CIVIL AVIATION AUTHORITY
OF NEW ZEALAND

Aviation Safety Summary

1 April to 30 June 2013

Autumn 2013

Introduction to the Quarterly Safety Summary Report

Welcome to the CAA's quarterly safety summary report for the Autumn of 2013. The report is presented in four sections, providing more detailed information as you progress through the report.

Section 1 - Social Cost and Accidents

Section 1 presents the social cost of accidents that occurred in this quarter. Pages 3-4 can be read as the overall safety outcome. The pages immediately following provide trend information to put this quarter's results into context.

Note about Social Cost

Social cost is a way of measuring safety performance by accounting for the number of accidents as well as the number and severity of casualties. The values used to estimate cost to the nation of fatal, serious and minor injuries are obtained from the annual report of the 'Social Cost of Road Crashes and Injuries' published by the Ministry of Transport. The Ministry of Transport has directed its agencies to use social cost to permit comparisons between transport modes. The current value of a statistical life is $3.8 million. Estimates of the values of aircraft destroyed or written off are made by the CAA on the basis of market prices in a number of developed aviation nations.

Section 2 - Incidents

Section 2 provides a summary of other safety data. Incidents are potentially unsafe events, that did not become accidents. They give some sense of the risks that are being managed within the sectors. A principal difference between Sections 1 and 2 is that Section 1 presents the data by Safety Target Group (type of operation) and Section 2 presents them by Aircraft Statistics Category (type of aircraft).

Section 3 - Activity

Section 3 provides statistical information on the activity levels within the 13 Safety Target Groups (types of operation). The activity data underpins the rate data in earlier sections.

Section 4 - Quarterly Statistics

Section 4 provides key statistics in a table format for this quarter along with the previous 11 quarters. In effect this table presents key statistics for the last three years.

This report is necessarily a summary of the information held by the CAA, for a more detailed analysis of a given area or other safety related information, enquires can be directed to the email below.

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Cover photo: RV7A, courtesy of Gavin Conroy

Introduction

Summary

Executive Summary - Aviation Safety to 30 June 2013

- There were a total of 29 accidents in the April to June quarter. There were no fatal, 5 serious, and 8 minor injuries in these accidents. Social cost in this quarter has accrued from accidents and injury incidents in the following safety target groups:
  - Airline Operations - Large Aeroplanes 2 minor injuries
  - Sport Transport (Part 115) Operations 1 Serious Injury
  - Other Commercial Operations - Aeroplanes 3 minor injuries
  - Other Commercial Operations - Helicopters 2 minor injuries and 1 aircraft destroyed
  - Agricultural Operations - Aeroplanes 1 minor injury
  - Private Operations - Helicopters 4 serious injuries
  - Private Operations - Sport 1 aircraft destroyed

  Some accidents in the safety target groups above and accidents in other safety target groups were not serious enough to contribute to the social cost outcome this quarter (no injuries or aircraft destroyed), see page 4.
- The Annual Social Cost is now $77 million (three year average). The social cost has been trending upwards and in the last four years has increased by 43% from $53M to $77M, see page 6.
- While the overall accident rate is trending marginally downwards, there are upward trends in 'Airline Operations - Medium Aeroplanes', 'Private Operations – Helicopters' and 'Other Commercial Operations - Helicopters'.
- Large Aeroplanes are showing an upward trend in the number of defects reported per flying hour, see page 10.
- Aircraft incident rates are decreasing for Large Aeroplanes, Small Aeroplanes, Helicopters and Agricultural Aeroplanes, see page 11.
- Airspace occurrence rates are decreasing for Large Aeroplanes, see page 12.
- The total number of hours flown is increasing slightly, however the total number of air transport flights and the number of movements from certificated aerodromes are continuing to decrease, see pages 15, 16 and 17.
- The total number of aircraft on the register is increasing, up 1.6% over the same time last year. There were increases in the numbers of helicopters, sport aircraft, medium aeroplanes and small aeroplanes, while agricultural aeroplanes and large aeroplanes decreased slightly, see page 18.

Section 1 - Social Cost and Accidents

Social Cost Quarterly Safety Outcome

The following table displays the social cost contribution from injuries and aircraft losses for each of the safety target groups for the quarter 1 April to 30 June 2013. The table also shows the number of accidents in this quarter.

Legend:

† Fatal Injuries	Serious Injuries	Minor Injuries	Aircraft Destroyed	Accidents

		Social Cost	†	Serious	Minor	Aircraft	Accidents
Total Safety Cost $2.49 m	Public Air Transport $0.43 m	Airline Operations - Large Aeroplanes	$0.03 m	0	0	2	0	0
		Airline Operations - Medium Aeroplanes	$0.00 m	0	0	0	0	0
		Airline Operations - Small Aeroplanes	$0.00 m	0	0	0	0	0
		Airline Operations - Helicopters	$0.00 m	0	0	0	0	1
		Sport Transport	$0.40 m	0	1	0	0	2
	Other Commercial Operations $0.41 m	Other Commercial Operations - Aeroplanes	$0.05 m	0	0	3	0	3
		Other Commercial Operations - Helicopters	$0.35 m	0	0	2	1	3
		Agricultural Operations - Aeroplanes	$0.02 m	0	0	1	0	3
		Agricultural Operations - Helicopters	$0.00 m	0	0	0	0	1
		Agricultural Operations - Sport	$0.00 m	0	0	0	0	0
	Non Commercial Operations $1.65 m	Private Operations - Aeroplanes	$0.00 m	0	0	0	0	2
		Private Operations - Helicopters	$1.59 m	0	0	0	0	3
		Private Operations - Sport	$0.06 m	0	4	0	1	11

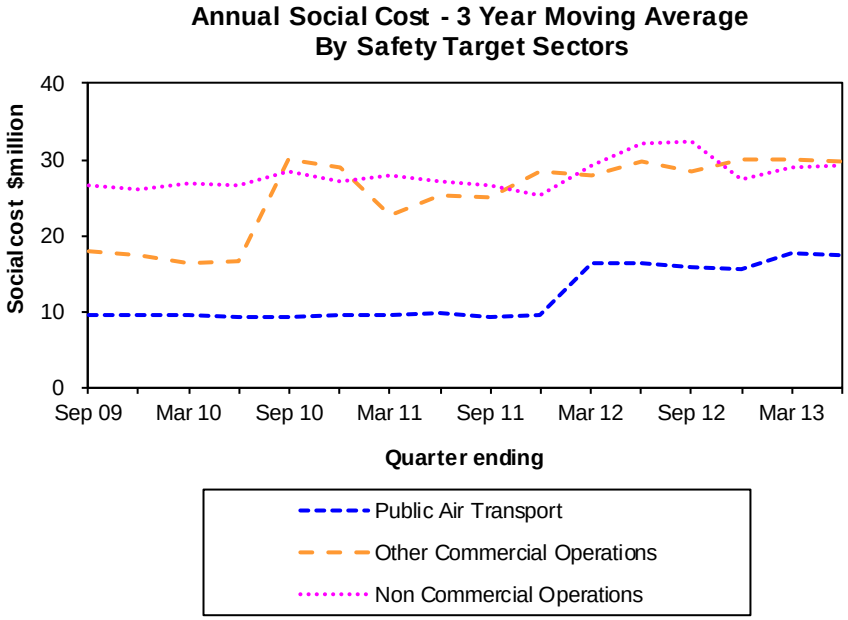
Notes:

1. Individual values in the table may not sum exactly to the subtotals or total shown due to rounding.
2. Sport groups include hang gliders and parachutes.
3. An explanation of the 2014 Safety Target Groups is provided by the diagram in the Definitions section.
4. Social cost is the cost of fatal, serious and minor injuries, and aircraft destroyed, expressed in 2012 dollars.

Section 1

Social Cost Trends

To provide context to this quarter's social cost outcome, the following graph shows the annual social cost (three year moving average) for the four-year period 1 July 2009 to 30 June 2013, (including the Sport Safety Target Groups).



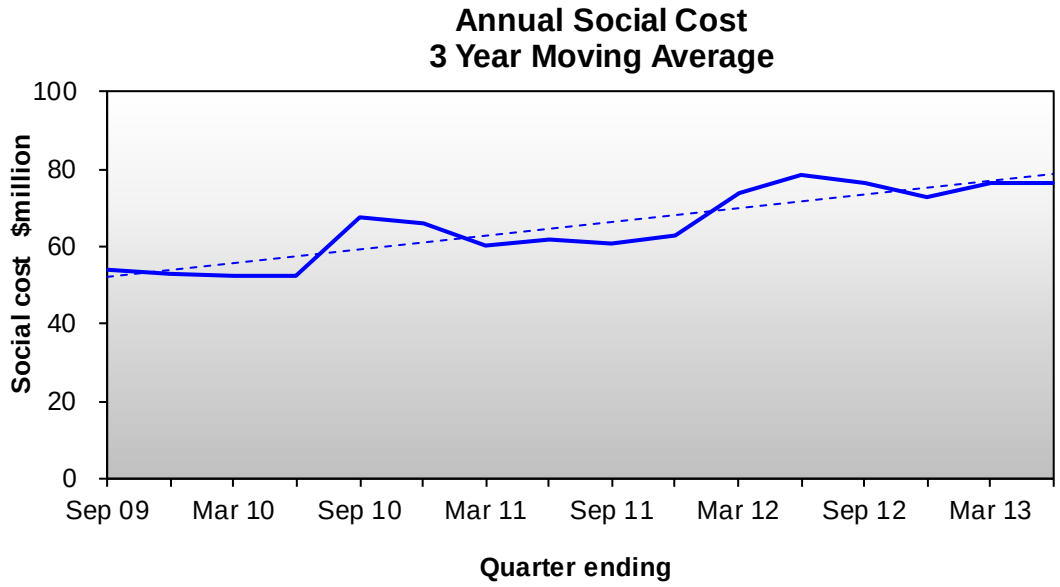
Social Cost Analysis

The graph above shows the social cost of each safety target sector averaged over three years. This has the effect of smoothing out the curve which would otherwise fluctuate abruptly. However in this quarter it obscures the fact that there were **no fatalities**, and the only serious injuries occurred in paraglider accidents.

The only group to generate a significant social cost in this quarter was the 'Private – Helicopter' group which contributed $1.59 million of the quarterly total of $2.49 million via 3 accidents, all without significant injury. 2 of these accidents involved unattended helicopters that became airborne and were substantially damaged, and the third helicopter struck its tail rotor on the ground while mustering stock (owned by the helicopter operator hence 'private' operation classification). For most other sectors it was an unusually successful quarter, with no fatalities or serious injuries.

The reduction in fatalities or serious injuries this quarter has contributed to a slight lessening in the upward trend of the 3 yearly average annual social cost (see next page) . The average annual social cost now sits at $77M, an increase of 43% from $53M in 2009.

While the two significant accidents in the 'Public Air Transport' and 'Other Commercial' have contributed to the rise, the increase in the 3 year average is being sustained by accidents in the 'Other Commercial' sector through 2011 and 2012. The 'Other Commercial' sector is now the leading contributor to annual social cost (3 year average), slightly ahead of the entire 'Non-commercial' sector. While the 'Non-commercial' sector contains the largest number of individual participants, (at least 2500 aircraft), they undertake far fewer flying hours than the 'Other Commercial' sector. The 'Other Commercial' sector, which includes agricultural operations, comprises approximatley 200 organisations operating 735 aircraft.



Accidents by Safety Target Group

Quarterly Comparison

Safety Target Group	1 Apr to 30 Jun 2013	Same Quarter Last Year
Airline Operations - Large Aeroplanes	0	0
Airline Operations - Medium Aeroplanes	0	0
Airline Operations - Small Aeroplanes	0	0
Airline Operations - Helicopter	**1**	**1**
Sport Transport	**2**	**2**
Other Commercial Operations - Aeroplane	**3**	**1**
Other Commercial Operations - Helicopter	**3**	**1**
Agricultural Operations - Aeroplane	**3**	**2**
Agricultural Operations - Helicopter	**1**	**3**
Agricultural Operations - Sport Aircraft	0	0
Private Operations - Aeroplane	**2**	**2**
Private Operations - Helicopter	**3**	0
Private Operations - Sport	**11**	**11**
Other	0	0
Total	**29**	**23**

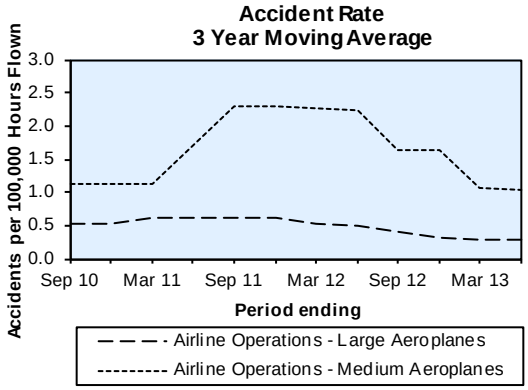
Comment

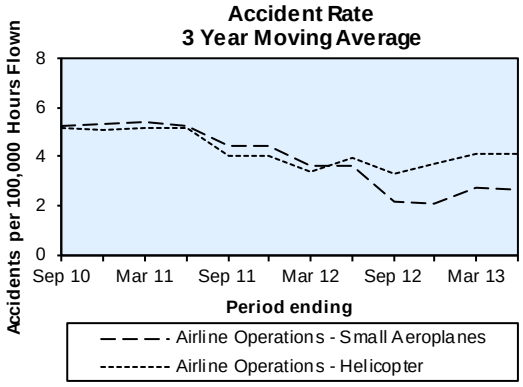
The overall number of accidents has increased by 26% in comparison to the autumn quarter last year, note the increases in the 'Other Commercial Operations - Aeroplane', 'Other Commercial Operations – Helicopter', 'Agricultural Operations - Aeroplane', and 'Private Operations Helicopter –safety target groups. Note this contradicts the overall social which is very low this quarter, implying more accidents but with less serious outcomes.

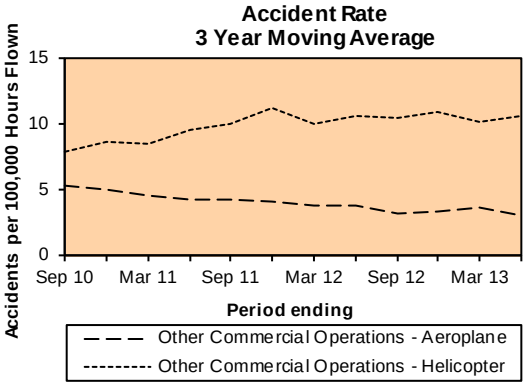
Section 1

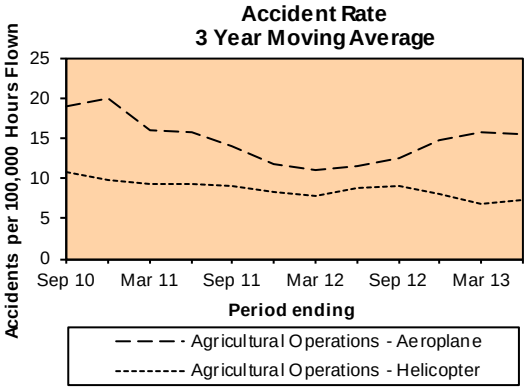
Trends

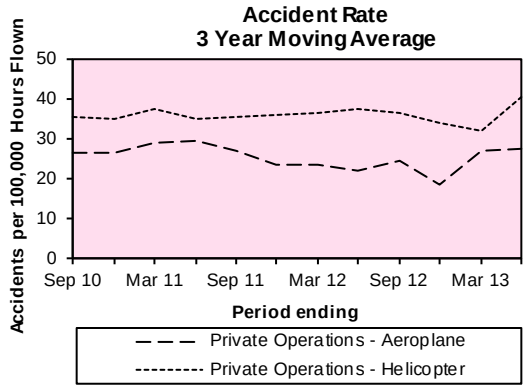
The following graphs show the aircraft accident rates (three year moving average) for the three-year period 1 July 2010 to 30 June 2013 (excluding the Sport Safety Target Groups, for which no accurate activity information is available).











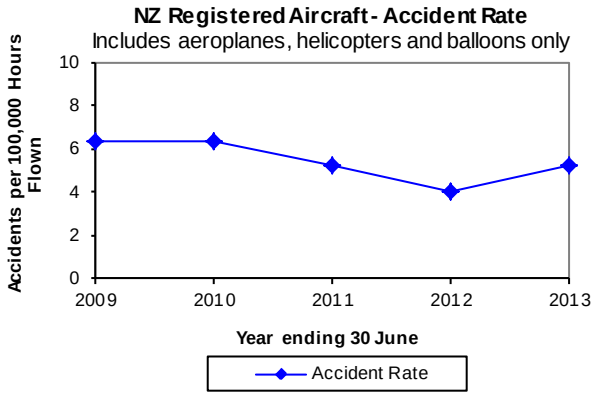
No accident rate information available for Sport Transport or Private Operations - Sport.

Sport Transport (Part 115) data not available for this period but may be provided from a future period.

Activity data is not provided by all aircraft classes in the Private Operations - Sport group (private amateur built aircraft, microlights, gliders, hang gliders and parachutes do not provide activity reports).

Overall Accident Rate

The following graph shows the overall accident rate per 100,000 hours flown. This data includes the aircraft classes aeroplane, helicopter and balloon only. Other aircraft classes such as amateur built aircraft, microlights, gliders, hang gliders and parachutes are excluded from this rate information. Data shown is for the five-year period 1 July 2008 to 30 June 2013.



Note that this graph does not show a moving average.

Summary of Injury Accidents

This section describes injury accidents that occurred during the period 1 April to 30 June 2013, these accidents contributed to the social cost for the quarter.

Airline Operations - Large Aeroplanes

- An Airbus A320 encountered unexpected turbulence just after top of descent and a passenger suffered a minor injury when their leg was burnt when a tea pot fell from a cart. Water was applied and the passenger taken to hospital on arrival.
- A Boeing 737 change table failed with a baby on it, causing the baby to fall and hit their head. The injury was minor..

Sport Transport

- A Cessna 182 on late final experienced engine power loss. The aircraft was low and would not be able to clear trees at threshold of runway so a right turn of 40 degrees was made towards a row of lower, less dense trees. The aircraft impacted the trees, with the pilot receiving minor injuries. The aircraft was destroyed and written off.
- A student skydiver had a hard landing and suffered a dislocated and fractured ankle. The injury was classified as serious.

Other Commercial Operations –Aeroplane

- A Piper PA-38-112 conducted a precautionary landing on a beach due to deteriorating visibility. During the landing roll the aircraft overturned, coming to rest on its back. The pilot suffered a minor injury

Summary of Injury Accidents continues on next page

Summary of Injury Accidents continued

Other Commercial Operations –Helicopter

- A Schweitzer 269C-1 Pilot cut their finger on a split pin when moving their hand to apply collective friction, requiring them to shut down the helicopter to apply first aid. The injury was minor.
- A Robinson R22 Beta Instructor exited the aircraft to allow the student to conduct a solo hover flight. Entering the hover the helicopter's nose dropped slightly, with the helicopter then moving abruptly rearwards in response. The port skid dug into the ground resulting in a dynamic roll-over. The student suffered a minor injury and the helicopter was substantially damaged.

Agricultural Operations - Aeroplane

- A NZ Aerospace FU24-954 Pilot felt a "pop" from the left brake on landing, with the failure resulting in them being unable to correct a swing to the right. The aircraft left the runway and struck an embankment, damaging the propeller, engine firewall, and collapsing the nose gear. The pilot suffered a minor injury and the aircraft damage was substantial but repairable.

Private Operations - Sport

- A paraglider stalled near a cliff and the pilot fell approximately 100 feet and suffered a serious injury.
- A sport paraglider stalled due to the pilot applying excessive brake when encountering rotor conditions. The pilot held the sink until low enough to flare, but landed heavily, fracturing a vertebra and spraining an ankle. The injury was classified as serious.
- A paraglider encountered local turbulence which resulted in the frontal collapse of the canopy. The paraglider made a 180 degree turn and hit some trees. The pilot was seriously injured.
- A paraglider wing experienced a full frontal collapse while turning away from a hill to find thermal activity. As the glider descended and turned back towards the hill the pilot's arm was broken on contact with a branch. The pilot and the glider fell through the canopy and struck the ground with no further injuries. The injury was classified as serious.

Other

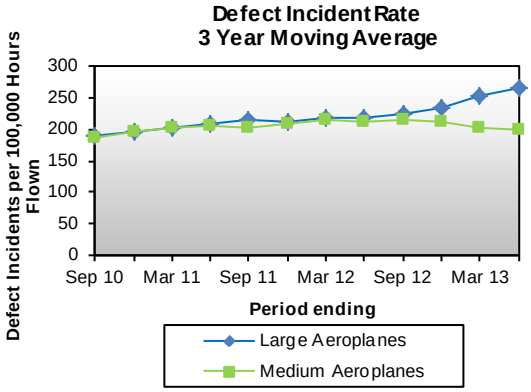
- A PT-6 powered FU24 conducting an agricultural operation in Indonesia crashed shortly after takeoff, fatally injuring the pilot.

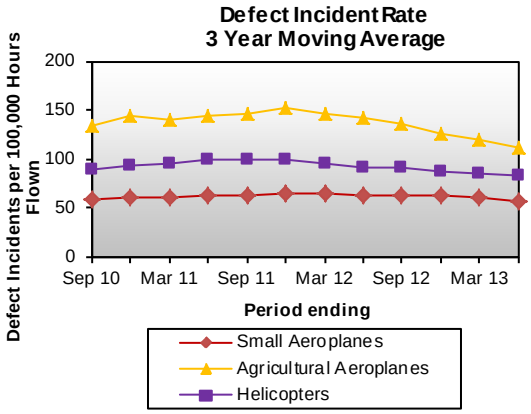
Section 2 - Incidents

Defect Incidents by Aircraft Statistics Category

Trends

The following graphs show the reported defect incident rates (three year moving average) for the three-year period 1 July 2010 to 30 June 2013 (excluding the Sport Aircraft statistics category).





Quarterly Comparison

Number of Reported Defect Incidents

Aircraft Statistics Category	1 Apr to 30 Jun 2013	Same Quarter Last Year
Large Aeroplanes	316	192
Medium Aeroplanes	21	27
Small Aeroplanes	37	35
Agricultural Aeroplanes	5	5
Helicopters	37	34
Sport Aircraft	5	13
Unknown Aircraft	6	7
Total	**427**	**313**

Severity of Reported Defect Incidents

Severity	1 Apr to 30 Jun 2013	Same Quarter Last Year
Critical	0	1
Major	71	62
Minor	356	250

The critical defect incident reported in the 1 April to 30 June 2013 quarter was in the 'Small Aeroplanes' statistics category.

Rate Monitoring

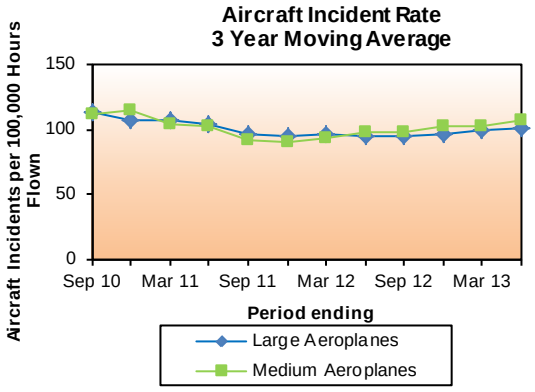
Defect incident rate monitoring of individual types of large and medium air transport aeroplanes has been estimated for the period ended 30 June 2012, due to a shortage of returned Aircraft Operations Statistics for some of these aircraft. Despite this, large aeroplanes are continuing to show an upward trend in the number of defects reported per flying hour. Medium and large aeroplane categories include all aircraft with more than 10 passenger seats, operated under CAR Part 125 or 121.

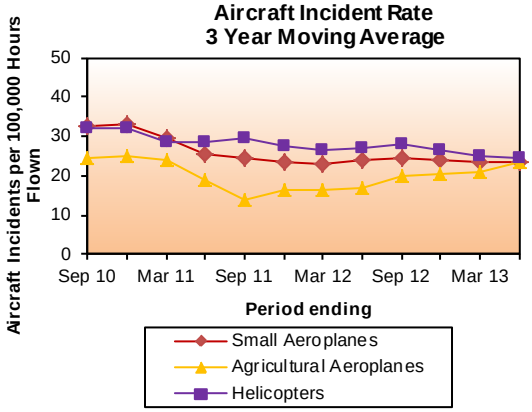
Section 2

Aircraft Incidents by Aircraft Statistics Category

Trends

The following graphs show the reported aircraft incident rates (three year moving average) for the three-year period 1 April 2010 to 31 March 2013 (excluding the Sport Aircraft statistics category). An aircraft incident is any safety occurrence related to the operation of an aircraft that does not result in an accident and is not classified as one of the other nine incident types. Examples of aircraft incidents include hard landings, lightning strikes, icing encounters, turn backs, diversions and go-arounds.





Quarterly Comparison

Number of Reported Aircraft Incidents

Aircraft Statistics Category	1 Apr to 30 Jun 2013	Same Quarter Last Year
Large Aeroplanes	103	63
Medium Aeroplanes	21	27
Small Aeroplanes	12	40
Agricultural Aeroplanes	5	1
Helicopters	7	13
Sport Aircraft	4	3
Unknown Aircraft	17	25
Total	**169**	**172**

Severity of Reported Aircraft Incidents

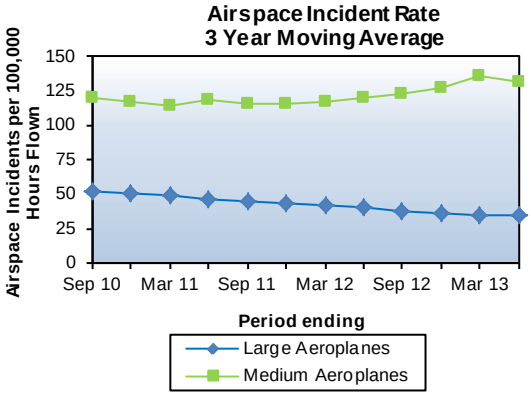
Severity	1 Apr to 30 Jun 2013	Same Quarter Last Year
Critical	1	2
Major	30	26
Minor	138	144

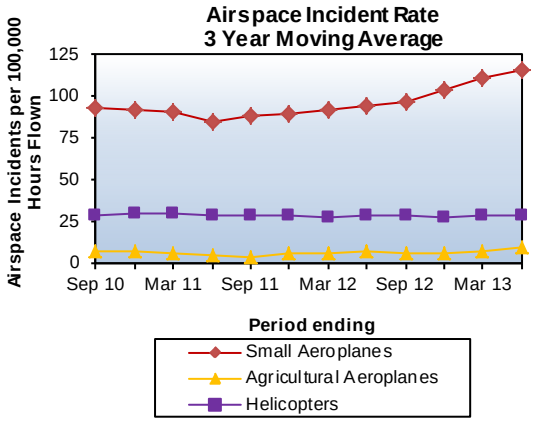
The sole critical aircraft incident reported in the 1 April to 30 June 2013 quarter was due to a large air-transport aircraft that lined up for takeoff incorrectly at Auckland Airport, causing damage to runway lights (CAA occurence 13/2247).

Airspace Incidents by Aircraft Statistics Category

Trends

The following graphs show the reported airspace incident rates (three year moving average) for the three-year period 1 July 2010 to 30 June 2013 (excluding the Sport Aircraft statistics category).





Quarterly Comparison

Number of Reported Airspace Incidents

Aircraft Statistics Category	1 Apr to 30 Jun 2013	Same Quarter Last Year
Large Aeroplanes	42	29
Medium Aeroplanes	11	26
Small Aeroplanes	124	115
Agricultural Aeroplanes	3	1
Helicopters	17	13
Sport Aircraft	14	12
Unknown Aircraft	83	90
Total	**294**	**286**

Severity of Reported Airspace Incidents

Severity	1 Apr to 30 Jun 2013	Same Quarter Last Year
Critical	3	2
Major	37	32
Minor	254	252

All 3 critical airspace incidents reported in the 1 April to 30 June 2013 quarter were in the 'Small Aeroplanes' statistics category. See 'Severity of Reported Airspace Incident's on next page for description. Note the description is taken from the participants report so distances and heights may be approximate.

Severity of Reported Airspace Incidents continued

At Matamata aerodrome a DA20 climbing on crosswind following a touch-and-go was required to take avoiding action from a glider tug joining onto downwind. The glider tug had reported tracking to join when 2nm south of Waharoa, as the DA-20 was conducting the touch-and-go, but the student pilot later sighted a glider, believing it was the joining traffic. The tug was then sighted 500m ahead and at the same level, with the DA20 climbing to avoid the traffic.

Two aircraft nearly collided while they were operating in the grass 21 and sealed 21 circuits at NZAR (Ardmore). One aircraft was turning finals for 21 seal when the following aircraft appears to have turned base leg for 21 grass and crossed ahead of the leading aircraft. Both of these circuits are left hand.

At Hamilton aerodrome a DA20 on downwind was instructed to sight another DA20 ahead conducting an orbit. The pilot could not sight the preceding aircraft, but with SSR unserviceable the controller visually observed the aircraft in close proximity. The following aircraft was instructed to make a right hand turn to resolve the conflict, but when the pilot made a readback and looked to their right they sighted the aircraft an estimated 30ft away between 2 and 3 o'clock. A left turn away was initiated, with the controller reiterated the instruction to make a right turn. The pilot observed they would pass behind the other aircraft, so complied with the instruction.

Attributability

Of the 294 reported airspace incidents in the 1 April to 30 June 2013 quarter, 17% are Air Traffic Service (ATS) attributable, 79% are pilot attributable, 4% are ATS and pilot attributable, and 0% are unknown attributable. (Note that the percentages may not sum exactly to 100% due to rounding.)

Since April 2010 the long-term trend of the ATS attributable airspace occurrence rate is upward and the long-term trend of the pilot attributable rate is upward.

Bird Incident Rates

Bird hazard monitoring has been carried out for the period ended 31 March 2013.

There were 3 aerodromes with strike rates in the high risk category of the CAA standard (10.0 and above bird strikes per 10,000 aircraft movements), all having long-term upward trends.

There were 9 aerodromes with strike rates in the medium risk category (5.0 to 10.0 per 10,000 movements), 3 having long-term upward trends, 3 having long-term constant trends and 3 having long-term downward trends.

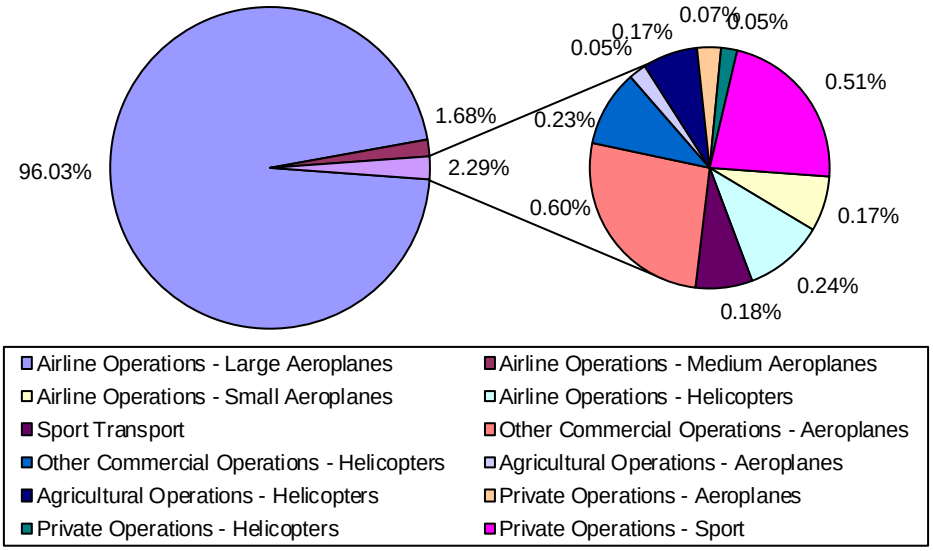
16 aerodromes had strike rates in the low risk category (below 5.0 per 10,000 aircraft movements), 4 having long-term upward trends, 5 having long-term constant trends and 7 having long-term downward trends.

Section 3 - Activity

Industry Size and Shape by Safety Target Group

The following graph and table show the size and shape of the aviation industry as determined from Aircraft Operating Statistics in the relevant 2014 Safety Target Group categories for the period 1 July to 30 September 2012 (the most recent quarter for which reliable Aircraft Operating Statistics data are available). For each Safety Target Group the total number of hours flown is multiplied by the average number of seats and the appropriate load factor, to give the number of seat hours utilised by the group (person exposure). For Safety Target Groups that are not predominantly passenger carrying a surrogate of 500 kg of aircraft weight is used instead of person exposure. For the Sport Safety Target Groups a standard estimate of seat hours offered is used as well as reported data for such aircraft in these groups, as most sport aircraft do not report hours or seats.

Percentage Sector Seat Hours



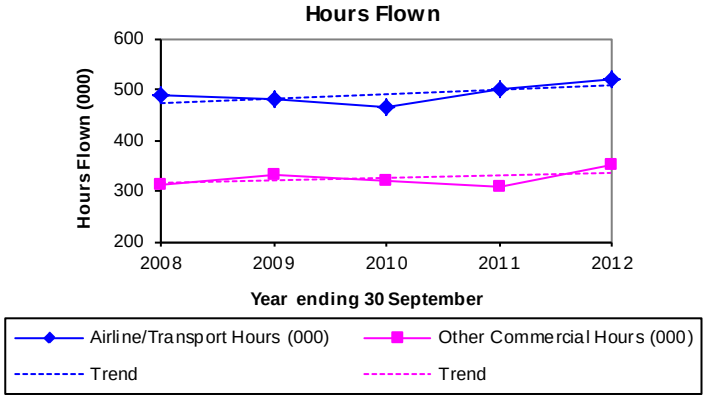
Safety Target Group	Percentage Sector Seat Hours
Airline Operations - Large Aeroplanes	96.56
Airline Operations - Medium Aeroplanes	1.47
Airline Operations - Small Aeroplanes	0.15
Airline Operations - Helicopters	0.19
Sport Transport	0.16
Other Commercial Operations - Aeroplanes	0.56
Other Commercial Operations - Helicopters	0.16
Agricultural Operations - Aeroplanes	0.05
Agricultural Operations - Helicopters	0.13
Agricultural Operations - Sport	-
Private Operations - Aeroplanes	0.07
Private Operations - Helicopters	0.04
Private Operations - Sport	0.46

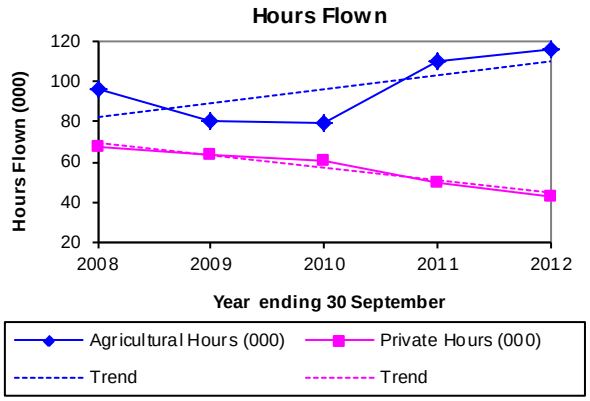
Note that the percentages may not sum exactly to 100.00% due to rounding.

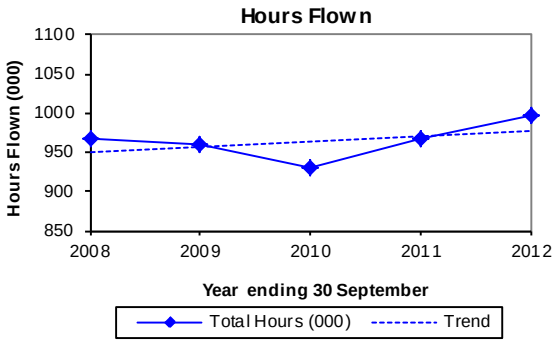
Hours by Operation Type

Trends

The following graphs show the number of hours flown (annual data) for the five-year period 1 October 2007 to 30 September 2012 (for the aircraft classes aeroplane, helicopter and balloon only). Flying hours data for the 4th quarter of 2012 and the 1st and 2nd quarters of 2013 are not available yet due to later returns from operators.







Note that the scales on these graphs do not start at zero.

Quarterly Comparison

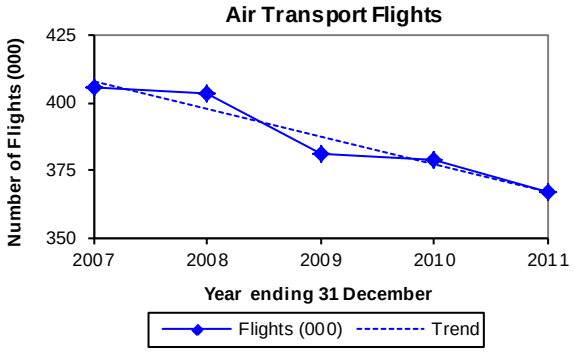
Activity	1 Jul to 30 Sep 2011	1 Jul to 30 Sep 2012	Change	
			Number	Percentage
Airline/Transport Hours	118,055	122,425	+ 4,370	+ 3.7
Adventure Aviation Hours	0	2,868	+ 2,868	-
Other Commercial Hours	76,452	93,277	+ 16,824	+ 22.0
Agricultural Hours	22,907	25,716	+ 2,809	+ 12.3
Private Hours	10,828	9,660	- 1,168	- 10.8
Total Hours	**228,242**	**253,946**	**+ 25,705**	**+ 11.3**

Note that these assessments include the aircraft classes aeroplane, helicopter and balloon only and exclude other aircraft classes such as hang gliders and parachutes, and foreign registered aircraft that are operated in New Zealand. These assessments are based on the reported Aircraft Operating Statistics for periods up to the quarter ended 30 September 2012 (the most recent quarter for which these data are available) with an allowance for aircraft for which reports were not received.

Air Transport Flights

Trends

The following graph shows the number of air transport flights (annual data) for the five-year period 1 January 2007 to 31 December 2011 (for the aircraft classes aeroplane, helicopter and balloon only).



Note that the scale on this graph does not start at zero.

Quarterly Comparison

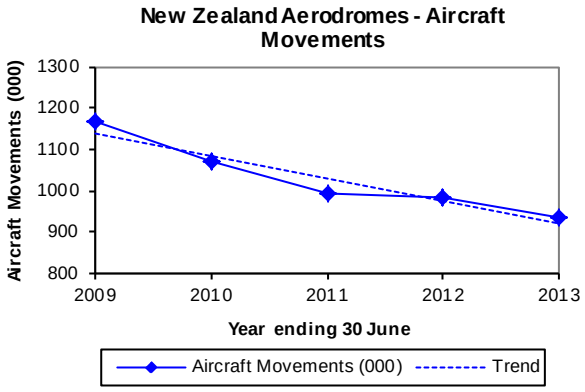
Activity	1 Oct to 31 Dec 2010	1 Oct to 31 Dec 2011	Change	
			Number	Percentage
Air Transport Flights	100,227	93,573	- 6,654	- 6.6

Note that these assessments include the aircraft classes aeroplane, helicopter and balloon only and exclude other aircraft classes such as hang gliders and parachutes, and foreign registered aircraft that are operated in New Zealand. These assessments are based on the reported Aircraft Operating Statistics for periods up to the quarter ended 31 December 2011 (the most recent quarter for which these data are available) with an allowance for aircraft for which reports were not received.

Aircraft Movements

Trends

The following graph shows the number of aircraft movements at certificated aerodromes (annual data) for the five-year period 1 July 2008 to 30 June 2013.



Note that the scale on this graph does not start at zero.

Quarterly Comparison

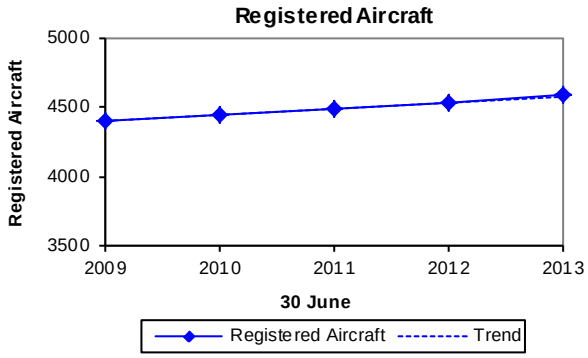
Activity	1 Jan to 31 Mar 2012	1 Jan to 31 Mar 2013	Change	
			Number	Percentage
Aircraft Movements	252,533	244,947	- 7,586	- 3.0

Note that this covers certificated aerodromes only. These figures are as reported to CAA by Airways Corporation and Taupo Airport. Includes Auckland, Christchurch, Dunedin, Gisborne, Hamilton, Invercargill, Napier, Nelson, New Plymouth, Ohakea, Palmerston North, Queenstown, Rotorua, Taupo, Tauranga, Wellington and Woodbourne. Excludes Chatham Islands/Tuuta Airport, Hokitika (certificated from Apr 2010), Kerikeri/Bay of Islands, Mount Cook (certificated until Sep 2009 and from Nov 2012), Paraparaumu (certificated from Apr 2009), Te Anau/Manapouri, Timaru, Wanganui, Westport and Whangarei.

Registered Aircraft by Aircraft Statistics Category

Trends

The following graph shows the number of registered aircraft at 30 June for each of the five-years 2009 to 2013.



Note that the scale on this graph does not start at zero.

Quarterly Comparison

Aircraft Statistics Category	30 June 2012	30 June 2013	Change	
			Number	Percentage
Large Aeroplanes	126	126	0	0
Medium Aeroplanes	85	85	0	0
Small Aeroplanes	1,522	1,529	+ 7	+ 0.5
Agricultural Aeroplanes	109	106	- 3	- 2.8
Helicopters	770	790	+ 20	+ 2.6
Sport Aircraft	1,920	1,951	+ 31	+ 1.6
Total	**4,532**	**4,587**	**+ 55**	**+ 1.2**

Note that these figures include the sport aircraft statistics category but exclude hang gliders, paragliders and parachutes.

Section 4 - Quarterly Statistics

Quarter	2010/3	2010/4	2011/1	2011/2	2011/3	2011/4
Social Cost $ million[1]	50.17	10.05	13.40	22.12	1.77	22.28
Number of Fatal Accidents[2]	3	1	2	4	0	3
Number of Fatal Injuries[2]	12	2	2	5	0	4
Number of Serious + Minor Injuries[2]	6	7	11	6	3	8
Number of Aircraft Accidents[2]						
Large Aeroplanes	2	0	1	0	0	0
Medium Aeroplanes	0	0	0	1	1	0
Small Aeroplanes	6	4	4	4	4	5
Agricultural Aeroplanes	0	1	3	3	0	1
Helicopters	4	3	5	6	4	8
Sport Aircraft	5	13	17	5	5	6
Unknown Aircraft	0	0	1	1	1	0
Hang Gliders	2	2	6	3	0	2
Parachutes	1	2	1	3	2	2
Number of Incidents[3]	1,166	1,173	1,230	1,239	1,229	1,119
Number of Aviation Related Concerns[4]	154	203	245	155	271	229
Number of Hours Flown[5]	211,763	243,440	272,126	224,740	228,242	245,436
Number of Air Transport Flights[5]	84,630	100,227	105,782	82,062	85,803	93,573
Number of Aircraft Movements[6]	240,033	256,474	256,398	242,338	256,117	242,744
Number of Aircraft on the Register[7]	4,438	4,442	4,480	4,490	4,495	4,499
Number of Part 119 Certificated Operators						
Air Operator – Large Aeroplanes	10	10	9	9	9	9
Air Operator – Medium Aeroplanes	15	16	15	15	15	15
Air Operator – Helicopters and Small Aeroplanes	175	175	173	174	174	175
Number of Part 115 Adventure Aviation Operators	0	0	0	0	0	1
Number of Part 137 Agricultural Aircraft Operators	106	108	107	104	106	105
Number of Part 141 Training Organisations	57	56	55	54	55	57
Number of Part 149 Recreation Organisations	9	8	9	9	9	8
Number of Licences (Type of Medical Certificate)[8]						
Recreational Pilot Licence (RPL Medical)	128	146	162	180	189	205
Private Pilot Licence (Class 1 & 2)	3,750	3,655	3,611	3,603	3,577	3,513
Commercial Pilot Licence (Class 2 only)	2,027	2,083	2,131	2,229	2,236	2,284
Commercial Pilot Licence (Class 1)	2,397	2,385	2,372	2,339	2,380	2,362
Airline Transport Pilot Licence (Class 2 only)	986	981	928	909	965	962
Airline Transport Pilot Licence (Class 1)	1,075	1,096	1,155	1,188	1,118	1,124
Air Traffic Controller Licence (Class 3)	358	362	363	361	361	362
Aircraft Maintenance Engineer Licence (N/A)	2,479	2,496	2,511	2,519	2,540	2,549

[1] All aircraft statistics categories. Includes hang gliders and parachutes. Cost of fatal, serious and minor injuries, and aircraft destroyed, in June 2012 dollars.
[2] All accidents. All aircraft statistics categories. Includes hang gliders and parachutes.
[3] Number of reported incidents. All incident sub-types.
[4] Number of reported Aviation Related Concerns.
[5] New Zealand registered aircraft. Includes the aircraft classes aeroplane, helicopter and balloon only; excludes other aircraft classes, hang gliders and parachutes. Based on reported Aircraft Operating Statistics for periods up to the quarter ended 31 December 2011 with an allowance for aircraft for which reports were not received. Estimated for 2012/1, 2012/2, 2012/3, 2012/4 and 2013/1.

Quarter	2012/1	2012/2	2012/3	2012/4	2013/1	2013/2
Social Cost $ million[1]	58.11	15.63	1.08	15.00	25.87	2.49
Number of Fatal Accidents[2]	4	2	0	3	3	0
Number of Fatal Injuries[2]	15	3	0	3	5	0
Number of Serious + Minor Injuries[2]	3	7	3	7	12	0
Number of Aircraft Accidents[2]						
Large Aeroplanes	0	0	0	0	0	0
Medium Aeroplanes	0	0	0	0	0	0
Small Aeroplanes	3	3	3	2	11	6
Agricultural Aeroplanes	0	2	2	4	2	3
Helicopters	2	5	3	5	5	8
Sport Aircraft	9	9	5	7	11	7
Unknown Aircraft	1	0	0	0	1	0
Hang Gliders	6	1	2	3	4	4
Parachutes	4	3	2	3	3	1
Number of Incidents[3]	1,297	1,184	1,270	1,319	1,500	1,500
Number of Aviation Related Concerns[4]	219	192	220	154	206	206
Number of Hours Flown[5]	283,412	257,766	253,946	272,075	290,276	240,700
Number of Air Transport Flights[5]	111,597	88,642	101,581	137,935	144,225	99,852
Number of Aircraft Movements[6]	252,533	235,050	231,371	240,384	244,947	219,840
Number of Aircraft on the Register[7]	4,516	4,532	4,558	4,581	4,587	4,587
Number of Part 119 Certificated Operators						
Air Operator – Large Aeroplanes	9	9	9	9	9	9
Air Operator – Medium Aeroplanes	15	15	14	15	16	16
Air Operator – Helicopters and Small Aeroplanes	176	171	166	168	174	174
Number of Part 115 Adventure Aviation Operators	1	20	28	33	33	33
Number of Part 137 Agricultural Aircraft Operators	101	99	99	104	103	103
Number of Part 141 Training Organisations	58	57	58	59	59	59
Number of Part 149 Recreation Organisations	9	9	7	7	7	7
Number of Licences (Type of Medical Certificate)[8]						
Recreational Pilot Licence (RPL Medical)	222	221	224	240	248	248
Private Pilot Licence (Class 1 & 2)	3,479	3,458	3,451	3,361	3,298	3,298
Commercial Pilot Licence (Class 2 only)	2,325	2,379	2,428	2,420	2,561	2,561
Commercial Pilot Licence (Class 1)	2,350	2,337	2,316	2,366	2,225	2,225
Airline Transport Pilot Licence (Class 2 only)	925	915	953	993	1,053	1,053
Airline Transport Pilot Licence (Class 1)	1,166	1,175	1,140	1,119	1,078	1,078
Air Traffic Controller Licence (Class 3)	370	374	374	363	363	363
Aircraft Maintenance Engineer Licence (N/A)	2,563	2,575	2,595	2,611	2,626	2,626

[6] Certificated aerodromes. Reported to CAA by Airways Corporation and Taupo Airport. Includes Auckland, Christchurch, Dunedin, Gisborne, Hamilton, Invercargill, Napier, Nelson, New Plymouth, Ohakea, Palmerston North, Queenstown, Rotorua, Taupo, Tauranga, Wellington and Woodbourne. Excludes Chatham Islands/Tuuta Airport, Hokitika, Kerikeri/Bay of Islands, Mount Cook (certificated from Nov 2012), Paraparaumu, Te Anau/Manapouri, Timaru, Wanganui, Westport and Whangarei.

[7] As at the last day of the quarter. Includes the sport aircraft statistics category, excluding hang gliders, paragliders and parachutes.

[8] As at the last day of the quarter. For RPL holders, a medical fitness certificate, in accordance with the NZTA medical fitness standards that are applicable for a Class 2, 3, 4 or 5 driver licence with a passenger endorsement. For PPL, CPL & ATPL holders, an active class 1 or active class 2 medical certificate; this means that for CPL and ATPL licences, the number with a class 2 medical only, must only be exercising PPL privileges (or not flying at all). For ATCL holders, an active class 3 medical certificate. This does not show the number of licence holders as each client may hold more than one licence.

Definitions

Accident

An occurrence that is associated with the operation of an aircraft and takes place between the time any person boards the aircraft with the intention of flight and such time as all such persons have disembarked and the engine or any propellers or rotors come to rest, being an occurrence in which–

(1) a person is fatally or seriously injured as a result of–

(i) being in the aircraft; or

(ii) direct contact with any part of the aircraft, including any part that has become detached from the aircraft; or

(iii) direct exposure to jet blast–

except when the injuries are self-inflicted or inflicted by other persons, or when the injuries are to stowaways hiding outside the areas normally available to passengers and crew; or

(2) the aircraft sustains damage or structural failure that–

(i) adversely affects the structural strength, performance, or flight characteristics of the aircraft; and

(ii) would normally require major repair or replacement of the affected component–

except engine failure or damage that is limited to the engine, its cowlings, or accessories, or damage limited to propellers, wing tips, antennas, tyres, brakes, fairings, small dents, or puncture holes in the aircraft skin; or

(3) the aircraft is missing or is completely inaccessible.

Aircraft Incident

Any incident, not otherwise classified, associated with the operation of an aircraft which did not immediately affect the safety of an aircraft operation but which,

(1) if allowed to continue uncorrected, or

(2) if repeated in different but likely circumstances,

could affect the safety of an aircraft operation.

Aircraft Statistics Category

The following table shows the definition of each aircraft statistics category and the aircraft classes included.

Aircraft Statistics Category	Definition	Aircraft Class
Large Aeroplanes	Aeroplanes that must be operated under Part 121 when used for air transport	Aeroplane
Medium Aeroplanes	Aeroplanes that must be operated under Part 125 when used for air transport, except for those required to operate under Part 125 solely due to operating SEIFR	Aeroplane
Small Aeroplanes	Other Aeroplanes with Standard Category Certificates of Airworthiness	Aeroplane
Agricultural Aeroplanes	Aeroplanes with Restricted Category Certificates of Airworthiness limited to agricultural operations	Aeroplane
Helicopters	Helicopters with Standard or Restricted Category Certificates of Airworthiness	Helicopter
Sport Aircraft	All aircraft not included in the groups above	Aeroplane, Amateur Built Aeroplane, Amateur Built Glider, Amateur Built Helicopter, Balloon, Glider, Gyroplane, Helicopter, Microlight Class 1, Microlight Class 2, Power Glider

Other Aircraft Types (not included on the NZ Aircraft Register)

Hang Glider
A glider, including a powered glider, that is capable of being launched and landed solely by the use of the pilot's legs, and includes paragliders. **Paraglider** means a hang glider with no rigid primary structure.

Parachute
Any device, without a motor in operation, comprising a flexible drag, or lift/drag, surface from which a load is suspended by shroud lines capable of controlled deployment from a packed condition.

Airspace Incident

An incident involving deviation from, or shortcomings of, the procedures or rules for–

(1) avoiding a collision between aircraft; or

(2) avoiding a collision between aircraft and other obstacles when an aircraft is being provided with an Air Traffic Service.

Bird Incident

Means an incident where–

(1) there is a collision between an aircraft and one or more birds; or

(2) when one or more birds pass sufficiently close to an aircraft in flight to cause alarm to the pilot.

Defect Incident

An incident that involves failure or malfunction of an aircraft or aircraft component, whether found in flight or on the ground.

Fatal Injury

An injury which results in death within 30 days of the accident.

Incident

Any occurrence, other than an accident, that is associated with the operation of an aircraft and affects or could affect the safety of operation.

Incident Sub-Types	
Aerodrome Incident	Dangerous Goods Incident
Aircraft Incident	Defect Incident
Airspace Incident	Facility Malfunction Incident
Bird Incident	Promulgated Information Incident
Cargo Security Incident	Security Incident

Occurrence

Means an accident or incident.

Serious Injury

Means any injury that is sustained by a person in an accident and that–

(1) requires hospitalisation for more than 48 hours, commencing within 7 days from the date the injury was received; or

(2) results in a fracture of any bone, except simple fractures of fingers, toes, or nose; or

(3) involves lacerations which cause severe haemorrhage, nerve, muscle, or tendon damage; or

(4) involves injury to an internal organ; or

(5) involves second or third degree burns, or any burns affecting more than 5% of the body surface; or

(6) involves verified exposure to infectious substances or injurious radiation.

Severity

The following definitions apply to the severity accorded to accidents and incidents as the result of investigation of occurrences:

Severity	Definition
Critical	An occurrence or deficiency that caused, or on its own had the potential to cause, loss of life or limb;
Major	An occurrence or deficiency involving a major system that caused, or had the potential to cause, significant problems to the function or effectiveness of that system;
Minor	An isolated occurrence or deficiency not indicative of a significant system problem.

Safety Target Structure