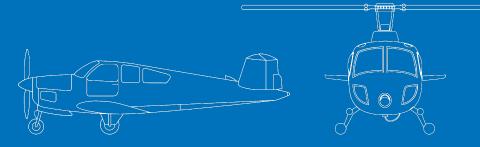


## Aviation Risk Management: Making Safe Aviation Even Safer

## Part 135 Helicopter and Small Aeroplane Operations

Sector Risk Profile

All risks, controls, and actions companion document





## Introduction

The Part 135 Helicopter and Small Aeroplane Operations (SRP) workshops generated an initial list of 92 controls and 146 potential actions that the sector could undertake to strengthen the control environment.

To produce the refined action list, CAA formed an internal panel with subject matter experts to review and refine the risks, causes, controls, and proposed actions. This process resulted in a final list of 47 actions for the sector to initially focus on.

This document provides the full high level list of risks, controls, and possible actions. As the sector works through the first group of risks and actions identified in the main report, where appropriate, new risks will be added as they emerge, or from this list. In addition, sector participants can use this document to apply the risks and action relevant to their own operations, informing their SMS development.

Boxes shaded grey represent initial causes, controls and actions, produced prior to the refined list and the initial focus areas. Although they weren't included on the initial focus list, there may be relevant action items in this list that sector participants can apply to their own operations.

## Contents

Inadequate flight crew competency	. 3
Deficient practices	. 5
Insufficient supervision within an organisation	7
Lack of Operational Awareness	8
Regulator expectation for participants are unclear1	10
Ineffective relationship, including communication and engagement, between the regulator and the sector1	11
Airborne conflict in controlled and uncontrolled airspace1	13
Flying when unfit to fly1	14
Flying non-airworthy aircraft1	16

			Control needs strengthening or		
Ref	Risk	Cause	development	Actions	Who is best to address?
	Inadequate flight crew	Inadequate training and development.	Flight supervisor training course.	CAA will work with the sector to determine the need for, and context of, a flight supervisor course and/or produce relevant and appropriate material for the sector.	САА
	competency			Operators to refine and tailor CAA course for their own unique circumstances, and ensure all supervisors attend training.	Operators
			Operator competency checks.	CAA, Industry Groups and Operators to define what 'good practice' looks like with regards to competency checks.	CAA, Industry Groups and Operators.
			Flight debriefs used to identify issues and further training needs.	CAA to consult with industry group(s) to develop a sector best practice guide for flights as appropriate e.g. training, ICUS and FCCC debriefs (including the format of the debrief and why these are important).	CAA and Industry Group
				Operators to implement flight debriefs for every flight and monitor associated benefits.	Operators
			Training standards and guidelines.	Industry to identify the issues / deficiencies	Operators and CAA.
				Set industry standard	-
4				<i>Review level of training standards and guidelines to ensure these are fit-for-purpose.</i>	
			Greater emphasis on company competence checks	Ensure relevance of content	Operators (with CAA input)
			···· <i>p</i> · · · · · · · · · · · ·	Define competency for content of role-based	-
				Engage with Operator / GA examiners to assist	
		Poor operating culture within the sector and operator.	Adherence to Standard Operating Procedures (SOPs).	Industry group to develop a mechanism for sharing 'best practice' SOPs between Operators.	Industry Groups
				CAA to provide guidelines on the process for developing SOPs, and the associated benefits of the use of SOPs.	CAA
				Operators to develop, continually review and update SOPs tailored to their unique operations.	Operators
			Flight risk assessments	CAA to consult with industry group(s) to develop a sector best practice guide for operational risk assessments [e.g. Flight Risk Assessment Tool] (which includes key items to be included, linkage to SMS, and why these risk assessments are important).	CAA and Industry Groups
				Operators to implement risk assessment and monitor associated benefits.	Operators
			Implementation of SMS.	Operators to submit implementation plan by 30 July 2018 for assessment by CAA.	Operators
				Operators to implement 'present and suitable' SMS prior to their approved SMS certification date.	Operators

			Control needs strengthening or		
Ref	Risk	Cause	development	Actions	Who is best to address?
				CAA to provide support and guidance for participants, including outreach and communications	CAA
			CAA surveillance activity under a performance based environment (SMS) focussed on operator culture.	CAA to develop post SMS surveillance procedures that focus on operator culture.	CAA
		Capacity to cope has been impaired. [NB:	Flight supervisor training course.	Develop coaching/mentoring	CAA, Aviation NZ, Operator
		Some controls and actions have been captured within 'Inadequate training and development' and 'Poor operating culture within		Flying supervision forum.	
			SOP forum for sharing (or develop standard) template.	Operators, Aviation NZ	

			Control needs strengthening or		
Ref	Risk	Cause	development	Actions	Who is best to address?
	Deficient practices	Poor safety culture.		Operators to submit implementation plan by 30 July 2018 for assessment by CAA.	Operators
	practices		Implementation of SMS.	Operators to implement 'present and suitable' SMS prior to their approved SMS certification date.	Operators
				CAA to provide support and guidance for participants, including outreach and communications.	CAA and Industry Training Providers
			Operator senior leadership adopt and promote ongoing safety risk awareness.	CAA to review existing education courses, such as the CAA Aviation Safety Officer course, to ensure these are fit-for- purpose and performance based	САА
				Education courses provided to Operators.	CAA and Industry Training Providers
				Sector meetings (such as NZHA and NZAAA) to continue to be used by industry to engage with CAA.	Operators.
				CAA to consider establishing a Part 135 sector reference group to enhance involvement and engagement with sector participants	CAA
				CAA to take regulatory action as necessary to manage aviation safety risk.	CAA
				Industry to promote importance of safety e.g. through established industry groups.	Operators
2			Collaborative engagement between sector and CAA	Sector meetings (such as NZHA and AAA) will continue to be used by the CAA to engage with the sector.	CAA
				CAA to consider establishing a Section 135 sector group to enhance involvement and engagement with sector participants.	CAA
				Sector secondments into CAA to be explored.	CAA and Operators
				CAA and Operators to consider greater use of Local User Groups.	CAA and Operators
			Operator senior leadership adopt and promote ongoing safety.	CAA Senior Role applications review.	CAA
			State Safety Programme	[No information provided]	[No information provided]
			Role based training	Appoint mentors and role models across the sector	Operators
				Implement role training - theory and practical application.	Operators
		Poor staff retention	Job satisfaction by Sector participants.	Operators to investigate opportunities to increase staff retention across the sector, and agree feasible actions.	Operators
				Pay Aviation leadership courses	Operators (with CAA input)
				Empower Cultural awareness	
				Responsibility	
	1			Nooponoionity	

			Control needs strengthening or		
Ref	Risk	Cause	development	Actions	Who is best to address?
				Trust	
				Opportunity to input to joint decisions	
				Feel valued	
			Recognise desire for career progression	Adaptable model and business	Operators (with CAA input)
				Active career management / paths	
				External programmes (e.g. business)	
				Liaise with training providers (e.g. aeroclubs) and Operators to	
				understand push and pull of resource.	
			Manage the individual	Operative environment – increase permissions as competence improves	Operators
				Set expectations	
				Close relationships/coaching/mentoring	-
				Open communication	-
		Commercial Pressure	Consider financial position as part of surveillance/certification activity.	CAA to review current certification processes and develop a method of gaining assurance that applicants are sufficiently resourced to conduct safe operations	САА
			Consider financial position and minimum weights rule as part of auditing/certification activity.	Application process (barriers to entry)	CAA
			CAA auditing	Focus on adequate resourcing	САА
				Exposition covers all operations in accordance to rules	
			Safety guidance material.	Reprint 'How to charter an aircraft' booklet with section recommending priority on safety profile rather than cost	CAA
				Education of cost / safety parameters to procurement officers	Operators
			Standardised traffic flow	Educate and publicise the radio frequency to be used.	Operators
				Publications to local operators	
				Training / education on radio discipline	
				Education on reporting on actual positions.	

			Control needs strengthening or		
Ref	Risk	Cause	development	Actions	Who is best to address?
KEI	Insufficient	Ineffective transfer of experience	Transparent career pathway by Sector participants.	Operators to create a structured career pathway	Operators
	supervision		Effective communication between and	CAA to review current communications strategy with the sector	CAA
	within an		within regulator and sector.	CAA to implement stakeholder engagement plan	
	organisation		Retain pilots within sector	Bonding of younger pilots.	Operators
			System allowing flow of information in	Career guidance	Operators
			all directions.	Succession plan	
		Inability to attract and retain competent supervisors.	Flight supervisor training course.	CAA will work with the sector to determine the need for, and context of, a flight supervisor course and/or produce relevant and appropriate material for the sector.	CAA
				Operators to refine and tailor CAA course for their own unique circumstances, and ensure all supervisors attend training.	Operators
			Job satisfaction by sector participants.	Operators to investigate opportunities to increase staff retention across the sector, and agree a plan to introduce and retain new high quality staff.	Operators
			Retain competency and experience	Communications	Operators
				Information sharing	
			Proactive, ongoing education.	Keep key people	
•				Robust, competency based training Integrated with regulator training / OLC	Operators
3				Periodic review of training focus	-
_			Adequate resource and appropriate	Better understanding of value of safety	Operators
			culture	CAA need to recognise good behaviour	
				Performance-based oversight	
		Lack of integrity and professionalism		Operators to submit implementation plan by 30 July 2018 for assessment by CAA.	Operators
				Operators to implement 'present and suitable' SMS prior to their approved SMS certification date.	Operators
				CAA to provide support and guidance for participants, including outreach and communications.	CAA and Industry training providers
			Awareness of rules.	Education	Operators
				SOPs	
				Mentoring	
			Pilots as risk managers.	Understanding the risks	- On such as
				Peer reviewed	Operators
			Mentoring	Safety / risk meetings External Advice	Operators
			womoning	Retain competency	
			Turnover management.	Succession planning.	Operators

			Control needs strengthening or		
Ref	Risk	Cause	development	Actions	Who is best to address?
	Lack of	Lack of information sharing across the sector	Sector working groups promote effective collaboration and sharing	Operators and the CAA to advertise existing user groups to encourage wider Sector attendance and participation.	CAA and Operators
	Operational			Operators to establish regional meetings.	Operators
	Awareness			Encourage wider participation in Airways NCLM and Safety Forum.	CAA
			Effective communication between and within regulator and sector.	CAA to review current communications strategy with the sector.	САА
				CAA to consider establishing a Section 135 sector group to enhance involvement and engagement with sector participants	
			Communication of safety issues.	CAA to continue existing publications, including Vector, AIP, NOTHAMS, AICS, GAP booklets.	САА
				CAA to investigate more effective and timely communication or current and relevant safety issues.	
				CAA to review how existing publications are communicated.	-
		Ineffective relationship between operations and management teams	Implementation of SMS	Operators to submit implementation plan by 30 July 2018 for assessment by CAA.	Operators
				Operators to implement 'present and suitable' SMS prior to their approved SMS certification date	Operators
4				CAA to provide support and guidance for participants, including outreach and communications.	CAA and Industry training providers
			Clear definition of roles and	PDs	Operators
			responsibilities.	Exposition defines roles/tasks	
				Monitoring of time allocation.	
			Regular communication	Routine meetings: Weekly telephone and monthly face-to-face	Operators
				Use of technology to communicate	
				Open door policy.	
			Clear indication of performance	Staff performance groups	Operators
				Staff meetings	
			Feeling of worth by staff.	Performance reviews	Operators
				Recognition of good performance.	
		Insufficient time dedicated to operational	Effective delegation and time/workload management skills.	Operators to develop an appropriate resourcing model and delegation framework	Operators
		management		Operators to ensure staff have appropriate skillsets and experience as part of the broader move into the SMS	
				environment, including non technical skills	

Ref	Risk	Cause	Control needs strengthening or development	Actions	Who is best to address?
			Adequate resourcing to support delivery of operational management activities.	Operators to leverage technology to monitor actual operations against safety performance indicators. Operators to review staffing levels	Operators

Ref	Risk	Cause	Control needs strengthening or development	Actions	Who is best to address?
Kei	Regulator expectation for	egulator application and messaging of requirements	CAA core skills training programme	CAA is implementing the Regulatory Craft Programme which will be reviewing the CAA training programme to ensure this is fit-for- purpose. CAA will communicate to the sector the current CAA core skills training programme.	CAA
	participants are unclear		Regular CAA internal auditing	CAA will continue internal audits and improvement tools e.g. use of the PDCA quality too	САА
			Regular feedback received by the CAA from the sector	CAA will continue to consult via the established mechanisms on rules. CAA will continue with ACAG Rule prioritisation, IAP (Issues Assessment Panel), and AC (Advisory Circular) prioritisation	САА
		Lack of guidance Rules not fit-for-purpose	Clear guidance available to the sector which align with rules.	CAA to develop new advisory circulars and notices for areas where clear guidance doesn't currently exist CAA will continue with ACAG Rule prioritisation, IAP (Issues Assessment Panel), and AC (Advisory Circular) prioritisation.	САА
			Communication strategy between CAA and sector.	CAA to develop a framework to communicate available standards and obtain regular feedback on these.	САА
5			Directive communication.	Dedicated industry case manager.	САА
J			Rules communicated to the sector for their awareness.	CAA to develop a framework to communicate available standards and obtain regular feedback on these.	САА
				Rules regularly reviewed and updated to ensure these are fit-for-purpose	CAA will continue with ACAG Rule prioritisation, IAP (Issues Assessment Panel), and AC (Advisory Circular) prioritisation. CAA to develop new advisory circulars and notices for areas where clear guidance doesn't currently exist.
			Timely rule change process.	Change / simplify rule change process.	САА
				Set timeframe	САА
			Regular rule review process.	Consult with industry	
				Establish team	
			Adaguata funding to amond rules	Determine who is best to fund / not to fund	Operators and CAA
			Adequate funding to amend rules.	Funding could equal human resource.	
			Industry consultation.	Forums to determine actual industry needs Secondments from industry	Operators and CAA
				International consultation e.g. ICAO, FAA Test rules / industry review before implementation.	

			Control needs strengthening or		
Ref	Risk	Cause	development	Actions	Who is best to address?
6	Ineffective relationship, including communication	Fear of reprisals	Independent industry body.	CAA to communicate to sector the avenues available for providing feedback, including the Ombudsman CAA to enhance communication around the nature of actions taken (fines, court prosecutions etc.) and the reasons why these were taken, subject to privacy considerations and avoiding prejudicing existing legal processes.	CAA
	and engagement, between the regulator and the sector		Effective communication between and within regulator and sector.	CAA to review current communications strategy with the sector CAA to consider establishing a Section 135 sector group to enhance involvement and engagement with sector participants CAA to enhance communication around the nature of actions taken (fines, court prosecutions etc.) and the reasons why these were taken, subject to privacy considerations and avoiding prejudicing existing legal processes. CAA to share data with regards to regulatory action that results from self-reporting. CAA to share incident data with industry.	CAA and Operators
			Just culture.	CAA to promote and educate the sector on Just Culture, including a rewrite of the Regulatory Operating Model (ROM) and the ROM being made available to industry to promote transparency.	CAA
		Perceived lack of just culture in CAA.	Effective communication between and within regulator and sector.	<ul> <li>CAA to review current communications strategy with the sector</li> <li>CAA to consider establishing a Section 135 sector group to enhance involvement and engagement with sector participants.</li> <li>CAA to enhance communication around the nature of actions taken (fines, court prosecutions etc.) and the reasons why these were taken, subject to privacy consideration and avoiding prejudicing existing legal processes.</li> <li>CAA to confirm that no prosecution action or infringement notice issued as a result of self-reporting.</li> <li>CAA to promote and educate the sector on Just Culture, including a rewrite of the Regulatory Operating Model (ROM) and the ROM being made available to industry to promote transparency.</li> </ul>	CAA and Operators.
			Relationship managers.	CAA to review relationship management as part of the wider communications and stakeholder engagement strategy.	САА
		Ineffective communications approach	Effective communication between and within regulator and sector.	CAA to review current communications strategy with the sector. CAA to consider establishing a Part 135 sector reference group to enhance involvement and engagement with sector participants. CAA and Operators to consider greater use of Local User	CAA and Operators

Ref	Risk	Cause	Control needs strengthening or development	Actions	Who is best to address?
				Groups.	
				CAA to enhance communication around the nature of actions	
				taken (fines, court prosecutions etc.) and the reasons why these	
				were taken, subject to privacy considerations and avoiding	
				prejudicing existing legal processes.	
				CAA to confirm that no prosecution action or infringement	
				notice issued as a result of self-reporting.	
				CAA to share incident data with industry.	
				More visits	САА
				More interaction opportunities.	

Ref	Risk	Cause	Control needs strengthening or development	Actions	Who is best to address?
Rei	Airborne conflict in controlled and uncontrolled airspace	Density of aircraft within confined airspace, and visiting or itinerant pilots not following correct procedures.	Awareness of Local Procedures.	Increase understanding of local procedures especially amongst itinerant pilots through the promulgation of procedures in the AIP, aerodrome websites, pilot briefings, etc. Create MBZs, assign common radio frequencies in the areas of greatest need, and rationalise frequencies to ease radio congestion as part of the regular Airspace Review process. Greater use of aerodrome / airspace local user groups to facilitate change and implementation. Improve RTF discipline e.g. reduce RTF chatter, use of both radios appropriately through education utilising local user groups.	Operators, CAA, and Local User Groups.
		Lack of knowledge and/or understanding by some Unmanned Aircraft Systems (UAS) operators of hazards and rules.	Awareness of rules.	CAA to review current communications strategy with UAS operators, to raise awareness of rules e.g. pamphlets to overseas visitors. CAA to conduct further data analysis to identify UAS use, incidents and near misses.	CAA
7		UAS difficult to see, both visibly and electronically.	Continual review and refinement of UAS rules.	CAA to continually consider and implement development of regulation to reflect changing UAS design and functionality, and align with best international practice.	САА
		The increasing use of Unmanned Aircraft Systems (UAS) and Visual Flight Rules (VFR) flights in uncontrolled airspace, along with the absence of a standardised traffic collision avoidance system (TCAS) and a common frequency for communication of Visual Flight Rules (VFR)/IFR traffic, and ineffective pilot education is leading to a higher likelihood of incidents / accidents and near misses with IFR flights and VFR flights.	Ongoing analysis to assess IFR and VFR related risk	CAA to conduct further ongoing analysis to assess the size of this risk, and develop associated action plan (as required).	САА
		Uncontrolled mass availability to anyone.	Education	Border entry cards which include statistics and pamphlets Local signage	CAA
			Local restrictions.	Risk management approach to permitting drone usage Enforcement of no-drone zones	CAA

			Control needs strengthening or		
Ref	Risk	Cause	development	Actions	Who is best to address?
	Flying when unfit to fly	Commercial pressure to fly.	Consider financial position as part of surveillance/certification activity.	CAA to review current certification processes and develop a method of gaining assurance that applicants are sufficiently resourced to conduct safe operations.	САА
			Implementation of SMS, and CAA certification and surveillance of flight and duty limitations and flight crew rostering.	Operators to submit implementation plan by 30 July 2018 for assessment by CAA.	CAA, Operators and Industry Training Providers
				Operators to implement 'present and suitable' SMS prior to their approved SMS certification date	
				CAA to provide support and guidance for participants, including outreach and communications	
				CAA project to review fatigue management.	
				CAA interim policy on assessment of flight and duty schemes	
8				CAA to develop expertise and tools to effectively and consistently certify flight and duty schemes and audit for compliance.	
				CAA to promote flight crew fatigue management training as part of flight crew training programmes.	
				Operators to adhere to AC119-2 or develop equivalent (and engage a fatigue expert).	
			Just culture.	CAA to promote and educate the sector on Just Culture, including a rewrite of the Regulatory Operating Model (ROM) and the ROM being made available to industry to promote transparency.	CAA
				Operators to adopt Just Culture approach.	Operators
			Limiting operators for particular location.	Sector-wide engagement prior to implementation. Limit number of operators doing a particular activity in a particular location.	CAA
			National standards	Create national standards	Operators and CAA CAA, Operators and Industry Training Providers
				Tamper-proof hobbs meters.	
		Operational demands exceed capability / competence.	Implementation of SMS	Operators to submit implementation plan by 30 July 2018 for assessment by CAA.	
				Operators to implement 'present and suitable' SMS prior to their approved SMS certification date.	
				CAA to provide support and guidance for participants, including outreach and communications.	
			Adherence to Standard Operating Procedures (SOPs).	Operators to develop, and continually review and update, SOPs which are tailored to their unique operations and organisation.	Operators, industry group and CAA.
				This should include operator internal reporting, operator monitoring, and associated management action to address procedural shift.	
				Industry group to develop a mechanism for sharing 'best practice' SOPs between Operators.	
				CAA to provide guidelines on the process for developing SOPs, and the associated benefits of the use of SOPs.	
			Training programme.	Develop more comprehensive training programme.	CAA

			Control needs strengthening or		
Ref	Risk	Cause	development	Actions	Who is best to address?
		Poor physiological	Comprehensive health management	CAA to educate sector that all medical records can be obtained	CAA and Operators
		and/or psychological	framework across the sector.	by the CAA for monitoring purposes.	
		health.		Operators develop peer support and mentoring programme.	
				Operators perform health checks, and day-to-day monitoring	
				CAA investigate 'good practice' fatigue management and develop guidelines for sector	
				Operators to inform their flight crew members about	
				assistance available to them such as Association support, Peer	
				Assistance network and insurance cover	
				MoT 'Clear Heads' initiative	
			Organisational monitoring.	Adequate resources / resourcing model.	Operators
				Organisation refers individuals to expert support (e.g. HIMS)	
		Procedural shift	Adherence to Standard Operating Procedures (SOPs).	Operators to develop, and continually review and update, SOPs which are tailored to their unique operations and organisation. This should include operator internal reporting, operator monitoring, and associated management action to address procedural drift	Operators, industry group and CAA.
				Industry group to develop a mechanism for sharing 'best practice' SOPs between Operators.	-
				CAA to work with examiners to provide external touchpoint.	
			Implementation of SMS	Operators to submit implementation plan by 30 July 2018 for assessment by CAA	CAA, Operators and Industry Training Providers
				Operators to implement 'present and suitable' SMS prior to their approved SMS certification date	
				CAA to provide support and guidance for participants, including outreach and communications.	
		Regulator pressure	Standardisation from CAA and operators.	Toolbox meetings	Operators and CAA.
				Upskilling	
			Communication.	Communicate CAA upskilling to industry	CAA
			Industry groups.	Promote regulator / industry discussions	Operators and CAA.
				Reflect Just Culture	

Ref	Risk	Cause	Control needs strengthening or development	Actions	Who is best to address?
9	Flying non- airworthy aircraft	Ineffective maintenance management	Maintenance course and guidance.	CAA to develop a 'How to become an engineer' booklet, and develop a communication strategy to publish this Maintenance courses are currently available for inspectors	САА
			Asset retirement.	Less conditional maintenance	САА
				Age limit less than 15 years	
		Lack of industry attractiveness.	Workforce management strategy in place.	Maintenance organisations to work with Operators to gradually increase fees for engineers.	Maintenance organisations, CAA and Operators
				CAA increases promotion of maintenance engineering as a career path.	-
		Lack of training and skillsets.	Licenced Aircraft Maintenance Engineer training and apprenticeship programmes.	Sector to develop 'Engineer of the Year' awards Training providers to incorporate Licensed Aircraft Maintenance Engineer into syllabus.	Training providers and Operators.
				Industry to investigate reinstating maintenance apprenticeships.	