CIVIL AVIATION AUTHORITY
OF NEW ZEALAND

Aviation Safety Summary

1 April to 30 June 2015

Autumn 2015

Introduction to the Quarterly Safety Summary Report

Welcome to the CAA's quarterly safety summary report for the autumn quarter of 2015. This report is designed to provide a summary of accidents, incidents and safety occurrences that were reported to the CAA for the period 1 April to 30 June 2015.

Typically the autumn quarter is quiet in terms of aviation activity and consequently accidents. This year is no exception with only 2 serious injuries in a commercial operations accident, which involved a helicopter with three people on board (the helicopter was destroyed). The pilot and passenger of a tandem paraglider flight received minor injuries. There were also two serious injuries in the sport hang gliding and paragliding sectors.

The only other major accident was the forced landing of a Cessna 182P during private operations in which the machine was badly damaged but there were no injuries. There were also minor injuries in the private sport microlight, parachuting and hang gliding sectors.

The airline and other commercial sectors had 5 non-injury accidents including three flight training related landing accidents (one of these was in the airline sector), an agricultural helicopter wire strike, and an agricultural aeroplane landing accident following a ferry flight. There were also non-injury accidents in the private aeroplane, and private sport aeroplane, microlight and paragliding sectors.

Safe flying,

J.D. Stanton
Manager Intelligence, Safety & Risk Analysis

jack.stanton@caa.govt.nz

Cover photograph, Air Chathams DC-3 ZK-AWP arriving at Wanaka, Autumn 2014. Used with permission.

Executive Summary - Aviation Safety to 30 June 2015

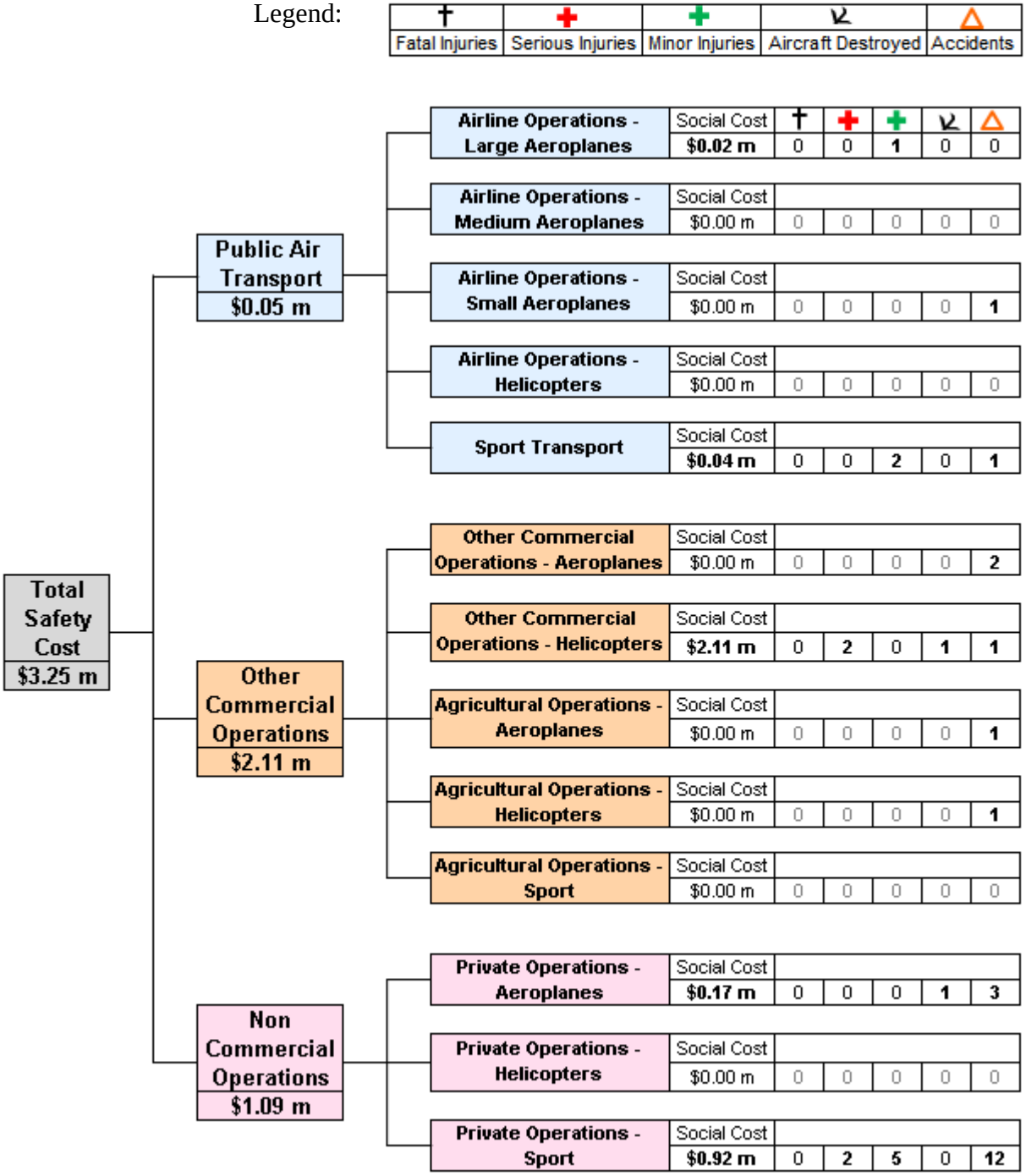
- There were a total of 22 accidents in the April to June quarter, the autumn of 2015. There were 4 serious and 8 minor injuries in these accidents and injury incidents (there were no fatal injuries). Social cost in this quarter has accrued from accidents and injury incidents in the following safety target groups:
  - Airline Operations - Large Aeroplanes — 1 minor injury
  - Sport Transport — 2 minor injuries
  - Other Commercial Operations - Helicopters — 2 serious injuries, and 1 aircraft destroyed
  - Private Operations - Aeroplanes — 1 aircraft destroyed
  - Private Operations - Sport — 2 serious and 5 minor injuries

  There were additional accidents in the groups above and other safety target groups that were not serious enough to contribute to the social cost outcome this quarter (no injuries or aircraft destroyed), but still represent safety risks, see page 3.
- The Annual Social Cost is now $60 million (three year average). The social cost has halted its upward trend and now shows a neutral trend. In the last four years the cost has decreased by 6% from $64M to $60M. See page 4.
- The overall accident rate over the period July 2010 to June 2015 has decreased to 4.4 accidents per 100,000 hours flown, which is below the average of approximately 5.1 accidents per 100,000 hours flown over the previous four years, see page 7.
- Aircraft incident rates are increasing for medium aeroplanes, small aeroplanes and agricultural aeroplanes, see page 11.
- Airspace incident rates are increasing for all 5 categories of aircraft, see page 12.
- The total annual number of aircraft movements from certificated aerodromes is continuing to decrease, by 9% from the year ending June 2011 to the year ending June 2015. See page 17.
- The number of Recreational Pilot Licences (with a medical fitness certificate) increased from 293 at 30 June 2014 to 366 at 30 June 2015, an increase of 73 (25%). The number of Private Pilot Licences (with an active class 1 or active class 2 medical certificate) decreased from 2,816 to 2,580, a decrease of 236 (8%).

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 2015. The table also shows the number of accidents in this quarter.

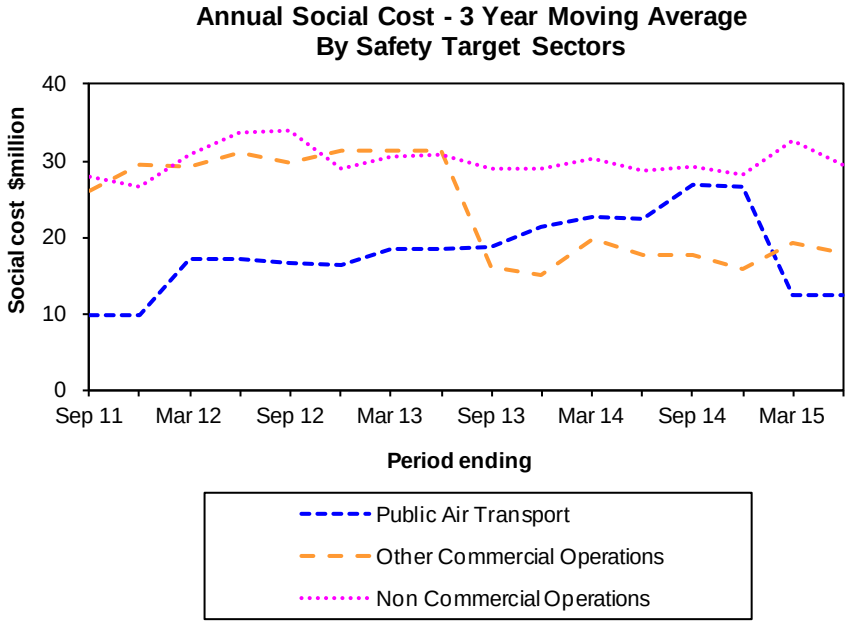


Notes:

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 2014 dollars.

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 2011 to 30 June 2015, (including the Sport Safety Target Groups).



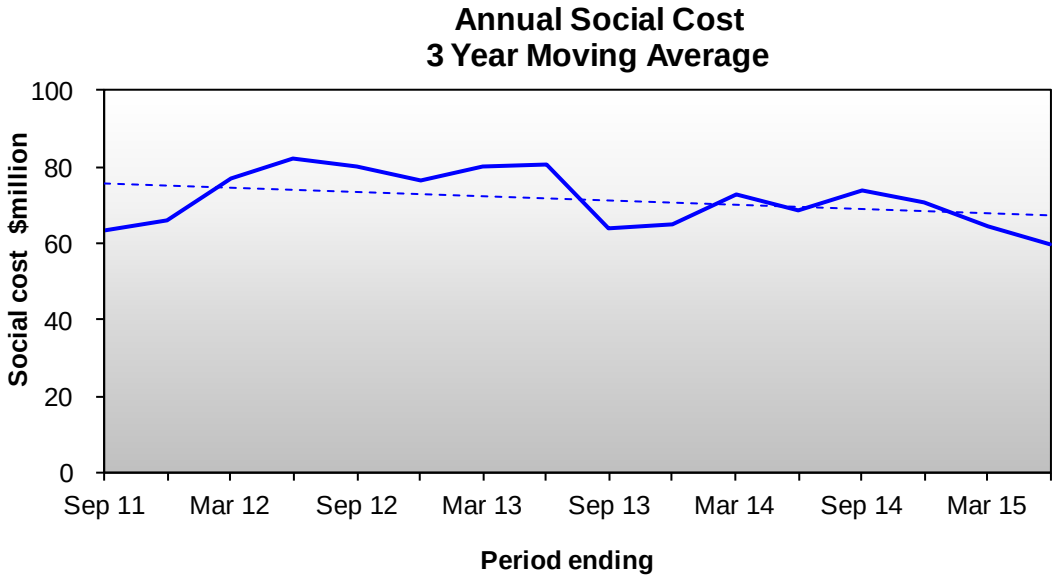
Social Cost Analysis

The graph above indicates the social cost contribution of each safety target sector averaged over the previous three years. In this graph both Public Air Transport and Other Commercial show marked step down reductions. The value plotted is the three year average and the step down reductions are due to the contribution of significant accidents more than three years ago ceasing.

The largest contribution to social cost in this quarter was from the Other Commercial Sector as a result of a single helicopter accident. Fortunately it was not fatal, although the pilot and one passenger were seriously injured and the helicopter destroyed. There were 4 other accidents in the 'Other Commercial' sector which did not cause injury or significant aircraft damage but illustrate the high potential safety risk which accompanies many of the types of operations in this sector.

The only other accident in this quarter serious enough to destroy the aircraft occurred in private operations (an aeroplane was substantially damaged and written off). There were also two serious injuries in the sport hang gliding and paragliding sectors. The social cost in the 'Non-Commercial' sector has been relatively constant now at approximately $30M (three year average).

The combined annual social cost of all three sectors is shown in the graph on the next page and has decreased by 6% from $64M to $60M between 2011 and 2015.



Accidents by Safety Target Group

Quarterly Comparison

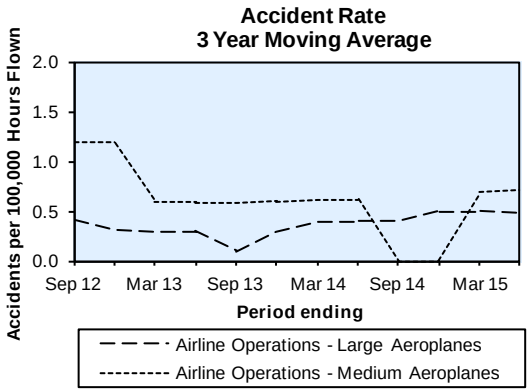
Safety Target Group	1 Apr to 30 Jun 2015	1 Apr to 30 Jun 2014	Average Of Same Quarter In Previous 3 Years
Airline Operations - Large Aeroplanes	0	0	0.0
Airline Operations - Medium Aeroplanes	0	0	0.0
Airline Operations - Small Aeroplanes	**1**	0	**0.7**
Airline Operations - Helicopters	0	0	**1.3**
Sport Transport	**1**	**2**	**2.3**
Other Commercial Operations - Aeroplanes	**2**	**3**	**1.7**
Other Commercial Operations - Helicopters	**1**	**1**	**2.0**
Agricultural Operations - Aeroplanes	**1**	0	**2.7**
Agricultural Operations - Helicopters	**1**	0	**1.7**
Agricultural Operations - Sport Aircraft	0	0	0.0
Private Operations - Aeroplanes	**3**	0	**2.0**
Private Operations - Helicopters	0	**1**	**1.3**
Private Operations - Sport	**12**	**6**	**10.3**
Other	0	0	**0.3**
Total	**22**	**13**	**26.3**

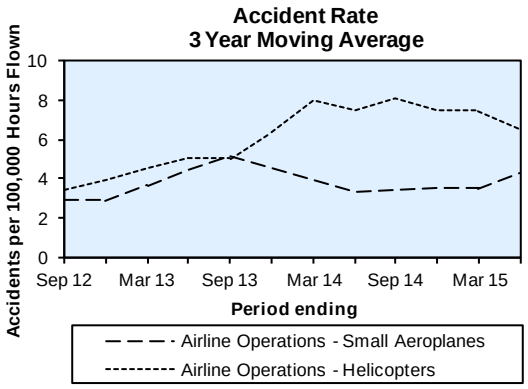
Comment

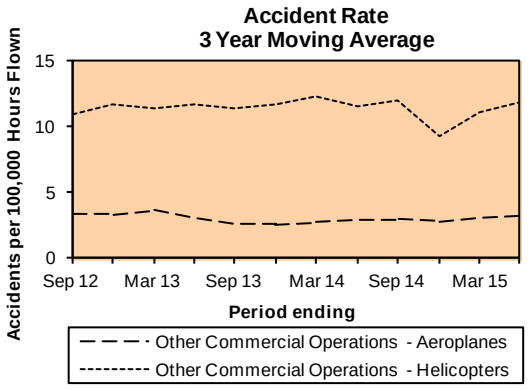
Overall accident numbers in the 2015 autumn quarter have increased by 9 (69%) in comparison to the 2014 autumn quarter. The biggest increase is within the Private Operations - Sport group.

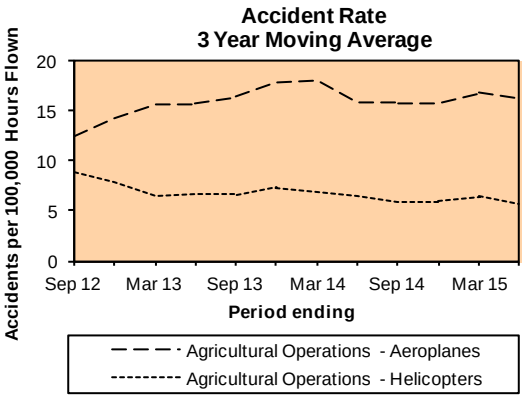
Trends

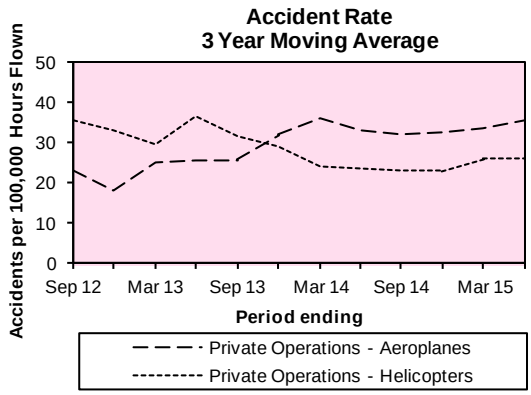
The following graphs show the aircraft accident rates (three year moving average) for the three-year period 1 July 2012 to 30 June 2015 (excluding the Sport Safety Target Groups, for which no accurate activity information is available).











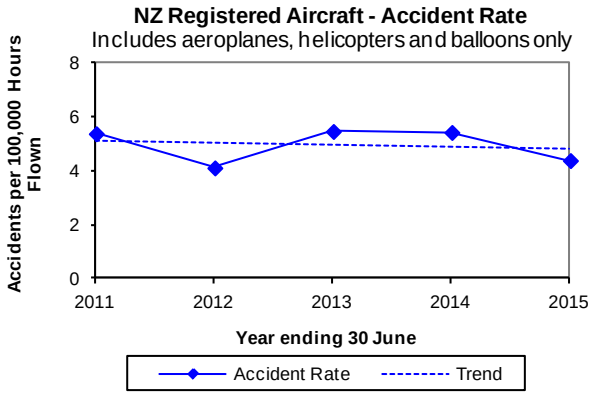
No accident rate information available for Sport Transport or Private Operations - Sport.

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 2010 to 30 June 2015. The accident rate has decreased to 4.4 accidents per 100,000 hours flown, which is below the average of approximately 5.1 accidents per 100,000 hours flown over the previous four years.



Note that this graph shows an annual rate and not a 3 year moving average.

Summary of Injury Accidents and Destroyed Aircraft Accidents

This section describes injury accidents, and accidents where there were no injuries but the aircraft was destroyed, that occurred during the period 1 April to 30 June 2015. These descriptions are classified according to the highest level of injury sustained and the safety target group. Not all of these accidents were investigated by the CAA, and some of the CAA investigations have not been completed, so the text may be condensed from the original accident notification.

Fatal Accidents

There were no fatal accidents in the 1 April to 30 June 2015 quarter.

Serious Injury Accidents

Other Commercial Operations - Helicopters

- A Hughes 369D on a hunting flight crashed on takeoff, seriously injuring the pilot and one passenger. (The other passenger was not injured.) The helicopter was destroyed.

Private Operations - Sport

- The hang glider's wing collapsed on approach due to turbulent air and excessive braking. The pilot fell approximately 15 to 20 ft, resulting in serious injuries to their lower limbs.
- A paraglider pilot flew low along sand dunes downwind, with the wind being marginal to fly (not enough). Due to misjudgement of speed, the paraglider collided with a sand dune, causing a serious injury (broken ankle).

Summary of Injury Accidents and Destroyed Aircraft Accidents continues on next page.

Minor Injury Accidents

Sport Transport

- The paraglider pilot of a passenger transport A to A flight encountered strong sink just as they got airborne. The paraglider came back down onto the slope approximately 30 metres below the takeoff ramp. Both pilot and passenger received minor injuries.

Private Operations - Sport

- The airspeed of a class 2 microlight decayed while in the flare. The aircraft stalled and the resulting hard landing caused the nose wheel to collapse then the aircraft to flip onto its back. The pilot received minor injuries. The propeller and nose pod were extensively damaged.
- A hang glider encountered sink during the landing flare and landed heavily resulting in minor injuries.
- A hang glider landing in still air carried out a flare that was late and inadequate. Directional control was lost in the attempt to run the hang glider out to a stand still. The pilot received minor injuries.
- The parachute opened with tension knots and the pilot did not carry out emergency procedures in a timely manner. When the reserve opened the pilot was low. Spinning and induced multiple line twists on the reserve with no time to rectify resulted in the pilot having no control over direction or flaring. The parachute landed off the drop zone and the pilot received minor injuries (ankle).

Destroyed Aircraft Accidents

Private Operations - Aeroplanes

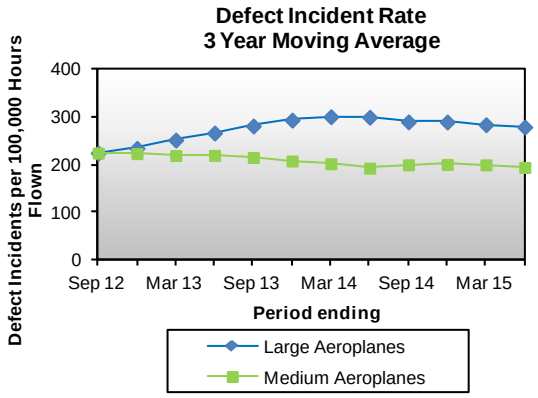
- While on a local flight, a Cessna 182P (Small Aeroplane) suffered a partial engine power loss. While completing checks the engine failed completely. The pilot completed a forced landing onto the beach. However, to avoid a group of people on the beach the pilot had to land on the soft sand resulting in the aircraft nosing over. The pilot and passenger were not injured. The aeroplane was substantially damaged and written off.

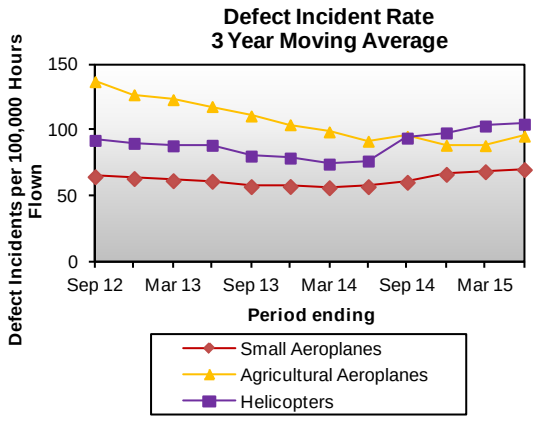
Section 2 - Incidents

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 2012 to 30 June 2015 (excluding the Sport Aircraft statistics category).





Quarterly Comparison

Number of Reported Defect Incidents

Aircraft Statistics Category	1 Apr to 30 Jun 2015	1 Apr to 30 Jun 2014	Average Of Same Quarter In Previous 3 Years
Large Aeroplanes	159	212	247.0
Medium Aeroplanes	14	29	35.0
Small Aeroplanes	53	51	48.0
Agricultural Aeroplanes	12	9	10.0
Helicopters	44	54	41.0
Sport Aircraft	6	5	8.7
Unknown Aircraft	16	12	10.0
Total	**304**	**372**	**399.7**

Severity of Reported Defect Incidents

Severity	1 Apr to 30 Jun 2015	1 Apr to 30 Jun 2014	Average Of Same Quarter In Previous 3 Years
Critical	0	1	0.3
Major	6	39	64.7
Minor	298	332	334.7

No critical defect incidents were reported in the 1 April to 30 June 2015 quarter.

Rate Monitoring

Defect incident rate monitoring of individual types of large and medium air transport aircraft has been carried out for the period ended 31 March 2015, using estimated data for some of the aircraft types due to a shortage of returned Aircraft Operations Statistics for these aircraft. Analysis shows that 3 of the 15 monitored aircraft types have defect rates above the “trigger level” for CAA action (2 of the 12 types of large aeroplane and 1 of the 3 types of medium aeroplane).

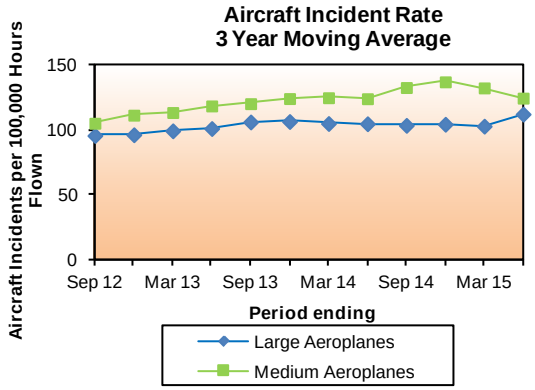
Medium and large aeroplane categories include all aircraft with more than 10 passenger seats operated under CAR Part 125 or 121.

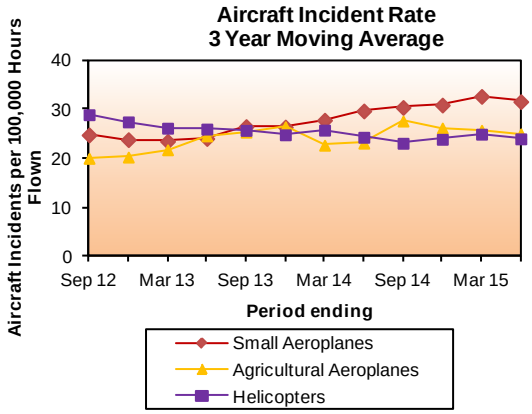
Section 2

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 July 2012 to 30 June 2015 (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 2015	1 Apr to 30 Jun 2014	Average Of Same Quarter In Previous 3 Years
Large Aeroplanes	164	86	83.3
Medium Aeroplanes	12	7	20.3
Small Aeroplanes	31	28	23.3
Agricultural Aeroplanes	0	1	2.3
Helicopters	8	5	12.3
Sport Aircraft	3	9	3.7
Unknown Aircraft	48	38	34.0
Total	**266**	**174**	**179.3**

Severity of Reported Aircraft Incidents

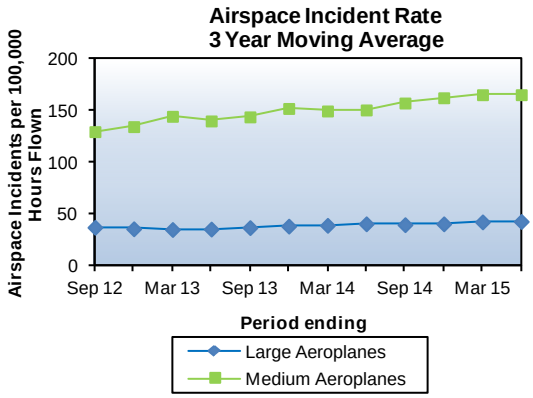
Severity	1 Apr to 30 Jun 2015	1 Apr to 30 Jun 2014	Average Of Same Quarter In Previous 3 Years
Critical	0	1	1.3
Major	68	17	23.3
Minor	198	156	154.7

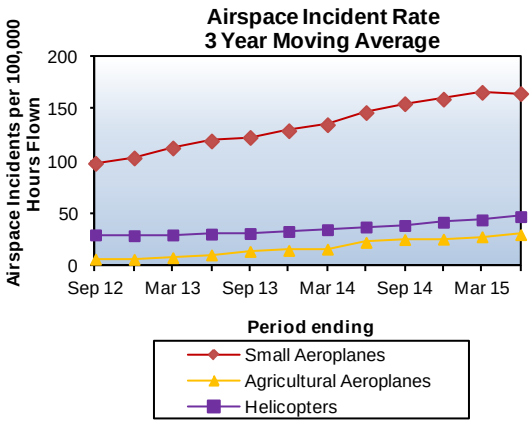
No critical aircraft incidents were reported in the 1 April to 30 June 2015 quarter.

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 2012 to 30 June 2015 (excluding the Sport Aircraft statistics category).





Quarterly Comparison

Number of Reported Airspace Incidents

Aircraft Statistics Category	1 Apr to 30 Jun 2015	1 Apr to 30 Jun 2014	Average Of Same Quarter In Previous 3 Years
Large Aeroplanes	36	35	30.3
Medium Aeroplanes	21	13	17.0
Small Aeroplanes	111	127	96.0
Agricultural Aeroplanes	3	7	1.3
Helicopters	32	21	12.7
Sport Aircraft	28	17	14.3
Unknown Aircraft	149	101	91.0
Total	**380**	**321**	**262.7**

Severity of Reported Airspace Incidents

Severity	1 Apr to 30 Jun 2015	1 Apr to 30 Jun 2014	Average Of Same Quarter In Previous 3 Years
Critical	1	3	3.0
Major	14	25	31.7
Minor	365	293	228.0

One critical airspace incident was reported in the 1 April to 30 June 2015 quarter, in the 'Small Aeroplanes' statistics category. A skydive aircraft (Other Commercial Operations, Small Aeroplane) descended into the circuit and passed from above and behind a helicopter to the front of the helicopter, passing within an estimated 30 to 40 metres, failing to see the helicopter established in the circuit. The skydive aircraft had failed to hear the helicopters radio calls as the pilot was on other frequencies at the time.

Analysis of reported airspace incidents continues on next page.

Attributability

Of the 380 reported airspace incidents in the 1 April to 30 June 2015 quarter, 19% are Air Traffic Service (ATS) attributable, 74% are pilot attributable, 2% are ATS and pilot attributable, and 6% are unknown attributable.
(Note that the percentages may not sum exactly to 100% due to rounding.)

Since July 2012 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 30 June 2015.

There were 6 aerodromes with strike rates in the high risk category of the CAA standard (10.0 and above bird strikes per 10,000 aircraft movements), 4 having long-term upward trends and 2 having long-term downward trends.

There were 6 aerodromes with strike rates in the medium risk category (5.0 to 10.0 per 10,000 movements), 3 having long-term upward trends, 2 having long-term constant trends and 1 having a long-term downward trend.

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

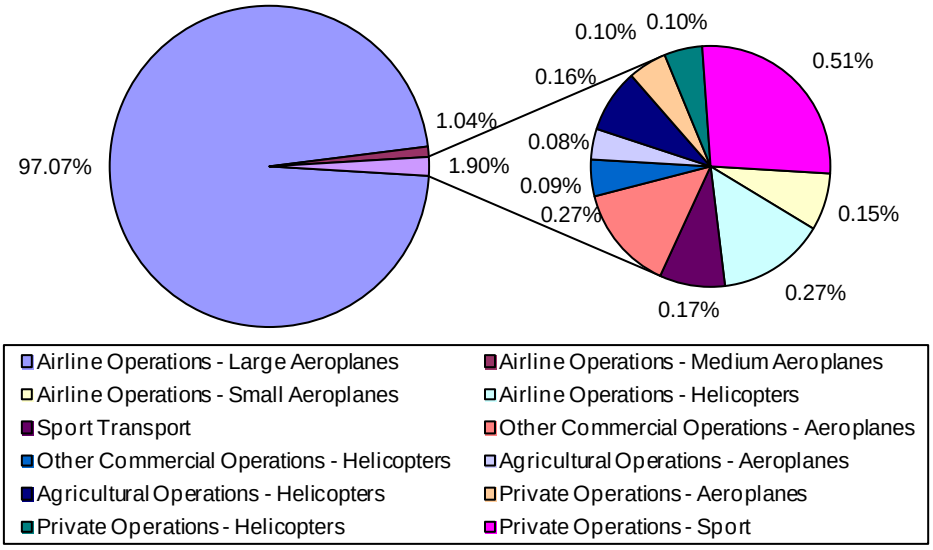
For more information visit the ‘Bird Hazard Reports’ section of the CAA web site http://www.caa.govt.nz/safety_info/safety_reports.htm

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 Safety Target Group categories for the period 1 October to 31 December 2014 (the most recent quarter for which adequate data are available) with an allowance for aircraft for which reports were not received. Adequate flying hours data for the 1st and 2nd quarters of 2015 are not available yet due to later returns from operators. 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	97.07
Airline Operations - Medium Aeroplanes	1.04
Airline Operations - Small Aeroplanes	0.15
Airline Operations - Helicopters	0.27
Sport Transport	0.17
Other Commercial Operations - Aeroplanes	0.27
Other Commercial Operations - Helicopters	0.09
Agricultural Operations - Aeroplanes	0.08
Agricultural Operations - Helicopters	0.16
Agricultural Operations - Sport	-
Private Operations - Aeroplanes	0.10
Private Operations - Helicopters	0.10
Private Operations - Sport	0.51

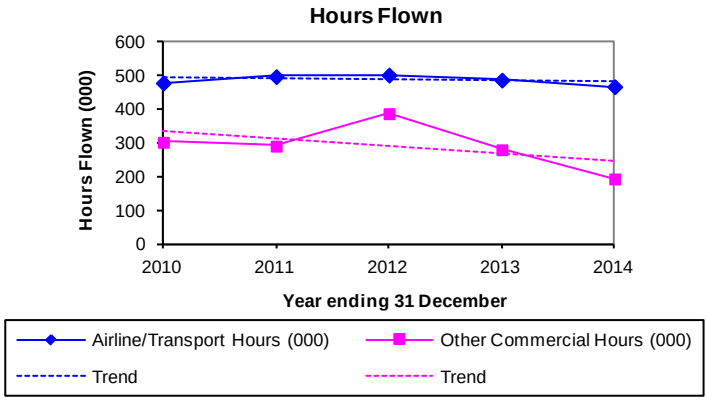
Note that the percentages may not sum exactly to 100.00% due to rounding.

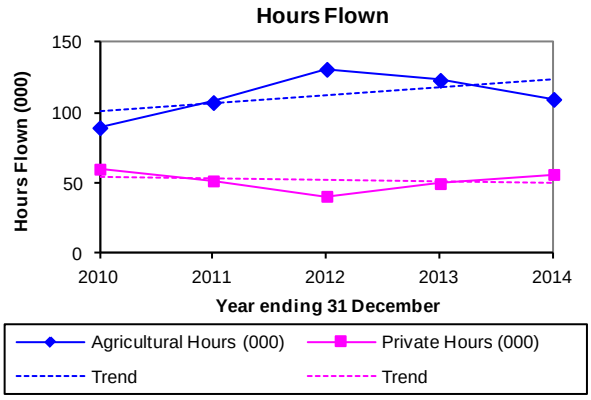
Section 3

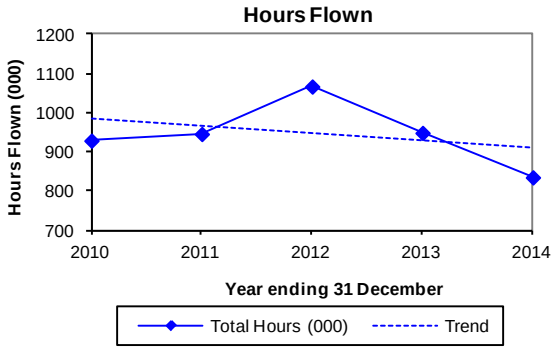
Hours by Operation Type

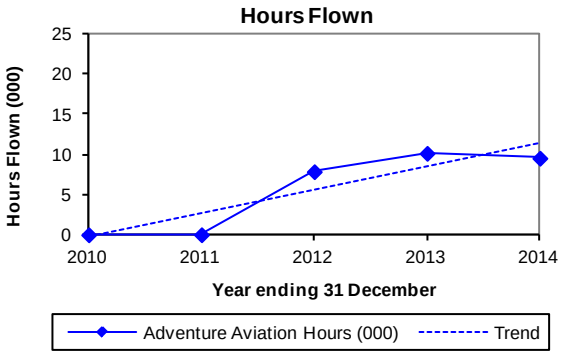
Trends

The following graphs show the number of hours flown (annual data) for the five-year period 1 January 2010 to 31 December 2014 (for the aircraft classes aeroplane, helicopter and balloon only). Adequate flying hours data for the 1st and 2nd quarters of 2015 are not available yet due to later returns from operators.









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

Note that the reporting of adventure aviation hours as a separate category began in 2012.

Quarterly Comparison

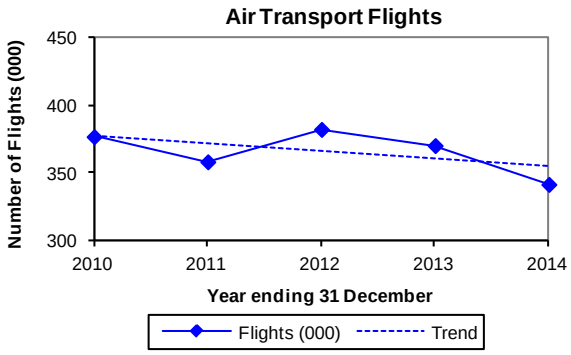
Activity	1 Oct to 31 Dec 2014	1 Oct to 31 Dec 2013	Average Of Same Quarter In Previous 3 Years
Airline/Transport Hours	121,941	121,254	132,495
Adventure Aviation Hours	2,404	2,588	1,215
Other Commercial Hours	42,809	67,133	82,137
Agricultural Hours	28,595	32,803	28,403
Private Hours	14,847	12,816	12,715
Total Hours	**210,595**	**236,596**	**256,966**

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 2014 (the most recent quarter for which adequate 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 2010 to 31 December 2014 (for the aircraft classes aeroplane, helicopter and balloon only).



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

Quarterly Comparison

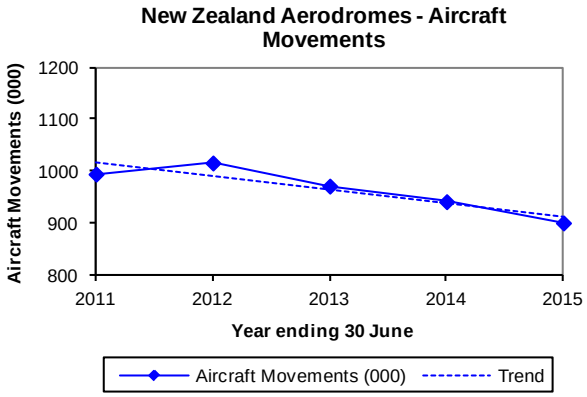
Activity	1 Oct to 31 Dec 2014	1 Oct to 31 Dec 2013	Average Of Same Quarter In Previous 3 Years
Air Transport Flights	90,962	94,318	100,396

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 2014 (the most recent quarter for which adequate 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 2010 to 30 June 2015.



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

Quarterly Comparison

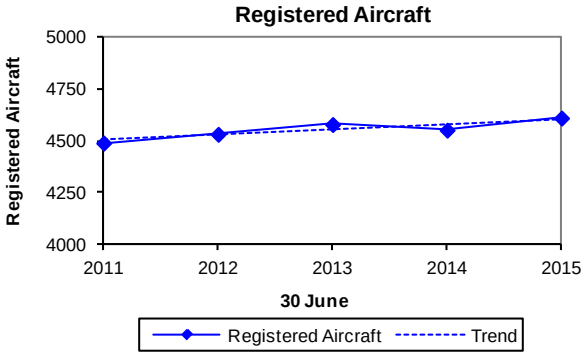
Activity	1 Apr to 30 Jun 2015	1 Apr to 30 Jun 2014	Average Of Same Quarter In Previous 3 Years
Aircraft Movements	211,137	221,072	237,710

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, Paraparaumu (certificated from April 2009, included in the graph from late July 2011), Queenstown, Rotorua, Taupo, Tauranga, Wellington and Woodbourne. Excludes Chatham Islands/Tuuta Airport, Hokitika, Kerikeri/Bay of Islands, Mount Cook (certificated from Nov 2012), Te Anau/Manapouri, Timaru, Wanganui, Westport, Whakatane (certificated from April 2015) 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 2011 to 2015.



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

Quarterly Comparison

Aircraft Statistics Category	30 June 2015	30 June 2014	Average Of 30 June In Previous 3 Years
Large Aeroplanes	117	127	127
Medium Aeroplanes	77	77	79
Small Aeroplanes	1,499	1,499	1,528
Agricultural Aeroplanes	93	102	108
Helicopters	828	798	774
Sport Aircraft	1,996	1,949	1,916
Total	**4,610**	4,552	4,534

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

Licences and Organisations

The number of Recreational Pilot Licences (with a medical fitness certificate) increased from 293 at 30 June 2014 to 366 at 30 June 2015, an increase of 73 (25%). The number of Private Pilot Licences (with an active class 1 or active class 2 medical certificate) decreased from 2,816 to 2,580, a decrease of 236 (8%).

Section 4 - Quarterly Statistics

Quarter	2012/3	2012/4	2013/1	2013/2	2013/3	2013/4
Social Cost $ million[1]	1.12	15.68	27.02	3.09	2.54	14.59
Number of Fatal Accidents[2]	0	3	3	0	0	2
Number of Fatal Injuries[2]	0	3	5	0	0	2
Number of Serious + Minor Injuries[2]	4	7	12	10	6	21
Number of Aircraft Accidents[2]						
Large Aeroplanes	0	0	0	0	0	2
Medium Aeroplanes	0	0	0	0	0	0
Small Aeroplanes	3	2	11	6	4	7
Agricultural Aeroplanes	2	4	2	3	1	3
Helicopters	3	5	5	8	1	6
Sport Aircraft	5	7	11	8	6	10
Unknown Aircraft	0	0	1	0	0	1
Hang Gliders	2	3	4	4	2	4
Parachutes	2	3	3	1	0	1
Number of Incidents[3]	1,271	1,324	1,515	1,460	1,375	1,377
Number of Aviation Related Concerns[4]	220	156	206	181	219	208
Number of Hours Flown[5]	253,127	284,443	266,122	223,070	223,324	236,596
Number of Air Transport Flights[5]	88,601	109,270	103,364	86,684	86,186	94,318
Number of Aircraft Movements[6]	239,410	248,728	256,386	227,657	232,694	240,943
Number of Aircraft on the Register[7]	4,558	4,581	4,587	4,579	4,577	4,562
Number of Part 119 Certificated Operators						
Air Operator – Large Aeroplanes	9	9	9	9	9	9
Air Operator – Medium Aeroplanes	14	15	16	16	16	15
Air Operator – Helicopters and Small Aeroplanes	166	168	174	173	168	166
Number of Part 115 Adventure Aviation Operators	28	33	33	33	34	34
Number of Part 137 Agricultural Aircraft Operators	99	104	103	103	98	99
Number of Part 141 Training Organisations	58	59	59	57	57	56
Number of Part 149 Recreation Organisations	7	7	7	7	8	8
Number of Licences (Type of Medical Certificate)[8]						
Recreational Pilot Licence (RPL Medical)	224	240	248	247	267	281
Private Pilot Licence (Class 1 & 2)	3,451	3,361	3,298	3,193	3,108	3,017
Commercial Pilot Licence (Class 2 only)	2,428	2,420	2,561	2,554	2,578	2,571
Commercial Pilot Licence (Class 1)	2,316	2,366	2,225	2,217	2,167	2,150
Airline Transport Pilot Licence (Class 2 only)	953	993	1,053	993	1,060	1,052
Airline Transport Pilot Licence (Class 1)	1,140	1,119	1,078	1,163	1,121	1,120
Air Traffic Controller Licence (Class 3)	374	363	363	367	375	380
Aircraft Maintenance Engineer Licence (N/A)	2,595	2,611	2,626	2,639	2,647	2,660

[1] All aircraft statistics categories. Includes hang gliders and parachutes. Cost of fatal, serious and minor injuries, and aircraft destroyed, in June 2014 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 2014 (the most recent quarter for which adequate data are available) with an allowance for aircraft for which reports were not received. Estimated for 2015/1 and 2015/2.

Quarter	2014/1	2014/2	2014/3	2014/4	2015/1	2015/2
Social Cost $ million[1]	36.77	10.79	16.52	14.73	41.89	3.25
Number of Fatal Accidents[2]	5	1	2	2	4	0
Number of Fatal Injuries[2]	6	2	2	2	9	0
Number of Serious + Minor Injuries[2]	19	6	16	23	13	10
Number of Aircraft Accidents[2]						
Large Aeroplanes	2	0	0	1	0	0
Medium Aeroplanes	0	0	0	0	1	0
Small Aeroplanes	8	3	2	4	7	6
Agricultural Aeroplanes	2	0	0	1	1	1
Helicopters	5	2	4	3	7	2
Sport Aircraft	22	5	2	13	8	5
Unknown Aircraft	2	0	0	0	0	0
Hang Gliders	6	0	5	7	5	7
Parachutes	4	3	2	3	1	1
Number of Incidents[3]	1,281	1,242	1,375	1,283	1,426	1,406
Number of Aviation Related Concerns[4]	270	171	215	225	243	188
Number of Hours Flown[5]	236,418	189,640	198,955	210,595	279,366	247,869
Number of Air Transport Flights[5]	95,979	77,093	77,856	90,962	108,559	98,309
Number of Aircraft Movements[6]	247,546	221,072	232,016	220,846	237,404	211,137
Number of Aircraft on the Register[7]	4,587	4,552	4,570	4,615	4,662	4,610
Number of Part 119 Certificated Operators						
Air Operator – Large Aeroplanes	9	9	9	8	8	7
Air Operator – Medium Aeroplanes	15	14	13	12	13	13
Air Operator – Helicopters and Small Aeroplanes	167	168	167	165	163	163
Number of Part 115 Adventure Aviation Operators	32	28	27	27	27	28
Number of Part 137 Agricultural Aircraft Operators	99	99	98	97	101	103
Number of Part 141 Training Organisations	52	53	55	55	56	56
Number of Part 149 Recreation Organisations	8	8	8	8	8	8
Number of Licences (Type of Medical Certificate)[8]						
Recreational Pilot Licence (RPL Medical)	289	293	311	320	337	366
Private Pilot Licence (Class 1 & 2)	2,948	2,816	2,763	2,617	2,587	2,580
Commercial Pilot Licence (Class 2 only)	2,527	2,544	2,515	2,442	2,390	2,448
Commercial Pilot Licence (Class 1)	2,147	2,098	2,107	2,125	2,141	2,046
Airline Transport Pilot Licence (Class 2 only)	990	994	986	998	987	995
Airline Transport Pilot Licence (Class 1)	1,204	1,223	1,232	1,226	1,232	1,228
Air Traffic Controller Licence (Class 3)	381	381	384	379	379	387
Aircraft Maintenance Engineer Licence (N/A)	2,678	2,699	2,708	2,726	2,737	2,754

[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, Paraparaumu, Queenstown, Rotorua, Taupo, Tauranga, Wellington and Woodbourne. Excludes Chatham Islands/Tuuta Airport, Hokitika, Kerikeri/Bay of Islands, Mount Cook (certificated from Nov 2012), Te Anau/Manapouri, Timaru, Wanganui, Westport, Whakatane (certificated from April 2015) 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.

Note about Social Cost

Social cost is a way of measuring safety performance by accounting for the number and severity of casualties, and aircraft damage. 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 statistical life is $3.95 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.

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