



**Kia ora koutou,**



I have a question for you. I'm fairly sure that up until recently, most of you wouldn't have got the answer to this question correct, but I'm hopeful the CAA's efforts to raise awareness of what is a major problem will mean more of you will get it right now than might have a few months ago.

What is the most dangerous occupation in NZ – in terms of worker fatality rate? No, it's not forestry, or construction, or agriculture. Sadly, civil aviation can claim the title and the correct answer is 'commercial helicopter pilot'. Based upon 2011 to 2017 figures, the fatality rate for commercial helicopter pilots (per 1000 workers on an annual basis) is 75 times the national average for all workplaces – compared with 44 times the average for forestry, which is the next worst workplace.

The comparative statistics are provided in more detail below but my focus with these comments is raising awareness of the problem and touching on what we can do about it. New Zealand's rates of work-related harm generally are very poor compared with the countries we normally compare ourselves to. The helicopter sector seems no different to our other workplaces in that regard. Sadly, the high rate of work-related harm in the sector doesn't seem to have a particularly high profile with the public, the media, the customers of helicopter operators or even in the sector itself.

I'm confident that will change. The CAA's efforts to improve helicopter safety will step up considerably in coming months. Many of you will have participated in the work we have recently completed to identify the primary risks in the commercial helicopter and light aeroplane air transport sectors. From that work, the management of risk will clearly be a focus in the helicopter sector.

If we are to be successful in improving the safety performance of the sector, a wide range of parties will need to work collaboratively. At an absolute minimum this will require buy-in and cooperation by helicopter operators, their workers, their worker's representative bodies, the organisations contracting helicopter operators, and the CAA. We are already engaged in discussions aimed at developing a framework for some of these groups to work together toward a common objective. Expect to see much more on this issue in coming months.

In this briefing we continue our series on Just Culture. In large part this is aimed at ensuring we all have a common understanding of exactly what Just Culture is, providing a common language and explaining how the CAA applies the concept.

Finally, I'm well aware we're moving into the busiest time of the year for the aviation sector. Recreational fliers will be taking advantage of the good (hopefully) weather; the commercial GA sector will be carrying lots of holiday-makers, and the airlines will be doing the same. Some staff of the Authority will soon be taking a well-earned break while others will be working long hours every day of the holidays at our five security-designated airports. My thanks go to all those working through the holiday period providing essential services, and I wish everyone an enjoyable and safe Christmas/New Year period.

Don't forget to let us know if you have a particular topic you would like us to cover in the briefing. Contact us at [briefing@caa.govt.nz](mailto:briefing@caa.govt.nz).

Ngā manaakitanga  
*Graeme Harris, CE and Director of Civil Aviation*

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## Just Culture – what it means to CAA

In the last CAA Briefing, we provided an overview of Just Culture, including the benefits flowing from adopting this approach and how it can be incorporated within our aviation system.

James Reason described a Just Culture as “an atmosphere of trust in which people are encouraged, and even rewarded, for providing essential safety-related information, but in which they are also clear about where the line must be drawn between acceptable and unacceptable behaviour.” More recent definitions build on this to incorporate that actions must be judged with the full knowledge and understanding of the context of the environment and systems in place.



For more information on our approach, see [Just Culture – what it means to CAA](#).

I welcome your feedback on the CAA's application of Just Culture. Also, I invite participants to share their experience of Just Culture within their own organisation, which could be used as an example for others to learn from to improve overall aviation system safety in New Zealand.

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## TAIC recommendation

The Transport Accident Investigation Commission (the Commission) has been inquiring into the accident involving the MDHI (Hughes) 369D registration ZK-HOJ at Wanaka on 18 October 2018. The Commission has finalised the following recommendation to address the safety issues arising from the accident:

*There have been three recent incidents involving the doors on this helicopter opening in flight that were not notified. It is important that incidents such as these are notified and investigated, and actions taken to prevent further accidents and incidents.*

*On 13 December 2018 the Commission recommended that the Director of Civil Aviation*

*urgently remind aviation participants of the importance of incident notification in accordance with Part 12 of the Civil Aviation Rules.*

The primary requirement in section 26 of the Civil Aviation Act to report incidents and accidents, expanded in Part 12, exists for a number of very good reasons. In part it is to ensure that incidents are assessed and, if appropriate, investigated by the Commission<sup>1</sup>, CAA, or the operator involved. In part it is to obtain the safety benefits of aggregated incident information from all aviation operators in NZ. A clear objective is to provide an opportunity for failures, identified in incidents, to be rectified given that in different circumstances they may result in an accident.

For this reason, improving incident reporting, particularly from the General Aviation community, is a priority for the CAA. There is a link here with the previous article on Just Culture. The CAA policy with respect to incident reporting is:

*If an aviation participant reports their involvement in an incident or Rules omission/breach in a complete, accurate, and timely fashion the CAA will apply just culture principles in its response. Where there's no self-reporting or there is evidence of repeated at-risk behaviours or recklessness, then the protections of Just Culture will not apply.*

Take advantage of that offer. If you report fully, frankly and in a timely manner then you will get the protection on offer. Your information may save a life.

<sup>1</sup> The CAA passes all reports to the Commission

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## Commercial helicopter workplace fatality rates

Workplace fatal injury statistics are published by WorkSafe. As part of a combined presentation given at the Aviation NZ conference in July, we updated the worker fatality statistics on commercial aviation operations. The data, which excludes passenger fatalities, is presented in the table below:

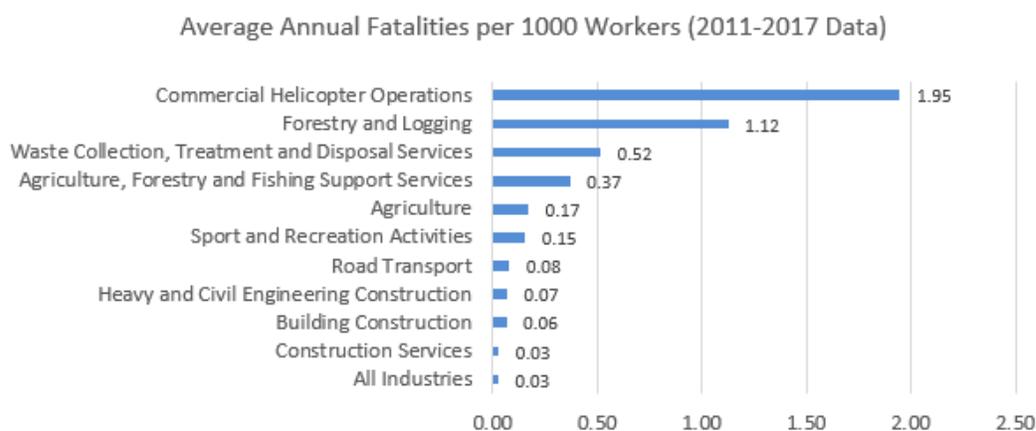


<b>Commercial Fatal Accidents 2010 - 2018</b>					
Operation Category	Aeroplane	Balloon	Helicopter	Parachute	Total
Commercial Fatal Accidents	6	1	16	2	25
Commercial % of Total	24%	4%	64%	8%	
Commercial Fatal Injuries - Employees	11	1	16	1	29
Commercial % of Total	38%	3%	55%	3%	

Commercial helicopter operations are over-represented in the total. Comparing these statistics against workplace fatalities in other sectors finds helicopter operations rank eighth overall:

Workplace Fatal Injuries by Sector 2010-2018	
Sector	Total
Agriculture	90
Agriculture, Forestry and Fishing Support Services	56
Forestry and Logging	42
Sport and Recreation Activities	34
Coal Mining	29
Construction Services	21
Road Transport	21
Helicopter Workplace Fatal Injuries - Commercial Employees Only	16
Heavy and Civil Engineering Construction	14
Building Construction	13

Where the numbers become more striking is when fatal accident rates are considered. WorkSafe measures sector safety by rates based on the size of the workforce in each sector. The chart below presents these statistics by sector, based on aggregated data on annual fatalities and workforce size from 2011-2017. At 1.95 deaths annually per 1000 workers, the commercial helicopter sector's workplace fatality rate per 1000 workers is New Zealand's highest, 75 times higher than the national average. The next highest is forestry with a rate of 1.12 annual deaths, 44 times the national average:

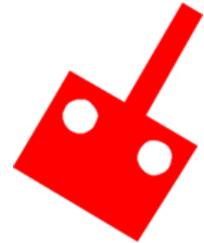


This is not a new problem. In 2001, the New Zealand Medical Journal published the results of the Work-Related Fatal Injury Study based on data from 1985-1994, including rates for different occupational groups. The authors commented that: *“Most strikingly, commercial pilots and related workers, particularly agricultural pilots and helicopter pilots, had the highest rates of fatal injury, with rates 27 to 210 times that of the population overall”*.

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## Danger areas used for model aircraft flying

A number of danger areas exist around the country to facilitate model aircraft operations. Civil Aviation Rule Part 91.129(b) states that a pilot must not operate an aircraft within a danger area designated under Part 71 unless that pilot has determined the activity associated with the danger area will not affect the safety of the aircraft. From occurrence investigations it appears that a number of pilots are under the impression that within these areas, model aircraft are still required to operate below 400 feet in accordance with Part 101, so it is safe to transit through the danger area above that height. Pilots are reminded that rule 101.207 enables a model aircraft to be operated above 400 feet (and up to the limit of the designated area) when operated in a danger area designated for that purpose under Part 71.



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## ADS-B: what you need to know

As part of the New Southern Sky Programme, it is proposed that New Zealand will be moving to ADS-B OUT surveillance as the current secondary radar is removed from service.



Automatic Dependent Surveillance-Broadcast (ADS-B), an advanced satellite-based system, will replace New Zealand's ageing radar surveillance technology over the next few years. ADS-B will make you more visible – it will give other aircraft and air traffic control more accurate information about where you are in the air.

As part of this proposal, all aircraft will need to be equipped with ADS-B OUT by the 31 December 2021. The CAA has launched an [ADS-B website](#) that provides information on what is required if you are considering upgrading your aircraft.



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