prosecution will have to prove only the conduct of the accused. However, where the accused produces evidence of an honest and reasonable, but mistaken, belief in the existence of certain facts which, if true, would have made that conduct innocent, it will be incumbent on the prosecution to establish that there was not an honest and reasonable mistake of fact.

The inclusion of strict liability in certain offences in this regulation is consistent with the principles set out in the Attorney-General's *Guide to Framing Commonwealth Offices, Infringement Notices and Enforcement Powers* (September 2011) and the Sixth Report of 2002 of the Senate Standing Committee for the Scrutiny of Bills, *Application of Absolute and Strict Liability Offences in Commonwealth Legislation* (26 June 2002).

Implementation and Review

The changes will be formally implemented by making of Parts 119, 121, 133, 135 and 138 in the *Civil Aviation Safety Regulations 1998* and an individual Manual of Standards for each of Parts 121, 133, 135 and 138. The commencement date will be 25 March 2021, which will allow operators approximately two years to prepare for the new rules. CASA will be publishing transitional arrangements in 2019 that address extended compliance periods between 2022 and 2024 for the provisions related to new aircraft equipment (that includes the requirements for weather radar and TAWS), new training and checking and new SMS requirements.

Prior to implementation of the new Parts, CASA plans to conduct an extensive education, training and communication program for both affected industry personnel and internal staff. This will be supplemented by the development and distribution of appropriate support tools to assist with the introduction of the initiatives, including sample materials that will reduce operator costs to update their documentation.

Review

CASA will monitor and review the new regulations on an ongoing basis during the transition phase, with careful consideration given to the feedback from the regulated organisations and their members and CASA will make any necessary changes to internal processes or the regulatory requirements.

The key information that CASA will be collecting during the transition is feedback from the regulated organisations as to the reasonableness of the requirements and whether the requirements reflect the original intent.

An important way that CASA will monitor the effectiveness of regulations, including safety performance, is surveillance of the organisations to ensure that they are implementing their processes documented in their Exposition or Manuals.

CASA will continue to monitor accident and incident data, including from the ATSB. This data will help inform any future changes required to the regulations, CASA procedures or the manuals or expositions of organisations.

The regulatory changes will be subject to a post-implementation review in 2025, which is one year after the end of the compliance date for all provisions. Prior to 2025 there will be on-going monitoring of the performance of the charter operators to assess how the new regulations are performing. This monitoring will be undertaken through the CASA field officers and CASA's industry oversight programs.

Conclusion

Australia has historically applied a lower regulatory safety standard to charter flights compared to RPT flights. The basis for a lower standard is difficult to sustain with evidence that charter flights can operate the same types of aircraft carrying the same number of passengers on the same routes. In effect the only difference is whether the flight is scheduled and generally available to the public.

Recent operational experience has highlighted the higher accident rate for charter flights relative to RPT flights, with a significant difference in the smaller aeroplane air transport industry sector where the disparity is 11 to 1. Overall, the charter accident rate is approximately 4.5 times higher than the comparable scheduled service accident rate. Whilst part of the higher accident rate could be explained by the differences in the operations involved, the relative accident rate difference is not as dramatic in countries that regulate the two operations the same. In the US where charter and RPT services are regulated the same the charter accident rate is only 1.2 times higher.

A key motivating factor for the creation of the air transport category is to address the relatively high accident rate for charter operations.

CASA is proposing to create a single air transport category including both current RPT and charter services. The standards for air transport would generally be the current standards for RPT services and therefore they will be relatively unaffected by the new Parts.

Approximately 500 charter businesses would be required to:

- Implement a safety management system
- Increase the frequency of pilot training and competency checks

Option 2 is the preferred option because the requirements are consistent with International Standards and recommendations from the ATSB, with a lower annualised compliance cost impact when compared to Option 3. CASA estimates that the 10-year annualised cost impact of the proposed changes under Option 2 is \$6.51m.

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Appendix 1: Explanation of minor regulatory changes

Aerial work changes under CASR Part 138 that will not be a significant impact

Reclassification of operations

The reclassification of aerial work operations will reduce the number of aerial work purposes from the current 41 to three. For new applicants or operators with multiple authorisations the reduction in the number of the operational categories will reduce the number of categories that require separate approval from CASA. This will provide an administrative saving for these affected operators.

Currently aerial work operators would require a specific CASA assessment to include an additional aerial work purpose on their AOC. The new three categories will potentially result in a simpler approval process for operations within a specific aerial work category, as the risk mitigating aspects of the category have been highly standardised.

Part 138 Certificate

The introduction of the Part 138 certificate will remove the requirement for operators to obtain and maintain an AOC. The requirements of the certificate will be graduated depending on the complexity of the operation. Complex operations, such as dedicated police, SAR and marine pilot transfer operations, will be required to meet comparable requirements to current AOC requirements, so in effect the Part 138 certificate will not be a significant change for these types of operations.

However, for non-complex operations the Part 138 certificate will potentially provide a simplification in terms of obtaining an initial certificate because CASA will not be required to impose the requirements specified in the *Civil Aviation Act* for the issue of an AOC. For example, entry control will potentially (dependant on the experience and previous history of the nominated person), not involve a specific assessment of the head of operations, rather the nominated person for this position could just be approved by CASA based on their history of operations.

The operating certificate will also open the possibility of a generic CASA approved or developed operations manual for specific types of operations, for example an acceptable means of compliance (AMC) based mustering manual could be developed by the relevant association and assessed by CASA once. After this initial CASA assessment of the operating procedures these procedures could then be adopted by operators at low cost and require minimal CASA assessment.

SMS

A safety management system will be required for complex operations that involve marine pilot transfer and more complex emergency service operations. This requirement will not be a significant impact because a larger majority of the current operators already have a SMS in place that would meet the proposed requirements. Many operators have reported to CASA that customers through formal contract terms require a SMS or that there are insurance or other business benefits from having a SMS.

Training and checking

Training and checking will be required for complex operations that involve marine pilot transfer, and more complex emergency service operations and when aerial work is conducted in more complex aircraft types. This requirement will not be a significant impact because the current operators undertaking these types of operations in most cases are required to already undertake training and checking of their pilots that would meet the proposed requirements.

Incorporate current exemptions

Some aerial work operations are required to obtain an approval or exemption, for example, external sling load, and most aerial work operations which require operations at low levels below that specified in CAR 157 of the Civil Aviation Regulations.

Part 138 will incorporate the current exemptions into legislation by adopting the conditions that are currently specified in the exemptions in a Manual of Standards. This will mean that there will be no change in the requirements that operators must meet in order to undertake the operation, however, the incorporation of the exemptions into Part 138 could provide a cost saving, particularly where an individual exemption was previously needed for the operation.

In the above situation operators will no longer incur the cost of applying for an exemption and there is likely to be a reduction in the number of CASA assessments required for individual operations.

Performance requirements

Part 138 will introduce performance requirements for operations based on the potential for risk to third party individuals and for operations where aerial work passengers are carried. The requirements will potentially impact on some high-end SAR, marine pilot transfer, police and firefighting operations.

For rotorcraft, the impact for some operations will be minimal because the current operations are already undertaken in types of rotorcraft that will meet the performance requirements, however in other cases this impact may require a reconsideration of how the operation is managed or resourced from an equipment perspective. There may be a limited number of police operations involving low-level operations over populous areas that are currently undertaken in a single-engine rotorcraft that may require the adoption of a more conservative operational strategy or possibly the use of a multi-engine aircraft.

Appendix 2: Current Compliance Costs for Commercial Operators

Section 27 of the *Civil Aviation Act 1988*, read with regulation 206 of the *Civil Aviation Regulations 1988* requires RPT, charter and aerial work operators to hold an AOC. In order to obtain and maintain an AOC the significant requirements are:

- Develop an Operations Manual. An important function of the manual is to outline how the operator will comply with the relevant regulatory requirements and be used by staff as a reference for decision making and to outline what processes they must follow. An operations manual can be in order of 300 to 400 pages.
- Appoint key personnel, currently a CEO, Head of Flying Operations and if required Head of Aircraft Airworthiness and Maintenance Control.
- CASA interviews with key personnel and a check flight with the CEO and Head of Flying Operations.
- Comply with the aviation legislation
- Submit variations to the operations manual
- Ensure pilot flight reviews are undertaken as required by CASR Part 61 and competency checks or training specified in the operations manual.
- Comply with pilot flight and duty limits to manage fatigue.
- Undertake aircraft maintenance, which in the case of current charter aircraft requires an inspection after 100 hours of operation.
- Engine overhaul based on the manufacturer specified requirements, typically after every 2000 hours of flying.

CASA has surveyed a number of businesses that have recently obtained an AOC, or varied their existing AOC or have been subject to ongoing surveillance. The purpose of the survey was to determine the time and resource cost involved in complying with the AOC requirements. The major findings were:

- The average time to prepare the manual was approximately 12 weeks of full-time work for one person
- Some businesses contracted out the preparation of the operations manual at an approximate cost of \$10 000
- 2 days to complete other associated paperwork with the application, including the application form
- 1 day for a CASA site visit and inspection of premises
- 1 day for each interview of key personnel
- 1 day for a check flight with the Head of Flying Operations
- 10 days for other miscellaneous requirements, including corresponding with CASA
- CASA assessment fees of \$12 000
- 1 day to complete associated paperwork for aircraft registration, including the initial application form and compiling supporting documentation

Table A1 provides the estimated costs associated with initial AOC application process with the estimated costs based on a wage rate of \$500 per day. For the issue of an initial AOC the compliance cost is estimated at approximately \$70 000.

Table A1: Current Compliance Costs for an Initial AOC

	Time to complete	CASA fees	Total cost
<i>Initial approval</i>			
<i>AOC application</i>	6 to 12 months	\$12 000	\$12 000
<i>Operations Manual</i>	3 months		\$45 000
<i>Interactions with CASA</i>	2 weeks		\$10 000
<i>Interview with Chief Pilot</i>	1 day		\$500
<i>Interview with CEO and HAAMC</i>	1 day		\$500
<i>Inspection of premises</i>	1 day		\$500
<i>Check flights</i>	1 day		\$1 000
<i>Aircraft registration</i>	1 day	\$130	\$390
<i>Total</i>			\$69 890

Ongoing requirements

The compliance costs associated with maintaining an AOC include ensuring that any change to the operational procedures of the business that requires a change to operations manual is submitted to CASA and approved. Feedback from AOC holders is that the time associated with varying the operations manual would take approximately 4 hours and require the payment of \$300 in CASA fees, resulting in an annual cost of \$550 for one change per year (Table A2).

A CASA audit of the AOC holder generally involves an onsite inspection, which is typically completed in one day with a further day of preparation. If the AOC holder was to be audited once every two years this would result in an annualised cost of \$500.

In order to ensure that the pilots employed by the AOC holder remain current they must undertake a flight review and a review for any endorsement held by the pilot that is used for the operations of the AOC holder, for example if the pilot undertakes aerial application for the AOC holder, this endorsement must be maintained with a review once per annum.

The frequency of flight reviews for pilots depend on the type of aircraft operation. For a single engine pilot in a small aeroplane or helicopter operating day VFR this would require a flight review once every 2 years at an estimated cost of \$1015 (Table A2). For the pilot operating a multiple engine aircraft the flight review is once per year at an estimated cost of \$1165 (Table A2). Most pilot ratings, including the commonly held instrument rating, require a review once per annum in order to maintain currency and would typically be done as part of pilot a flight review. Therefore if the pilot is authorised to operate a single engine aeroplane and holds and instrument rating, these pilots would be required to have an annual Instrument Proficiency Check.

Whilst not part of the current review of the requirements applying to AOC holders, the aircraft airworthiness standards impose a cost on operators. A charter operator must undertake 100 hourly inspections to maintain a Certificate of Airworthiness. The typical cost of 100 hourly inspection is \$2 000.

In addition, the maintenance requirements applying to charter aircraft require the engine to be overhauled according to the manufacturer's time limits, typically every 2000 hours. The engine overhaul costs are typically in the order of \$50 000 (Table A2).

Table A2: Ongoing AOC holder Compliance Costs

<i>Ongoing requirements</i>	Time to complete	CASA fees	Total cost	Annualised cost
Variations to manuals	0.5 days	\$300	\$250	\$550
Comply with audits	2 days		\$1 000	\$500
Pilot flight reviews (single engine, once every 2 years)	1 day		\$1 015	\$500
Pilot flight reviews (multi-engine, once per year)	1 day		\$1 165	\$1 165
Aircraft maintenance (100 hourly inspection in charter)	1 day		\$2 000	\$8 000
Engine overhaul every 2000 hours	1 week		\$50 000	\$12 500

The total cost of ongoing compliance will vary according to the number of pilots employed, hours flown and number of aircraft operated. For a current AOC charter operator employing 3 pilots, operating 2 single engine aircraft with a total of 1500 flight hours annual, the annual cost would be approximately \$46 128 (Table A3). This currently assumes that all operators employ multiple engine rated pilots.

Table A3: Compliance Cost by size of Operator

Operators	Number of pilots	Number of Aircraft	Variation to manuals	Comply with audits	Flight Reviews	Aircraft Maintenance	Engine Overhaul	Total
Single Pilot	1	1	\$550	\$500	\$1 165	\$8 000	\$12 500	\$22 715
2 to 5 pilots	3.5	2	\$550	\$500	\$4 078	\$16 000	\$25 000	\$46 128
6 to 20 pilots	11.5	5	\$550	\$500	\$13 398	\$40 000	\$62 500	\$116 948
20+	33	10	\$550	\$500	\$38 445	\$80 000	\$125 000	\$244 495

Appendix 3: Cost Impact for implementing and maintaining a Safety Management System

Upfront Costs

For small charter organisations employing less than 20 safety sensitive staff, it is anticipated that there is a requirement for the organisation to develop, implement and maintain a safety management system, and a program for training and assessing operational staff in human factors principles and non-technical skills. Training time for initial staff SMS induction training would be approximately 4 hours, with a further one to two days to set-up SMS process forms and spread sheets. A typical HF & NTS course would run for approximately 2 days. Therefore, the total SMS and HF & NTS training implementation for the organisation would be approximately five days.

For a medium-sized charter organisation employing between 20 to 50 personnel, the training time/costs would be similar to the smaller organisations, however, there would be an additional 2 days required for the safety manager/designate to ensure SMS process forms and spread sheets are fully integrated within the organisation's SMS. Induction would be ½ a day for all personnel, plus a 2-day HF & NTS course for all safety sensitive staff. Total SMS and HF & NTS training requirements for the organisation would be approximately 6 ½ days (1/2 – SMS induction and 2 – HF & NTS for all personnel plus 4 days for the safety manager/designate).

For larger charter organisations, employing more than 50 staff, the time cost will be similar to the small/medium organisations, however, the development and implementation of the SMS would take approximately 2 further days for the safety manager/department, plus an extra half a day to cover initial SMS induction training for all safety sensitive staff. Therefore, total SMS and HF & NTS training requirements would be approximately 9 days (2 x ½ day – SMS induction courses and 2 days – HF & NTS to cover all personnel plus 6 days for the safety manager/department).

On-going Costs

For the smaller charter organisations there will be an on-going requirement to provide staff with refresher training to cover both the organisation's SMS and HF & NTS principles and processes. This could be accomplished by 1 day per year for refresher training covering SMS and HF & NTS for all personnel. An additional 2 days per year is required to maintain/amend SMS policies and processes for the safety manager/designate. Therefore, the on-going requirement for SMS and HF & NTS would be approximately 3 days per year.

For the medium-sized charter organisations there will be increased on-going time costs due to maintenance of the SMS processes (hazard/incident reporting, internal audit, safety meetings and safety investigations) which will be undertaken by the person in the safety manager role. Approximately 5 to 10 days per year would be required by the safety manager/designate to maintain the SMS plus additional induction training as required, and approximately 1 day per year for all safety sensitive staff to cover SMS and HF & NTS refresher training requirements.

For the larger charter organisations there will be additional full-time time and costs for the safety department to cover the on-going maintenance and amendment of SMS processes including: safety reporting processes, safety meeting coordination, safety investigations similar to the medium organisations, however, larger in scale. The on-going training time/cost for the safety department to cover SMS and HF & NTS induction and refresher

training would be in the order of 24 days per year (based on 2 days per month, noting probable staff turn-over), as well as all safety sensitive staff having 1 day per year to cover refresher training for SMS and HF & NTS principles and processes.

Assumptions

- Small to medium organisations would most likely have a person in the safety manager role as a part-time appointment (a secondary duty) to maintain the organisation's SMS procedures, policies and processes
- HF & NTS training for the larger organisations would be carried out internally
- SMS induction and refresher training is carried out internally for all organisations
- Refresher training is an annual event for all safety sensitive personnel
- Time and cost considerations are approximate only, noting that each organisation will have SMS training and process requirements specifically 'tailored' for their operations

Appendix 4: Cost of flight reviews and operator proficiency checks

The cost of flight reviews is determined by the aircraft operating costs and the opportunity cost of staff time.

The typical operating cost for a single engine aircraft weighing less than 5700kg such as a Cessna 172 is approximately \$250 per hour. For multi-engine aircraft weighing less than 5700kg, the weighted average operating cost is approximately \$350 per hour.

The other significant cost of the review is the opportunity cost for the two pilots valued at \$80 per hour, which represents the hourly rate of a \$135 000 salary.

Table 4: Flight Review costs for single engine aircraft <5700kg

<i>Aircraft based cost components</i>	
Aircraft operating costs per hour ¹	\$250
Value of 1.5 hours of aircraft use	\$375.0
Pilot time ²	640
Total review cost	\$1 015.0

1: Average costs obtained from a survey of affected aircraft operators

2: Four hours for two pilots valued at \$80 per hour

Table 5: Competency Check costs for multi-engine aircraft <5700kg

<i>Aircraft based cost components</i>	
Aircraft operating costs per hour ¹	\$350
Value of 1.5 hours of aircraft use	\$525.0
Pilot time	640
Total review cost	\$1 165.0

1: Average costs obtained from a survey of affected aircraft operators

2: Four hours for two pilots valued at \$80 per hour.

Statement of Compatibility with Human Rights

Prepared in accordance with Part 3 of the Human Rights (Parliamentary Scrutiny) Act 2011

Civil Aviation Safety Amendment (Part 133) Regulations 2018

This Legislative instrument is compatible with the human rights and freedoms recognised or declared in the international instruments listed in section 3 of the *Human Rights (Parliamentary Scrutiny) Act 2011*.

Overview of the Disallowable Legislative Instrument

The *Civil Aviation Safety Amendment (Part 133) Regulations 2018* (the Regulations) amends the *Civil Aviation Safety Regulations 1998* (the CASR) to introduce a new Part 133 which provides a regulatory framework for Australian air transport operations in rotorcraft. Part 133 will also operate with, in particular, Part 119 of the CASR.

The Regulations make various amendments to the *Civil Aviation Regulations 1988* (the CA Regulations) to improve aviation safety through the introduction of a consistent, dedicated framework for rotorcraft air transport operations that is broadly based on the Standards and Recommended Practices of the International Civil Aviation Organization and aligned with the legislative frameworks of other leading aviation nations for comparable types of operations. It also contributes to harmonisation in operating standards between existing requirements for regular public transport and charter operations.

The Regulations also include dedicated regulatory oversight for medical transport operations utilising rotorcraft, enhancing safety by consolidating and clarifying the operating rules for this specific industry sector and moving them out of the aerial work category.

Subpart 133.A prescribes the application of Part 133, approvals made by the Civil Aviation Safety Authority (CASA) for Part 133 and for the issue of a Manual of Standards (MOS) for Part 133.

Subpart 133.C prescribes the framework for the required documents, reporting and recording of defects and incidents, search and rescue service and associated equipment and other miscellaneous requirements for operations regulated under Part 133.

Subpart 133.D prescribes the operational procedures for the operations regulated under Part 133. This includes operational procedures for operational control, flight preparation, flight planning, flight rules, aerodromes, fuel requirements, passenger transport and medical transport-specific requirements, instruments, indicators, equipment and systems.

Under Subpart 133.F, the performance requirements for rotorcraft used in the operations regulated under Part 133 are prescribed.

Subpart 133.J prescribes the weight and balance requirements for rotorcraft used in the operations regulated under Part 133.

Subpart 133.K prescribes the instruments, indicators, equipment and systems requirements for rotorcraft used in the operations regulated under Part 133, as well as when such rotorcraft can be flown with inoperative instruments, indicators, equipment or systems.

Subpart 133.N and Subpart 133.P provide the regulatory framework for, respectively, flight crew and cabin crew / air crew / medical transport specialists used in the operations regulated under Part 133.

Non-compliance with a number of the stated requirements in Subparts 133.C to 133.P is an offence under the Regulations.

Human rights implications

The Regulations engage the following human rights:

- the right to a fair trial and fair hearing in Article 14 of the *International Covenant on Civil and Political Rights* (ICCPR)
- the right to protection against arbitrary and unlawful interference with privacy in Article 17 of the ICCPR.

The right to a fair trial and fair hearing: presumption of innocence

Article 14 of the ICCPR provides that in the determination of a criminal charge, everyone shall be entitled to a fair and public hearing by a competent, independent and impartial tribunal established by law. Further, in criminal proceedings, people are entitled to a range of protections including minimum guarantees as set out in Article 14(3) and following of the ICCPR.

The presumption of innocence in Article 14(2) imposes on the prosecution the burden of proving the charge and guarantees that no guilt can be presumed until the charge has been proven beyond reasonable doubt. For the charge to be proven beyond reasonable doubt, the legal and evidential burden is on the prosecution.

Strict liability offence provisions

There are 60 offences of strict liability prescribed in the Regulations.

Strict liability offences engage the presumption of innocence through the imposition of liability without the need to prove fault. A strict liability offence will not impermissibly limit the right to the presumption of innocence if the offence pursues a legitimate aim and is reasonable, necessary and proportionate to that aim.

Nature of strict liability provisions

Subpart 133.C provides the general offence provisions for this Part, including strict liability offences relating to the regulation of:

- permitted categories of rotorcraft
- required operational documents
- required flight-related documents
- information about search and rescue services and emergency and survival equipment
- requirements for various crew and ground support activities, and personnel requirements
- persons authorised to occupy a flight crew seat.

Subpart 133.D provides strict liability offence provisions regulating the operational procedures for operations under Part 133, including:

- flight planning
- aerodrome-related procedures, such as take-off and landing minima, using instrument approach procedures, and provision for alternate aerodromes
- fuel requirements
- particular requirements for passenger and medical transport operations
- instruments, indicators, equipment and systems for rotorcraft flights
- the winching of persons in an external load operation.

Subpart 133.F provides strict liability offence provisions regulating rotorcraft performance in operations covered by Part 133, including:

- take-off and landing weights
- flight in a performance class and requirements of rotorcraft in each performance class.

Subpart 133.J provides strict liability offence provisions regulating the loading, and weight and balance, for rotorcraft flights under Part 133.

Subpart 133.K provides a strict liability offence provision regulating instruments, indicators, equipment and systems and their requirements for operations under Part 133.

Subparts 133.N and 133.P provide strict liability offence provisions regulating crew members on operations under Part 133, including:

- various requirements for flight, cabin, and air crew, and medical transport specialists, including requirements in relation to crew composition, number, age, language abilities, qualifications, training, recent experience and competence
- assignment to duty of pilot in command and the requirements of the position.

Reasonableness, necessity and proportionality

The strict liability offences relate to administrative and safety requirements that must be adhered to by regulated individuals and operators involved in the aviation industry to ensure the integrity of the aviation safety system. The imposition of strict liability offences in the amendments limits the right to the presumption of innocence. However, the limitation is necessary to ensure that operators and pilots in command of aircraft, and other listed individuals, are placed on notice to more carefully guard against the contravention of safety-related obligations in relation to operations under Part 133. The limitations also ensure that CASA retains oversight over such persons as is necessary to ensure the safety of air navigation.

The rationale is that people who perform activities that engage with safety risk should be expected to be aware of their duties and obligations. In the context of air transport operations, a defendant can reasonably be expected to know what conduct is required by the law, and the mental, or fault, element can justifiably be excluded.

Further, the defence of honest and reasonable mistake, as set out in section 9.2 of the *Criminal Code Act 1995*, will be available to the defendant in all offence provisions. If relied upon, this is an evidential burden on the defence to prove, on the balance of probabilities, that the accused had an honest and reasonable mistaken belief of fact which, if those facts existed, would not have constituted an offence.

The strict liability offences in this instrument are considered reasonable, necessary and proportionate to the objective of ensuring aviation safety. The offences are regulatory in nature and their aim is to ensure reasonable compliance with regulated safety standards by those conducting activities which are otherwise intrinsically or potentially unsafe unless such

high standards of compliance are met. Not having to prove fault in the relevant circumstances aims to provide a strong deterrent.

To this extent, and in this context, they are consistent with other safety-focussed regulatory regimes and do not unreasonably or impermissibly limit the presumption of innocence. The offences are designed to achieve the legitimate objective of ensuring the safety and integrity of the aviation industry and the public.

The offences are also proportionate in that they fall at the lower end of the penalty scale, not exceeding 50 penalty units, and are otherwise consistent with the guidance set out in *A Guide to Framing Commonwealth Offences, Infringement Notices and Enforcement Powers*, September 2011.

The strict liability offences in this instrument are considered reasonable, necessary and proportionate to the objective of ensuring aviation safety, and therefore an acceptable limitation on the presumption of innocence.

Reversal of burden of proof provisions

A total of 12 of the strict liability offence provisions impose a reversed burden of evidential proof on the accused. The nature of these provisions can be found in Table 1 below.

The burden of proof has been reversed only to establish a defence to an offence provision, once prosecution discharges the legal and evidential burden of proof in establishing the offence. The burden of adducing or pointing to evidence must only suggest a reasonable possibility that the matter exists or does not exist. This is in accordance with subsection 13(3)(6) of the Criminal Code.

Aim

The aim of CASA and its regulatory framework, including Part 133 is to uphold aviation safety by prescribing the conduct of persons involved in civil aviation operations.

The provisions reversing the burden of proof pursue this aim as they are each attached to a defence to a strict liability offence in circumstances where the defence relates to a safe aviation practice.

Reasonableness, necessity and proportionality

The AGD Guide states that provisions that reverse the evidential burden of proof are permissible for either or both of the following justifications:

- the relevant information or evidence is peculiarly within the knowledge of the defendant;
- it is significantly more difficult and costly for the prosecution to disprove the matter than for the defendant to establish.

Each reversal of onus provision in Part 133 affords a defendant the opportunity to adduce evidence of specific aviation practices, of a kind contemplated by the offence provisions, that are safe despite contravening the general rule in the offence provision.

The table below details each defence provision giving rise to a reversal of the evidential burden of proof, describes the factual matter that is the subject of the reversal of the burden, and sets out the justification for the reversal of the burden.

The factual matters may not be the subject of documentary evidence, for example because they relate to matters of judgement by the defendant, or are matters relating to a particular flight that are subject to actions only. In each case, due to the nature of the information, it is

significantly easier for the defendant to establish the defence as it relates to information within the control of the defendant, and/or is a matter peculiarly within the knowledge of the defendant.

In addition:

- the offence provisions where a defence with the reversed onus is provided carry relatively low penalties, not exceeding 50 penalty units
- the proscribed conduct relates to the safe operation of aircraft or the integrity of the regulatory scheme for the safety of air navigation, and therefore relates to matters that potentially pose a danger to public safety
- CASA expects that in each case the facts in relation to a defence can be readily and inexpensively provided by the defendant.

For example, in item 1 of the table, the matter is that: (1) circumstances prescribed by the Part 133 Manual of Standards exist for the flight in relation to a requirement or limitation in an aircraft flight manual; and (2) the requirement or limitation is of a kind prescribed by the Part 133 Manual of Standards for those circumstances. Whether or not the circumstances in (1) existed in a particular case to justify the action to avoid criminal liability may be unknown to, and not readily ascertainable by, CASA, and would not generally be set out in documentation regulated by CASA. In these circumstances it would be relatively impractical for CASA to disprove all such circumstances. Further, it is a matter of judgment for the defendant, and within the knowledge of the defendant in relation to the particular case.

Similarly, item 3 of the table relates to the recording of information in a location alternate to the passenger list for a flight. Whether or not the information is recorded in another document kept by the operator or is readily available from another source may not be known to, and not readily ascertainable by, CASA. Further, it is within the knowledge of the defendant in relation to the particular case.

In both these examples, due to the nature of the matter and the knowledge of the defendant, the matter will be significantly more difficult and costly for the prosecution to disprove than for the defendant to establish.

Additional justification for some specific provisions is detailed in the table.

Exemptions to offences, and justification of the reversed burden of proof		
Item	Provision description	Justification for reversal of evidential burden of proof
1	Subregulation 133.030(2) provides that subregulation 133.030(1) does not apply to a requirement or limitation in aircraft flight manual instructions if circumstances prescribed by the Part 133 Manual of Standards exist for the flight and the requirement or limitation is of a kind prescribed by the Part 133 Manual of Standards for those circumstances.	Whether or not a particular circumstance exists for a particular requirement or limitation in a case will be peculiarly within the knowledge of the defendant and will be significantly more difficult and costly for the prosecution to disprove than for the defendant to establish.
2	Subregulation 133.075(4) provides that subregulation 133.075(2) does not apply if	Whether the failure to record the information in the journey log

Exemptions to offences, and justification of the reversed burden of proof		
Item	Provision description	Justification for reversal of evidential burden of proof
	the flight is a medical transport operation, the information mentioned in that subregulation is not recorded in the journey log before the flight begins because of the urgent nature of the medical transport operation, the pilot in command is satisfied, when the flight begins, that the failure to record the information in the journey log before the flight begins will not affect the safety of the rotorcraft, and the information is recorded in the journey log as soon as practicable after the flight ends.	before the flight begins will affect the safety of the rotorcraft, in relation to any particular flight, will be peculiarly within the knowledge of the defendant. In that situation it will be significantly more difficult and costly for the prosecution to disprove than for the defendant to establish.
3	Subregulation 133.080(3) provides that subregulation 133.080(1) does not apply to the operator in relation to information required to be included in a passenger list under subregulation (1) if, by the time it is required to be recorded, the information is recorded in another document kept by the operator or is readily available to the operator from another source.	The matter, in relation to any particular flight, will be peculiarly within the knowledge of the defendant and significantly more difficult and costly for the prosecution to disprove than for the defendant to establish.
4	Subregulation 133.110(3) provides that subregulations 133.110(1) and (2) do not apply in relation to an activity during a medical transport operation if the activity is essential to the care of a patient and will not affect the safety of the flight.	Whether an activity is essential to the care of a patient and will not affect the safety of the flight is one of judgement for the defendant, and will be peculiarly within the knowledge of the defendant. In this situation it will be significantly more difficult and costly for the prosecution to disprove than for the defendant to establish.
5	Subregulation 133.135(4) provides subregulation 133.135(1) or (3) does not apply to the operator or the pilot in command in relation to information required to be included in the operational flight plan under that subregulation if, by the time it is recorded, the information is recorded in another document kept by the operator or is readily available to the operator from	The matter, in relation to any particular flight, will be peculiarly within the knowledge of the defendant and significantly more difficult and costly for the prosecution to disprove than for the defendant to establish.

Exemptions to offences, and justification of the reversed burden of proof		
Item	Provision description	Justification for reversal of evidential burden of proof
	another source.	
6	Subregulation 133.140(4) provides subregulation 133.140(1) does not apply if the rotorcraft is carrying sufficient fuel to allow the flight to be continued to the planned destination aerodrome and, if the rotorcraft cannot land at the planned destination aerodrome, the flight can continue to an alternate aerodrome that is suitable in accordance with the operator's exposition.	The matters, in relation to a particular flight, are not the subject of regulatory documentation visible to CASA. They are matters of judgement for the defendant and will be peculiarly within the knowledge of the defendant in relation to any particular flight, and significantly more difficult and costly for the prosecution to disprove than for the defendant to establish.
7	Subregulations 133.165(3) and (4) provide that subregulation 133.165(2) does not apply if either: (1) the pilot in command receives a weather forecast meeting prescribed requirements for the particular flight are met; or (2) the rotorcraft is carrying a prescribed amount of fuel sufficient for the flight.	Whether or not the pilot receives a relevant forecast, and whether the aircraft is carrying sufficient fuel, will be peculiarly within the knowledge of the defendant, and significantly more difficult and costly for the prosecution to disprove than for the defendant to establish.
8	Subregulation 133.220(3) provides that subregulation 133.220(1) does not apply if the flight is a medical transport operation and the emergency exit is obstructed by a stretcher fit-out that is described or identified in a supplemental type certificate (STC) for the rotorcraft.	Whether or not a stretcher fit out is supported by a STC may not be known to CASA in relation to the particular aircraft, since CASA does not regulate the issue of all STCs and there is no regulatory requirement for an operator to inform CASA when they modify an aircraft to incorporate an STC. Accordingly, not only will the matter be peculiarly within the knowledge of the defendant, it is significantly more difficult and costly for the prosecution to disprove than for the defendant to establish.
9	Subregulation 133.230(2) provides that subregulation 133.230(1) does not apply in relation to a passenger with reduced	The suitability of an accompanying passenger is a matter of judgement for a defendant. That matter, and the

Exemptions to offences, and justification of the reversed burden of proof		
Item	Provision description	Justification for reversal of evidential burden of proof
	mobility if the passenger is accompanied or assisted, for the flight, by a suitable person who is seated adjacent to an emergency exit, the suitable person is accompanying or assisting only that passenger for the flight and the suitable person has agreed to assist the rotorcraft's crew with the evacuation of the rotorcraft in an emergency.	agreement of the accompanying person to assist, is peculiarly within the knowledge of the defendant and significantly more difficult and costly for the prosecution to disprove than for the defendant to establish.
10	Subregulation 133.240(2) provides that subregulation 133.240(1) does not apply in relation to a medical patient on a flight that is a medical transport operation.	Whether a passenger was a medical patient on a medical transport operation will be within the knowledge of a defendant and in this context is significantly more difficult and costly for the prosecution to disprove than for the defendant to establish.
11	Subregulation 133.315(2) provides that subregulation 133.315(1) does not apply in relation to a stage of a flight if the flight is a medical transport operation and the stage is either: a take-off or take off and initial climb from a medical transport operating site; an approach and landing or baulked landing at a medical transport operating site; or an external load operation involving winching a person at a medical transport operating site, and the operator complies with procedures in its exposition if the rotorcraft is not flown in a performance class during such a stage.	The matters relevant to the particular operation will be peculiarly within the knowledge of the defendant and significantly more difficult and costly for the prosecution to disprove than for the defendant to establish.
12	Subregulation 133.335(4) provides subregulation 133.335(2) does not apply in relation to the take-off, or the approach and landing or baulked landing stage of a flight if the flight is a medical transport operation, the take-off is conducted from, or the approach and landing or baulked landing is conducted at a place as part of the medical transport operation, and the operator holds an approval under regulation 133.015 in relation to the place and the rotorcraft.	The matters relevant to the particular operation will be peculiarly within the knowledge of the defendant and significantly more difficult and costly for the prosecution to disprove than for the defendant to establish.

Implication on right to presumption of innocence

The provisions reversing the evidential burden of proof are permissible limitations on the presumption of innocence, as they are within reasonable limits which take into account the importance of the objective being sought while maintaining the defendant's right to a defence. They do so in the context of defences to strict liability offences in circumstances where the defence relates to a safe aviation practice. In particular, the burden is only reversed where the matter to be established is peculiarly within the knowledge of the defendant in particular circumstances, and/or the matter is costly for the prosecution to disprove and significantly cheaper for the defendant to establish. In these circumstances, consistent with Attorney-General's Department guidance on the use of provisions of this kind, the provisions are considered a necessary, reasonable and proportionate limitation on the presumption of innocence.

The right to a fair trial and fair hearing: right to an effective remedy

A person affected by certain decisions under the Regulations has rights of merit review in accordance with regulation 201.004 of the CASR, in addition to administrative law rights under the *Administrative Decisions (Judicial Review) Act 1977* (Cth) and general principles of Australian administrative law. As such, the rights of persons under the Regulations are linked to existing mechanisms that promote an individual's right to an effective remedy.

Right to protection against arbitrary and unlawful interference with privacy

Article 17 of the ICCPR provides that no one shall be subjected to arbitrary or unlawful interference with their privacy, family, home or correspondence, or to unlawful attacks on honour and reputation. It further provides that everyone has the right to the protection of the law against such interference or attacks.

Regulation 133.055 prescribes requirements in relation to the availability or carriage of flight crew member medical certificates and flight crew licences for flights, in the circumstances prescribed in the subregulation. The information is required so that documents that demonstrate whether a person is authorised to act as a flight crew member for a Part 133 operation are available for checking by operators for quality assurance purposes and by CASA for safety regulatory purposes.

Regulation 133.060 prescribes requirements in relation to the availability or carriage of documents for certain flights, including information about the name of persons needing special consideration during an evacuation. The information is required so that the interests of the person can be properly managed in an emergency.

Regulation 133.075 prescribes requirements in relation to the keeping of journey logs, including the names or other identifier of each crew member. The information is required so that crew involved in operations can be identified for safety regulatory purposes, and for search and rescue and recovery operations in the event of an incident.

Regulation 133.080 prescribes requirements in relation to the keeping of passenger lists, including the names of passengers. The information is required for search and rescue and recovery operations in the event of an incident, to ensure that each passenger is able to be accounted for.

Regulation 133.355 prescribes requirements in relation to weight and balance documents for aircraft, including the name of the person who prepared the documents. The name is required so that the person can be identified for safety regulatory purposes.

The requirements in the abovementioned regulations involve activities of one or more of the collecting, recording and storing of personal information. For the reasons stated above in relation to each provision, the requirements are reasonable, necessary and proportionate to achieve the fulfilment of specific safety objectives, including the protection of the safety of individuals and the protection of the integrity of the safety regulatory scheme by ensuring that information is available about who is performing activities affecting safety and demonstrating that they are appropriately authorised.

The protections afforded by the *Privacy Act 1988* continue to apply.

To the extent that the Regulations limit the privacy-related rights in Article 17 of the ICCPR, those limitations are reasonable, necessary and proportionate for safety purposes, consistent with the objects of the Act.

Conclusion

This Legislative instrument is compatible with human rights, and to the extent that it may limit human rights, those limitations are reasonable, necessary and proportionate to ensure the safety of aviation operations and to promote the integrity of the aviation safety system.

Details of the *Civil Aviation Safety Amendment (Part 133) Regulations 2018*

Section 1 – Name of Regulations

Section 1 provides that the title of the Regulations is the *Civil Aviation Safety Amendment (Part 133) Regulations 2018*.

Section 2 – Commencement

Section 2 provides for the Regulations to commence on 25 March 2021

Section 3 – Authority

Section 3 provides that the *Civil Aviation Safety Amendment (Part 133) Regulations 2018* is made under the *Civil Aviation Act 1988* (the Act).

Section 4 – Schedules

Section 4 provides that each instrument that is specified in a Schedule to this instrument is amended or repealed as set out in the applicable items in the Schedule concerned, and any other item in a Schedule to this instrument has effect according to its terms.

Schedule 1—Amendments

Civil Aviation Safety Regulations 1998

Item 1—Part 133

This item repeals the existing Part 133 of CASR – Commercial air transport and aerial work operation (rotorcraft). It substitutes a new Part 133 – Australian air transport operations - rotorcraft. Aerial work operations are regulated by Part 138 of CASR – Aerial work operations.

Subpart 133.A—Preliminary

This Part inserts a complete new Part 133.A of CASR inclusive of regulations 133.005 to 133.020. It provides the application, key definitions, approvals processes and empowerment to issue a MOS for Part 133.

Regulation 133.005 states that Part 133 applies in relation to the operation of a rotorcraft for an Australian air transport operation.

Regulation 133.010 – Definition of suitable forced landing area for rotorcraft flights

Areas of ground

Subregulation 133.010(1) provides the requirement for an area of ground to be considered a suitable forced landing area for a flight of a rotorcraft.

Areas of water

Subregulation 133.010(2) provides that, subjecting to meeting the requirements in subregulation 133.010(3), the rotorcraft must meet certain requirements before making a forced landing.

Subregulation 133.010(3) provides the requirements for an area of water to be considered a *suitable forced landing area*. Paragraph 133.010(3)(a) and (b) both refer to an objective standard, the requirements of which must be considered in light of a ‘reasonable expectation’.

Subregulation 133.010(4) provides a non-exhaustive list of factors that affect whether there is a reasonable expectation about matters mentioned in paragraphs 133.010(3)(a) and (b).

Regulation 133.015 – Approval by CASA for Part 133

Regulation 133.015 provides for a person to apply to CASA and the manner in which their application will be considered.

Regulation 133.020 provides for CASA to issue a Manual of Standards for Part 133 (the Part 133 MOS).

Subpart 133.C—General

This Subpart inserts a complete new Subpart 133.C of CASR inclusive of Divisions 133.C.1. to 133.C.6. It prescribes the permitted categories of rotorcraft, operational documents required by operators of rotorcraft, flight-related documents required by operators of rotorcraft, requirements for reporting and recording defects and incidents, requirements for information about search and rescue services and emergency and survival equipment, and other miscellaneous requirements.

Division 133.C.1—General flight limitations

Regulation 133.025 – Permitted categories of rotorcraft

Subregulation 133.025(1) provides the permitted type certification categories of a rotorcraft to be used by an operator to begin a flight.

Subregulation 133.025(2) provides that an offence relating to contravention of subregulation 133.025(1) is an offence of strict liability.

Division 133.C.2—Operational documents

Regulation 133.030 – Compliance with flight manual

Subregulation 133.030(1) provides the circumstances where an operator would contravene the subregulation for failure to comply with aircraft flight manual instructions.

Subregulation 133.030(2) provides the circumstances, prescribed in the Part 133 MOS, where subregulation 133.030(1) does not apply.

Subregulation 133.030(3) provides that an offence to a contravention of subregulation 133.030(1) is an offence of strict liability.

Regulation 133.035 provides the circumstances where a minimum equipment list for the rotorcraft is required. An offence relating to a contravention of this regulation would be an offence of strict liability.

Regulation 133.040 – Availability of checklists

Subregulation 133.040(1) provides for a contravention if the requirement in subregulation 133.040(2) is not met.

Subregulation 133.040(2) provides a requirement for an operator to provide relevant checklists to crew members.

Subregulation 133.040(3) provides that an offence relating to the contravention of subregulation 133.040(1) is an offence of strict liability.

Division 133.C.3—Flight related documents

Regulation 133.045 provides that if a document is required to be carried on the flight by this Division then an electronic copy of the document satisfies that requirement.

Regulation 133.050 – Availability of parts of exposition

Subregulation 133.050(1) provides for a contravention of the subregulation if the operator does not provide prescribed parts of the operator's exposition to crew members.

Subregulation 133.050(2) provides that an offence relating to the contravention of subregulation 133.050(1) is an offence of strict liability.

Regulation 133.055 – Carriage of documents

Subregulation 133.055(1) provides the circumstances in which documents mentioned in this subregulation must be carried, and that it contravenes this subregulation if they fail to carry any of the mentioned documents.

Subregulation 133.055(2) provides the circumstances in which documents mentioned in this subregulation must be carried, and that it contravenes this subregulation if they fail to carry any of the mentioned documents.

Subregulation 133.055(3) provides the circumstances in which documents mentioned in this subregulation must be carried, and that it contravenes this subregulation if they fail to carry any of the mentioned documents.

Subregulation 133.055(4) provides that an offence relating to a contravention of subregulations 133.055(1), (2) and (3) is an offence of strict liability.

Regulation 133.060 – Availability or carriage of documents for certain flights

Subregulation 133.060(1) provides the circumstances in which documents mentioned in subregulation 133.060(4) must be carried, and that the operator and the pilot in command of the rotorcraft contravene this subregulation if they fail to carry any of the mentioned documents.

Subregulation 133.060(2) provides the circumstances in which documents mentioned in subregulation 133.060(4) must be available to the pilot immediately before the flight or

carried on the rotorcraft. Both the operator and pilot in command of a rotorcraft contravene this subregulation if subregulation 133.060(3) is not met when the flight begins.

Subregulation 133.060(3) provides that, in the circumstances in subregulation 133.060(2), the documents required in subregulation 133.060 (4) must be available to the pilot in command immediately before the flight or carried on the rotorcraft.

Subregulation 133.060(4) prescribes the required documents for paragraph 133.060(1)(b) and subregulation 133.060(3).

Subregulation 133.060(5) provides that an offence relating to the contravention of subregulation 133.060(1) or (2) is an offence of strict liability.

These provisions make the operator and PIC jointly responsible for the carriage of certain documents for a flight. The documents provide information to the crew relating to the safe operation of the flight. The requirements would apply to flights conducted under the IFR and the VFR by night. They also apply to flights under the VFR by day that travel further than 50 nm from the point of departure. The required documents include a flight notification, weight and balance information, NOTAMS and AIS briefing (if any), authorised weather forecast (if any) and information on anyone on board who requires any special consideration during the flight or in the event of an evacuation.

It is not a requirement to carry the documents on a flight under the VFR by day that remains within 50 nm of the point of departure. The requirement for such flights is that the documents must be available for use before the flight.

Regulation 133.065 – Carriage of documents – flights that begin or end outside Australian territory

Subregulation 133.065(1) provides the territory in which this regulation applies.

Subregulation 133.065(2) excludes two circumstances for flights which otherwise fall within the scope of subregulation 133.065(1). These flights are exempt from the operation of this regulation.

Subregulation 133.065(3) provides the circumstances, related to the carriage of documents for a flight, in which both the operator and the pilot in command of the rotorcraft contravene this subregulation.

Subregulation 133.065(4) provides that an offence relating to a contravention of subregulation 133.065(3) is an offence of strict liability.

Regulation 133.070 provides the requirements of a rotorcraft operator's exposition for the procedures for keeping of documents of a flight of the rotorcraft and procedures for the updating of information in relation to a flight to a person on the ground, if it meets the circumstances in subparagraphs 133.070(1)(b)(i) to (iv).

Regulation 133.075 – Journey logs

Subregulation 133.075(1) provides that a rotorcraft operator contravenes this subregulation if they have not prepared a journey log for the flight in accordance with the requirements of this subregulation.

Subregulation 133.075(2) provides the conditions where the operator and the pilot in command of a rotorcraft each contravene this subregulation.

Subregulation 133.075(3) provides the pre-flight information which have to be recorded when the flight begins.

Subregulation 133.075(4) provides exemptions from the application of subregulation 133.075(2).

Subregulation 133.075(5) provides that the operator and pilot in command of a rotorcraft each contravene this subregulation unless the requirements of subregulation 133.082(6) are met.

Subregulation 133.075(6) provides the post-flight information which must be recorded as soon as practicable after the flight ended.

Subregulation 133.075(7) provides that an offence relating to a contravention of subregulation 133.075(1), (2), or (5) is an offence of strict liability.

These provisions enhance the safety of flight by requiring a journey log. This is to be provided by the operator and PIC is responsible to ensure the journey log is completed. The journey log is a final check/log of the crew member/s assigned for the flight, the duties assigned to each crew member, the place and time of departure, the place and time of arrival, the fuel on departure and arrival, and a place to record any incidents or observations. The flight summary allows CASA and the operator to monitor flight trends, record flight times and fuel consumption.

Regulation 133.080 – Passenger lists

Subregulation 133.080(1) provides that the operator of a rotorcraft for a passenger transport operation contravenes this subregulation if they do not comply with the requirements relating to passenger lists prescribed in the subregulation.

Subregulation 133.080(2) provides the requirements for passenger lists prescribed for subregulation 133.080(1).

Subregulation 133.080(3) provides circumstances where an operator does not to record the information specified in subregulation 133.080(2) for the purpose of complying with subregulation 133.080(1).

Subregulation 133.080(4) provides that an offence relating to contravention of subregulation 133.080(1) is an offence of strict liability.

These provisions ensure the details of the passengers and crew on a flight are recorded to assist the authorities in the event of an emergency.

Regulation 133.085 – Flight preparation forms for flights that begin or end outside Australian territory

Subregulation 133.085(1) provides the territorial application of regulation 133.085.

Subregulation 133.085(2) provides flights to which this regulation does not apply.

Subregulation 133.085(3) provides that the operator and pilot in command of an rotorcraft each contravene this subregulation if they do not comply with the requirements outlined in the subregulation.

Subregulation 133.085(4) provides the matters which would require signing off by the pilot in command of a flight preparation form.

Subregulation 133.085(5) provides that an offence relating to the contravention of subregulation 133.085(2) is an offence of strict liability.

These provisions require a flight preparation form to be completed and signed by the pilot in command for international flights. This is an ICAO requirement. The form provides a checklist of essential requirements for an international flight. When signed by the pilot in command, it indicates that all requirements on the form have been met and the regulatory requirements for the flight are being complied with. The disapplication in subregulation (2) are for flights to oil and gas facilities which originate in or return to Australian Territory.

Division 133.C.4—Reporting and recording defects and incidents etc.

Regulation 133.090 provides that procedures for the reporting and recording of specified defects and abnormal events by a flight crew member must be included in a rotorcraft operator's exposition.

Regulation 133.095 provides that a rotorcraft operator's exposition must include procedures for the reporting and recording by crew members of matters specified in this regulation.

Division 133.C.5—Search and rescue services and emergency and survival equipment

Regulation 133.100 – Information about search and rescue services

Subregulation 133.100(1) provides the circumstances relating to information about search and rescue services where an operator of a rotorcraft for a flight contravenes this subregulation.

Subregulation 133.100(2) provides that that an offence relating to a contravention of subregulation 133.100(1) is an offence of strict liability.

Regulation 133.105 – Information about emergency and survival equipment

Subregulation 133.105(1) provides the circumstances relating to information about emergency and survival equipment where an operator of a rotorcraft for a flight contravenes this subregulation.

Subregulation 133.105(2) provides that an offence relating to a contravention of subregulation 133.100(1) is an offence of strict liability offence.

Division 133.C.6—Miscellaneous requirements

Regulation 133.110 – Crew activities necessary for safe operation

Subregulation 133.110(1) provides the circumstances where an operator of a rotorcraft for a flight contravenes this subregulation. The circumstances relate to the assignment of tasks to crew members during specified critical phases of flight if the task is not necessary for safety.

Subregulation 133.110(2) provides the circumstances where a crew member for a flight of a rotorcraft contravenes this subregulation. The circumstances relate to the assignment of tasks to crew members during specified critical phases of flight if the task is not necessary for safety.

Subregulation 133.110(3) provides the circumstances where subregulations 133.110(1) and (2) do not apply.

Subregulation 133.110(4) provides that an offence relating to a contravention of subregulation 133.110(1) or (2) is an offence of strict liability.

Regulation 133.115 – Competence of ground support personnel

Subregulations 133.115(1) and (2) together provide requirements that an operator must comply with in relation to the competence of ground support personnel.

Subregulation 133.115(3) provides that contravention of the requirements of subregulation 133.115(1) is an offence of strict liability.

Regulation 133.120 – Crew station authorisation and briefing

Subregulation 133.120(1) provides the circumstances relating to who is permitted to occupy a crew station where the operator and the pilot in command of a rotorcraft each contravene this subregulation.

Subregulation 133.120(2) provides the persons permitted to occupy a crew station in subregulation 133.120(1).

Subregulation 133.120(3) provides the circumstances where the pilot in command of a rotorcraft would contravene this subregulation, relating to the occupation of crew stations by non-crew members.

Subregulation 133.120(4) provides that an offence relating to the contravention of subregulation 133.120(1) or (3) is an offence of strict liability.

Subpart 133.D—Operational procedures

This Subpart prescribes the operational procedures for the operator and pilot in command of the rotorcraft.

Division 133.D.1—Operational control

Regulation 133.125 provides details for matters to be included in a rotorcraft operator's exposition.

Division 133.D.2—Flight preparation

Regulation 133.130 provides the required flight preparation procedures that a rotorcraft operator must include in their exposition. These flight preparation procedures relate to requirements for both weather assessments and alternate aerodromes.

Division 133.D.3—Flight planning

Regulation 133.135 – Operational flight plans

Subregulation 133.135(1) provides the circumstances relating to operational flight plans where the operator and the pilot in command of a rotorcraft for a flight each contravene this subregulation.

Subregulation 133.135(2) provides the requirements of an operational flight plan for subregulation 133.135(1).

Subregulation 133.135(3) provides the circumstances where the operator and the pilot in command of a rotorcraft each contravene this subregulation, to ensure that information prescribed in the Part 133 MOS is recorded in operational flight plans.

Subregulation 133.135(4) provides exemptions for the application of subregulation 133.135(1) and (3).

Subregulation 133.135(5) provides that an offence relating to the contravention of subregulation 133.135(1) or (3) is an offence of strict liability.

Regulation 133.140 – Availability of flight planning information

Subregulation 133.140(1) provides the circumstances where the operator of a rotorcraft contravenes this subregulation if a requirement in subregulation 133.140(2) is not met for the flight.

Subregulation 133.140(2) provides the requirements for specified persons to have access to information relevant to flight operations prescribed in subregulation 133.140(3).

Subregulation 133.140(3) provides the information required to satisfy subregulation 133.140(2).

Subregulation 133.140(4) provides that subregulation 133.140(1) does not apply in relation to the information mentioned in subparagraph 133.140(3)(c)(i) about the planned destination aerodrome if the circumstances in paragraphs 133.140(4)(a), (b) and (c) apply to the flight.

Subregulation 133.140(5) provides that an offence relating to the contravention of subregulation 133.140(1) is an offence of strict liability.

Division 133.D.4—Flight rules

Regulation 133.145 – Take-off and landing minima

Subregulation 133.145(1) provides that the operator's exposition must include procedures for determining take-off minima that meet the requirements mentioned in subregulation 133.145(2) and landing minima mentioned in subregulation 133.145(3).

Subregulation 133.145(2) provides the take-off minima requirements for which the exposition must prescribe procedures.

Subregulation 133.145(3) provides the landing minima requirements for which the exposition must prescribe procedures.

Subregulation 133.145(4) provides the requirements for the operator's exposition for specified circumstances where a rotorcraft conducts an IFR flight to or from an aerodrome that involves visual circling.

Subregulation 133.145(5) provides the circumstances where the operator and pilot in command of a rotorcraft for a flight mentioned in subregulation 133.145(1) or (4) each contravene this subregulation.

Subregulation 133.145(6) provides that an offence relating to the contravention of subregulation 133.145(5) is an offence of strict liability.

Regulation 133.150 – Flights to or from foreign countries that do not use ICAO procedures

Subregulation 133.150(1) provides the application of this regulation.

Subregulation 133.150(2) provides requirements for the rotorcraft operator's exposition relating to instrument approach and departure procedures.

Subregulation 133.150(3) provides the circumstances where the operator of a rotorcraft mentioned in subregulation 133.150(1) contravenes this subregulation.

Subregulation 133.150(4) provides the requirements for each pilot and the conduct of instrument approach and departure for a foreign country's aerodrome.

Subregulation 133.150(5) provides that an offence relating to the contravention of subregulation 133.150(3) is an offence of strict liability.

Regulation 133.155 – Authorised instrument approach procedures not in the AIP

Subregulation 133.155(1) provides the circumstances where the operator of a rotorcraft for an IFR flight contravenes this subregulation for conducting an unauthorised instrument approach procedure.

Subregulation 133.155(2) provides that an offence relating to the contravention of subregulation 133.155(1) is an offence of strict liability.

Regulation 133.160 provides requirements for the rotorcraft operator's exposition relating to each type of low-visibility operation conducted.

Regulation 133.165 – IFR flights without destination alternate aerodromes

Subregulation 133.165(1) provides the rotorcraft flight circumstances in which this regulation applies.

Subregulation 133.165(2) provides the circumstances in which the pilot in command of a rotorcraft for a flight contravenes this subregulation. The provision ensures that sufficient fuel is carried to land at an alternate aerodrome if the weather forecast at the planned destination aerodrome changes during a flight.

Subregulation 133.165(3) provides the circumstances in which subregulation 133.165(2) would not apply.

Subregulation 133.165(4) provides additional circumstances in which subregulation 133.165(2) would not apply

Subregulation 133.165(5) provides that an offence relating to the contravention of subregulation 133.165(2) is an offence of strict liability.

Division 133.D.5—Aerodromes

Regulation 133.170 – Procedures to determine information about aerodromes

Subregulation 133.170(1) provides the requirements for a rotorcraft operator's exposition to include procedures to determine information about the departure, planned and alternate aerodromes.

Subregulation 133.170(2) provides the kinds of information that the procedure determines about the departure, planned and alternate aerodromes. This subregulation does not prescribe the precise information required, rather the kinds of information that the procedure covers.

Regulation 133.175 provides the requirements for a rotorcraft operator's exposition to include procedures for safety at aerodromes.

Division 133.D.6—Fuel requirements

Regulation 133.180 provides that a rotorcraft operator's exposition must include procedures to ensure that a flight of the rotorcraft would be conducted in accordance with the requirements mentioned in subregulation 133.190(1).

Regulation 133.185 – Oil requirements

Subregulation 133.185(1) provides that the operator and the pilot in command of a rotorcraft for a flight each contravene this subregulation if sufficient oil is not carried for the flight.

Subregulation 133.185(2) provides that an offence relating to the contravention of subregulation 133.185(1) is an offence of strict liability.

Regulation 133.190 – Fuel requirements

Subregulation 133.190(1) provides that the Part 133 MOS may prescribe requirements relating to fuel for rotorcraft and includes a non-exhaustive list of requirements.

Subregulations 133.190(2) and (3) respectively require the pilot in command and operator of a rotorcraft to comply with applicable requirements mentioned in subregulation 133.190(1).

Subregulation 133.190(4) provides that an offence relating to the contravention of subregulation 133.190(2) or (3) is an offence of strict liability.

Regulation 133.195 provides that a rotorcraft operator's exposition must include: procedures to ensure that a turbine-engine rotorcraft when being fuelled with highly volatile fuel is being fuelled safely, procedures relating to the safety of passengers for a flight of the rotorcraft during fuelling, and certain statements and procedures if the operator permits the operation of low risk electronic devices in the cabin of the rotorcraft while the rotorcraft is being fuelled.

Division 133.D.7—Passenger transport and medical transport

Regulation 133.200 provides the application of this Division.

Regulation 133.205 – Simulation of emergency or abnormal situations

Subregulation 133.205(1) provides the circumstances where the operator and pilot in command of an rotorcraft each contravenes this subregulation.

Subregulation 133.205(2) provides that an offence relating to the contravention of subregulation 133.205(1) is an offence of strict liability.

This provision is provided for the safety of the rotorcraft and its occupants. The pilot in command must not simulate emergency or abnormal situations in flight.

Regulation 133.210 – Carriage of restricted persons

Subregulation 133.210(1) provides for the detail which a rotorcraft operator's exposition must include regarding the carriage of a restricted person.

Subregulation 133.210(2) provides the additional procedural requirements that an operator's exposition must include if it states that the operator will carry a restricted person on a flight of the rotorcraft.

Regulation 133.215 provides that a rotorcraft operator's exposition must include the prescribed procedures relating to carry-on baggage.

Regulation 133.220 – Obstruction of emergency exits

Subregulation 133.220(1) the operator and pilot in command of a rotorcraft for a flight to ensure that emergency exits are not obstructed.

Subregulation 133.220(2) clarifies that passengers seated in emergency exit rows do not obstruct such exits.

Subregulation 133.220(3) provides the circumstances in which subregulation 133.220(1) does not apply.

Subregulation 133.220(4) provides that an offence relating to the contravention of subregulation 133.220(1) is an offence of strict liability.

Regulation 133.225 – Passengers in seats adjacent to emergency exits

Subregulation 133.225(1) provides for a contravention by the operator of a rotorcraft if the requirement in subregulation 133.225(2) is not met.

Subregulation 133.225(2) provides the requirement for subregulation 133.225(1), which relates to the suitability of occupants in seats adjacent to an emergency exit.

Subregulation 133.225(3) provides the circumstances where the operator of a rotorcraft contravenes this subregulation, relating to the agreement of a person seated adjacent to an emergency exit to assist with evacuation of the aircraft in an emergency.

Subregulation 133.225(4) provides the circumstances where the operator of a rotorcraft contravenes this subregulation. The circumstances require a person, who is assisting another person seated adjacent to an emergency exit, to agree to assist with evacuation of the aircraft in an emergency.

Subregulation 133.225(5) provides that an offence relating to the contravention of subregulation 133.225(1), (3) or (4) is an offence of strict liability.

Regulation 133.230 – Carriage of passengers with reduced mobility

Subregulation 133.230(1) provides the circumstances, related to the seating of persons with reduced mobility, where the operator and the pilot in command of a rotorcraft each contravene this subregulation.

Subregulation 133.230(2) provides circumstances in which subregulation 133.230(1) does not apply.

Subregulation 133.230(3) provides that the operator's exposition must include procedures for informing crew members about any passenger with reduced mobility who is to be carried on the flight.

Subregulation 133.230(4) provides that the operator of a rotorcraft contravenes this subregulation if a procedure established for subregulation 133.230(3) is not complied with.

Subregulation 133.230(5) provides that contravention of subregulation 133.230(1) or (4) is an offence of strict liability, with a maximum penalty of 50 penalty units.

Regulation 133.235 – Safety briefing cards

Subregulation 133.235(1) specify the application of this regulation.

Subregulation 133.235(2) provides the circumstances, relating to the provision of safety briefing cards, where the operator of a rotorcraft would contravene this subregulation.

Subregulation 133.235(3) provide the circumstances, relating to the content of safety briefing cards, where operator of a rotorcraft would contravene this subregulation.

Subregulation 133.235(4) provides the contents of the safety briefing card.

Subregulation 133.235(5) provides that an offence relating to the contravention of subregulation 133.235(2) or (3) is an offence of strict liability.

Regulation 133.240 – Safety briefings, instructions and demonstrations

Subregulation 133.240(1) provides the circumstances where the operator and pilot in command of a rotorcraft for a flight would each contravene this subregulation. The circumstances relate to the provision of safety briefings, instructions and demonstrations that meet prescribed requirement.

Subregulation 133.240(2) provides that subregulation 133.240(1) does not apply in relation to a medical patient on a flight that is a medical transport operation.

Subregulation 133.240(3) provides the circumstances, related to giving irrelevant information in safety briefings, where the operator of a rotorcraft contravenes this subregulation.

Subregulation 133.240(4) provides the circumstances, related to evacuation assistance for persons with reduced mobility, where the operator of a rotorcraft contravenes this subregulation.

Subregulation 133.240(5) provides that contravention of subregulation 133.240(1), (3) or (4) is an offence of strict liability.

Regulation 133.245 – Safety briefing in the event of an emergency

Subregulation 133.245(1) provides that an operator's exposition must include procedures for briefing passengers.

Subregulation 133.245(2) provides an exception to subregulation 133.245(1) for a medical patient.

Division 133.D.8—Instruments, indicators, equipment and systems

Regulation 133.250 – Airborne weather radar equipment

Subregulation 133.250(1) provides the rotorcraft to which this regulation applies. The two scenarios where this regulation applies are where subpart 133.K requires the rotorcraft to be fitted with airborne weather radar equipment, or where the rotorcraft is fitted with airborne weather radar equipment regardless of whether subpart 133.K requires weather radar to be fitted to the rotorcraft.

Subregulation 133.250(2) provides for a rotorcraft operator's exposition to include procedures related to using airborne weather radar equipment, including to ensure that there are procedures for flights if such equipment is fitted to a rotorcraft but is inoperative.

Regulation 133.255 – Head-up displays, enhanced vision systems and synthetic vision systems

Subregulation 133.255(1) provides that this regulation applies to a flight of a rotorcraft if the rotorcraft is fitted with a head-up display, enhanced vision system, a synthetic vision system and the flight is either an IFR flight or a VFR flight at night.

Subregulation 133.255(2) provides for a rotorcraft operator's exposition to include procedures related to using specified kinds of enhanced vision systems, including to ensure that there are procedures for flights using such systems if an element of system is inoperative.

Subregulation 133.255(3) provides that the Part 133 MOS may prescribe requirements for the use of a system mentioned in paragraph (1)(a) for the flight of a rotorcraft.

Subregulation 133.255(4) provides for the operator and the pilot in command of a rotorcraft for a flight to comply with requirements prescribed under subregulation 133.255(3).

Subregulation 133.255(5) provides that an offence relating to the contravention of subregulation 133.255(4) is an offence of strict liability.

Regulation 133.260 – Survival equipment procedures

Subregulation 133.260(1) provides the circumstances in which this regulation applies to the flight of a rotorcraft.

Subregulation 133.260(2) provides that if a rotorcraft is used to conduct a flight to which this regulation applies, the operator's exposition must include procedures for determining survival equipment for the area in or through the flight will be conducted and procedures for determining the pyrotechnic signalling devices required for the flight.

Regulation 133.265 – NVIS flights

Subregulation 133.265(1) provides for the application of this regulation.

Subregulation 133.265(2) provides for a rotorcraft operator's exposition to include to include procedures related to using night vision imaging systems (NVIS), including to ensure that there are procedures for flights using such systems if an element of system is inoperative.

Subregulation 133.265(3) provides requirements the Part 133 Manual of Standards may prescribe in relation to NVIS.

Subregulation 133.265(4) provides for the operator and the pilot in command of a rotorcraft for a flight to comply with requirements prescribed under subregulation 133.265(3).

Subregulation 133.265(5) provides that an offence relating to the contravention of subregulation 133.265(4) is an offence of strict liability.

Regulation 133.270 provides that a rotorcraft operator's exposition must include procedures for identifying and stowing items of moveable equipment.

Division 133.D.9—Miscellaneous

Regulation 133.275 provides the procedures that the operator's exposition must include regarding de-icing and anti-icing measures.

Regulation 133.280 provides that the operator's exposition must include procedures for the operation of portable electronic devices for a flight of a rotorcraft.

Regulation 133.285 provides that the operator's exposition must include procedures for the carriage of animals for a flight of a rotorcraft.

Regulation 133.290 – Polar operations

Subregulation 133.290(1) provides for the application of this regulation.

Subregulation 133.290(2) provides the procedures that a rotorcraft operator's exposition must include relating to rotorcraft operations in polar regions.

Regulation 133.295 – External load operations involving winching a person

Subregulation 133.295(1) provides the circumstances, related to the conduct of external load operations, where the operator and pilot in command of a rotorcraft each contravene this subregulation.

Subregulation 133.295(2) provides that an offence relating to a contravention of subregulation 133.295(1) is an offence of strict liability.

Regulation 133.300 – Minimum height rules for certain operations

Subregulation 133.300(1) provides for the disapplication of regulation 91.320 of CASR in prescribed circumstances.

Subregulation 133.300(2) provides for the disapplication of regulations 91.305, 91.310, 91.315 and 91.320 of CASR in prescribed circumstances.

Subpart 133.F—Performance

This Subpart prescribes the take-off and landing weight regulations and performance class requirements for rotorcraft operations.

Regulation 133.305 – Take-off weights

Subregulation 133.305(1) provides the circumstances, related to exceeding the maximum take-off weight for a rotorcraft, where the operator and pilot in command of the rotorcraft each contravene this subregulation.

Subregulation 133.305(2) provides the matters the Part 133 Manual of Standards may prescribe for this subregulation.

Subregulation 133.305(3) provides for further circumstances and methods that the Part 133 Manual of Standards may prescribe, without limiting what the Part 133 Manual of Standards may prescribe, which relate to the take-off weight of a rotorcraft.

Subregulation 133.305(4) provides that an offence relating to the contravention under subregulation 133.305(1) is an offence of strict liability.

Regulation 133.310 – Landing weights

Subregulation 133.310(1) provides the circumstances, related to exceeding the maximum landing weight for a rotorcraft, where the operator and pilot in command of the rotorcraft each contravene this subregulation.

Subregulation 133.310(2) provides the matters the Part 133 Manual of Standards may prescribe for this subregulation.

Subregulation 133.310(3) provides further circumstances and methods that the Part 133 Manual of Standards may prescribe, without limiting what the Part 133 Manual of Standards may prescribe, which relate to the landing weight of a rotorcraft.

Subregulation 133.310(4) provides that an offence relating to the contravention under subregulation 133.310(1) is an offence of strict liability.

Regulation 133.315 – Flight in a performance class

Subregulation 133.315(1) provides the circumstances, related to ensuring that rotorcraft are operated in a performance class, where the operator and pilot in command of a rotorcraft each contravene this subregulation. The prescription of the different performance classes ensures that rotorcraft are capable of maintaining safe flight in circumstances that are appropriate to the purpose and risks of the flight.

Subregulation 133.315(2) provides exemptions from the operation of subregulation 133.315(1) in relation to conduct of flights in a performance class. For the exemption to apply: the flight has to involve a medical transport operation; the flight must be at one of the three prescribed stages of flight listed in paragraph 133.315(2)(b); the operator's exposition includes procedures that must be complied with if the rotorcraft is not flown in a performance class during such a stage; and the procedures have to be complied with.

Subregulation 133.315(3) provides that an offence relating to a contravention of subregulation 133.315(1) is an offence of strict liability.

Regulation 133.320 – Rotorcraft permitted to fly in performance class 1 or 2 or performance class 2 with exposure

Subregulation 133.320(1) provides the circumstances, related to ensuring that appropriate kinds of rotorcraft are used for flights in specified performance classes, where the operator and pilot in command of a rotorcraft each contravene this subregulation.

Subregulation 133.320(2) provides that, for the purpose of avoiding a contravention of subregulation 133.320(1), the rotorcraft must be of a kind prescribed by the Part 133 MOS. The provision ensures that the kind of rotorcraft is appropriate to the flight risks associated with the relevant performance class.

Subregulation 133.320(3) provides that an offence relating to the contravention of subregulation 133.320(1) is an offence of strict liability.

Regulation 133.325 – Flight in performance class 2 with exposure

Subregulation 133.325(1) provides the circumstances, related to flights in performance class 2 with exposure, where the operator and pilot in command of a rotorcraft each contravene this subregulation.

Subregulation 133.325(2) provides that, for the purpose of avoiding a contravention of subregulation 133.325(1), the rotorcraft must be flown in accordance with a requirement prescribed by the Part 133 MOS for the purposes of this paragraph, and that the operator must hold an approval under issued under regulation 133.015 for the rotorcraft to be flown in performance class 2 with exposure during that stage of the flight.

Subregulation 133.325(3) provides that an offence relating to the contravention of subregulation 133.325(1) is an offence of strict liability.

Regulation 133.330 – Flight in performance class 1 for certain rotorcraft

Subregulation 133.330(1) provides the circumstances, related to conducting flights in performance class 1 if the rotorcraft can carry more than 19 persons, where the operator and pilot in command of a rotorcraft each contravene this subregulation.

Subregulation 133.330(2) provides that an offence relating to the contravention of subregulation 133.330(1) is an offence of strict liability.

Regulation 133.335 – Flight in performance class 1 or 2 or performance class 2 with exposure for certain rotorcraft

Subregulation 133.335(1) provides the circumstances in which this regulation operates.

Subregulation 133.335(2) provides for the operator and pilot in command of a rotorcraft to comply with the requirements of subregulation 133.335(3) in the circumstances in which thus subregulation operate.

Subregulation 133.335(3) provides the requirements, for the purpose of avoiding a contravention of subregulation 133.335(2), for the performance classes that must be used for the different phases of the flight.

Subregulation 133.335(4) provides an exemption to the application of subregulation 133.335(1).

Subregulation 133.335(5) provides that an offence relating to the contravention of subregulation 133.335(2) is an offence of strict liability.

Regulation 133.340 – Flight in performance class 3 over populous areas

Subregulation 133.340(1) provides the circumstances where the operator and pilot in command of a rotorcraft for a flight over a populous area each contravene this subregulation.

Subregulation 133.340(2) provides that an offence relating to the contravention of subregulation 133.340(1) is an offence of strict liability.

Subpart 133.J—Weight and balance

This Subpart prescribes the procedures for loading the rotorcraft and requirements for weight and balance documents for rotorcraft operations.

Regulation 133.345 – Loading of rotorcraft

Subregulation 133.345(1) provides the circumstance, relating to the loading of rotorcraft within the rotorcraft’s weight and balance limits, where the operator and pilot in command each contravene this subregulation.

Subregulation 133.345(2) provides the circumstances, relating to ensuring that rotorcraft stay within weight and balance limits during flight, where the operator and pilot in command each contravene this subregulation.

Subregulation 133.345(3) provides that an offence relating to the contravention of subregulation 133.345(1) or (2) is an offence of strict liability.

Regulation 133.350 provides that a rotorcraft operator’s exposition must include certain procedures for loading and offloading passengers and cargo, including that the procedures for loading the rotorcraft must comply with regulation 133.345.

Regulation 133.355 – Weight and balance documents

Subregulation 133.355(1) provides the circumstances, relating to having weight and balance documents that comply with subregulation 133.355(2), where the operator and pilot in command of a rotorcraft each contravene this subregulation.

Subregulation 133.355(2) provides the information, for the purpose of avoiding a contravention of subregulation 133.355(1), which the weight and balance documents must include.

Subregulation 133.355(3) provides that an offence relating to the contravention of subregulation 133.355(1) is an offence of strict liability.

Subpart 133.K—Instruments, indicators, equipment and systems

This Subpart prescribes the procedures for flight instruments, systems and equipment on a rotorcraft.

Regulation 133.360 – instruments, indicators, equipment and systems-requirements

Subregulation 133.360(1) provides that the Part 133 MOS may prescribe instruments, indicators, items of equipment or systems that must or must not be fitted to or carried on a rotorcraft, and the requirements in relation to an instrument, indicator, item of equipment or system that is fitted to, or carried on, a rotorcraft.

Subregulation 133.360(2) provides the circumstances, related to compliance with paragraphs 133.360(1)(a) and (b) relating to the fitment and non-fitment of instruments etc, where the operator and the pilot in command of a rotorcraft contravene this subregulation.

Subregulation 133.360(3) provides the circumstances, related to compliance with paragraph 133.360(1)(c) relating to requirements for instruments etc, where a crew member of a rotorcraft for a flight contravenes this subregulation.

Subregulation 133.360(4) provides that an offence relating to the contravention of subregulation 133.360(2) or (3) is an offence of strict liability.

Regulation 133.365 provides circumstances where a rotorcraft may begin a flight with an instrument, indicator, item of equipment or system that is inoperative.

Subpart 133.N—Flight crew

This Subpart prescribes the requirements for flight crew positions of a rotorcraft for a flight.

Division 133.N.1—General

Regulation 133.370 – Composition, number, qualifications and training

Subregulation 133.370(1) provides that the operator of a rotorcraft contravenes this subregulation if a requirement mentioned in subregulation 133.370(2) is not met when the flight begins.

Subregulation 133.370(2) provides the circumstances and relevant requirements that an operator of a rotorcraft must comply with, regarding a flight crew's composition, number, qualifications and training.

Subregulation 133.370(3) provides that the rotorcraft operator's exposition must include the kinds of operations for which additional flight crew members must be carried.

Subregulation 133.370(4) provides that the Part 133 MOS may prescribe requirements relating to training and checking that must be completed by a flight crew member for a flight.

Subregulation 133.370(5) provides that a rotorcraft operator's exposition must include the requirements that must be met for new or inexperienced crew members to be assigned to duty for a flight.

Subregulation 133.370(6) provides that an offence relating to the contravention of subregulation 133.370(1) is an offence of strict liability.

Regulation 133.375 – Competence

Subregulation 133.375(1) provides the circumstances, related to the competence of assigned flight crew members, where the operator of a rotorcraft contravenes this subregulation.

Subregulation 133.375(2) provides that an offence relating to the contravention of subregulation 133.375(1) is an offence of strict liability.

Regulation 133.380 – Assignment to duty of pilot in command

Subregulation 133.380(1) provides the circumstances, related to assignment of a flight crew member as pilot in command, where the operator of a rotorcraft contravenes this subregulation.

Subregulation 133.380(2) provides that an offence relating to the contravention of subregulation 133.380(1) is an offence of strict liability.

Regulation 133.385 – Pilot in command

Subregulation 133.385(1) provides when a pilot is qualified as pilot in command of a rotorcraft. A table summarises the type of flight and corresponding flight hours required to qualify as pilot in command.

Subregulation 133.385(2) provides specific requirements that the rotorcraft operator's exposition must include in relation to the minimum flying experience requirements for the operator's flight crew.

Subregulation 133.385(3) clarifies the application of the table in subregulation (1).

Regulation 133.390 – Co-pilot

Subregulation 133.390(1) provides when a pilot is qualified as co-pilot for a flight of a rotorcraft.

Subregulation 133.390(2) provides that a pilot also is qualified as co-pilot for a flight of a rotorcraft if the pilot is qualified under regulation 133.385.

Regulation 133.395 – Pilot in command in non-command pilot's seat

Subregulation 133.395(1) provides the circumstances, related to activities that the pilot in command may only perform in the command pilot's seat, in which the operator of a rotorcraft contravenes this subregulation.

Subregulation 133.395(2) provides the circumstances, related to when the pilot in command may operate a rotorcraft from a non-command pilot seat, in which the pilot in command contravenes this subregulation.

Subregulation 133.395(3) provides that an offence relating to the contravention of subregulation 133.395(1) or (2) is an offence of strict liability.

Regulation 133.400 – Knowledge of route and aerodromes

Subregulation 133.400(1) provides that a rotorcraft operator's exposition must include requirements in relation to the knowledge that a pilot in command must have of the route of the flight, departure and planned destination aerodrome and any alternative aerodrome required for the flight by the flight planning requirements.

Subregulation 133.400(2) provides that the operator of a rotorcraft contravenes this subregulation if the pilot in command did not have knowledge that meets the requirements included in the exposition under subregulation 133.400(1) when the flight began.

Subregulation 133.400(3) provides that an offence relating to the contravention of subregulation 133.400(2) is an offence of strict liability.

Division 133.N.2—Flight crew training - miscellaneous

This Division has been reserved for future use.

Division 133.N.3—Operation of rotorcraft of different types

Regulation 133.410 provides for the application of the Division.

Regulation 133.415 provides that a rotorcraft operator's exposition must include procedures regarding the assignment of flight crew to different multi-engine rotorcraft.

Division 133.N.4—Recent experience

Regulation 133.420 – Recent experience requirements—90 days before flight

Subregulation 133.420(1) provides the circumstances, related to recent experience requirements for pilots, where the operator of a rotorcraft contravenes this subregulation.

Subregulation 133.420(2) provides the circumstances, related to recent experience requirements for pilots, where the pilot of a rotorcraft contravenes this subregulation.

Subregulation 133.420(3) provides the requirements for recent experience for flights by day.

Subregulation 133.420(4) provides the requirements for recent experience for flights by night.

Subregulation 133.420(5) provides that an offence relating to the contravention of subregulation 133.420(1) or (2) is an offence of strict liability.

Subpart 133.P—Crew other than flight crew

This Subpart prescribes the requirements for crew other than flight crew of a rotorcraft.

Division 133.P.1—Cabin crew

Regulation 133.425 – Number, qualification, experience and training

Subregulation 133.425(1) provides the circumstances, related to compliance with requirements for cabin crew in regulation 133.425, where the operator of a rotorcraft contravenes this subregulation.

Subregulation 133.425(2) provides for when a cabin crew member must be carried on the flight.

Subregulation 133.425(3) provides the cabin crew requirements for subregulation 133.425(1).

Subregulation 133.425(4) provides for requirements that the Part 133 Manual of Standards may prescribe in relation to training and checking of cabin crew.

Subregulation 133.425(5) provides that an offence relating to the contravention of subregulation 133.425(1) is an offence of strict liability.

Regulation 133.430 – Competence

Subregulation 133.430(1) provides the circumstances, related to the competence of cabin crew, where the operator of a rotorcraft contravenes this subregulation.

Subregulation 133.430(2) provides that an offence relating to the contravention of subregulation 133.430(1) is an offence of strict liability.

Regulation 133.435 – Minimum age

Subregulation 133.435(1) provides the circumstances, related to the minimum age of cabin crew, where the operator of a rotorcraft contravenes this subregulation.

Subregulation 133.435(2) provides that an offence relating to the contravention of subregulation 133.435(1) is an offence of strict liability.

Regulation 133.440 – English proficiency

Subregulation 133.440(1) provides the circumstances, related to the English language proficiency of cabin crew, where the operator of a rotorcraft contravenes this subregulation.

Subregulation 133.440(2) provides, for the purpose of avoiding a contravention of subregulation 133.440(1), the English language proficiency requirement.

Subregulation 133.440(3) provides that an offence relating to the contravention of subregulation 133.440(1) is an offence of strict liability.

Regulation 133.445 – Assignment to duty as senior cabin crew member

Subregulation 133.445(1) provides the circumstances, related to assignment of a senior cabin crew member for a flight, where the operator of a rotorcraft contravenes this subregulation.

Subregulation 133.445(2) provides that an offence relating to the contravention of subregulation 133.445(1) is an offence of strict liability.

Regulation 133.450 – Training and checking requirements for senior cabin crew member

Subregulation 133.450(1) provides the circumstances, related to the training checking requirements for senior cabin crew members, where the operator of a rotorcraft contravenes this subregulation.

Subregulation 133.450(2) provides that an offence relating to the contravention of subregulation 133.450(1) is an offence of strict liability.

Division 133.P.2—Air crew

Regulation 133.455 – Training and checking

Subregulation 133.455(1) provides the circumstances, related to training and checking requirements for air crew carried on a flight, where the operator of a rotorcraft contravenes this subregulation.

Subregulation 133.455(2) provides requirements that the Part 133 MOS may prescribe for the purpose of avoiding a contravention of subregulation 133.455(1).

Subregulation 133.455(3) provides that an offence relating to the contravention of subregulation 133.455(1) is an offence of strict liability.

Regulation 133.460 – Competence

Subregulation 133.460(1) provides the circumstances, related to the competence of air crew carried on a flight, where the operator of a rotorcraft contravenes this subregulation.

Subregulation 133.460(2) provides that an offence relating to the contravention of subregulation 133.460(1) is an offence of strict liability.

Regulation 133.465 – English proficiency

Subregulation 133.465(1) provides the circumstances where the operator of a rotorcraft contravenes this subregulation.

Subregulation 133.465(2) provides, for the purpose of avoiding a contravention of subregulation 133.465(1), the English language proficiency requirement.

Subregulation 133.465(3) provides that an offence relating to the contravention of subregulation 133.465(1) is an offence of strict liability.

Division 133.P.3—Medical transport specialists

Regulation 133.470 – Training and checking

Subregulation 133.470(1) provides the circumstances, related to the training checking requirements for medical transport specialists carried on a flight, where the operator of a rotorcraft contravenes this subregulation.

Subregulation 133.470(2) provides the requirements that the Part 133 MOS may prescribe for the purpose of avoiding a contravention of subregulation 133.470(1).

Subregulation 133.470(3) provides that an offence relating to the contravention of subregulation 133.470(1) is an offence of strict liability.

Regulation 133.475 – Competence

Subregulation 133.475(1) provides the circumstances, related to the competence of medical transport specialists carried on a flight, where the operator of a rotorcraft contravenes this subregulation.

Subregulation 133.475(2) provides that an offence relating to the contravention of subregulation 133.475(1) is an offence of strict liability.