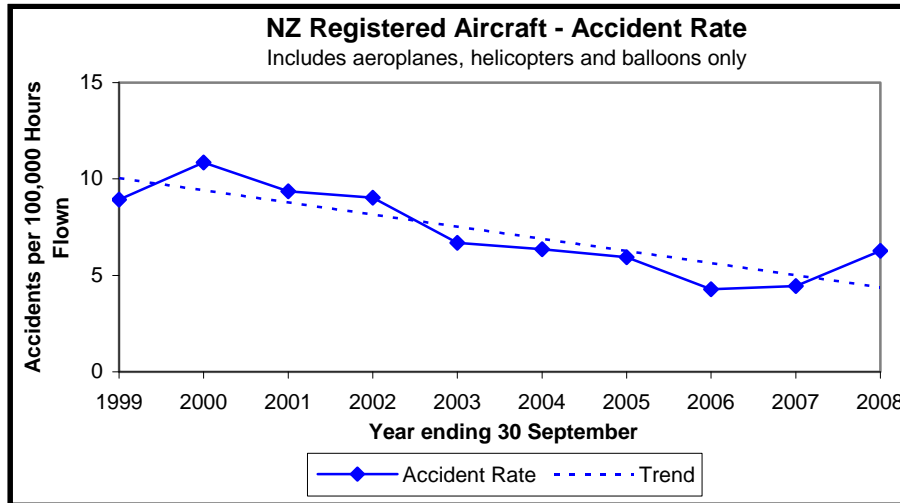


# Aviation Safety Summary Report

1 July to 30 September 2008



Note that this graph does not show a moving average.



## Introduction

The purpose of this report is to provide readers with a quarterly snapshot of the aviation industry in terms of its size, shape, activity and safety performance. This complements the more detailed six-monthly “Aviation Industry Safety Update”, which is available only on the CAA website.

This report uses calendar years; the first quarter is 1 January to 31 March.

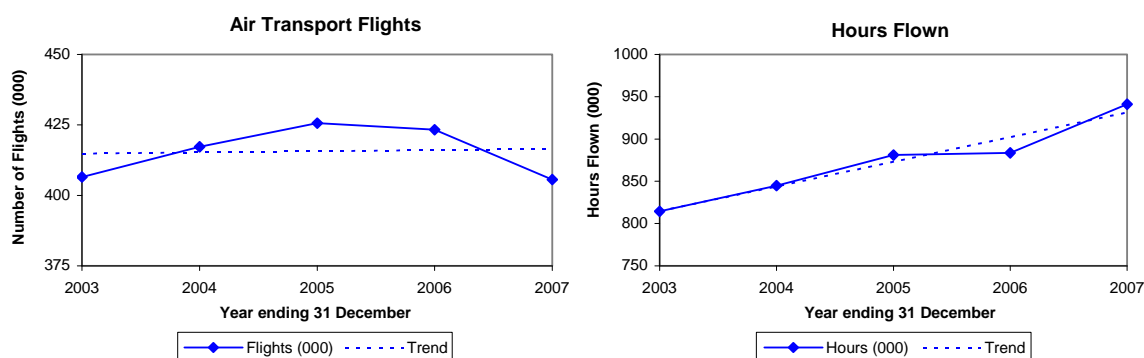
## Overview

### Activity

#### *Air Transport Flights, Total Hours*

#### Trends

The following graphs show the number of air transport flights and the total number of hours flown (annual data) for the five-year period 1 January 2003 to 31 December 2007 (includes the aircraft classes aeroplane, helicopter and balloon only).



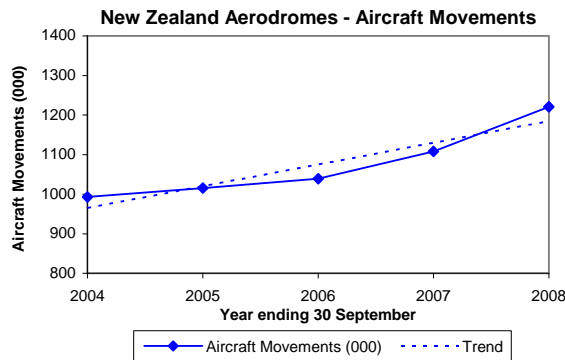
Note that the scales on these graphs do not start at zero.

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 Aircraft Operating Statistics for periods up to the quarter ended 31 December 2007 (the most recent quarter for which these data are available).

## Aircraft Movements

### Trends

The following graph shows the number of aircraft movements at certificated aerodromes (annual data) for the five-year period 1 October 2003 to 30 September 2008.



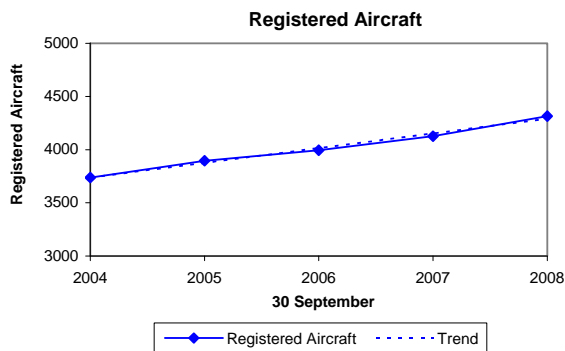
Note that the scale on this graph does not start at zero.

Note that this covers certificated aerodromes only. Includes Auckland, Christchurch, Dunedin, Gisborne (from December 2004), Hamilton, Invercargill, Napier, Nelson, New Plymouth, Ohakea, Palmerston North, Queenstown, Rotorua, Taupo, Tauranga, Wellington and Woodbourne. Excludes Chatham Islands/Tuuta Airport, Kerikeri/Bay of Islands, Manapouri, Mount Cook, Timaru, Wanganui, Westport, Whangarei and Wigram.

## Registered Aircraft

### Trends

The following graph shows the number of registered aircraft at 30 September for each of the five-years 2004 to 2008.



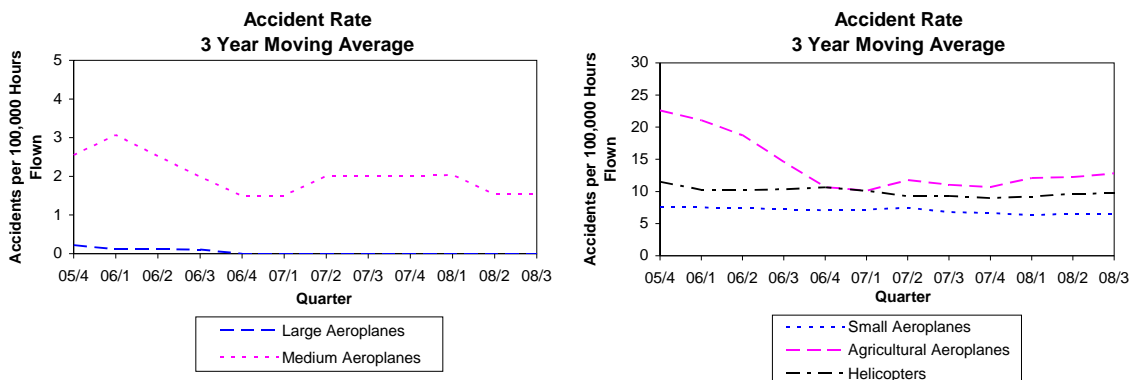
Note that the scale on this graph does not start at zero.

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

## Accidents

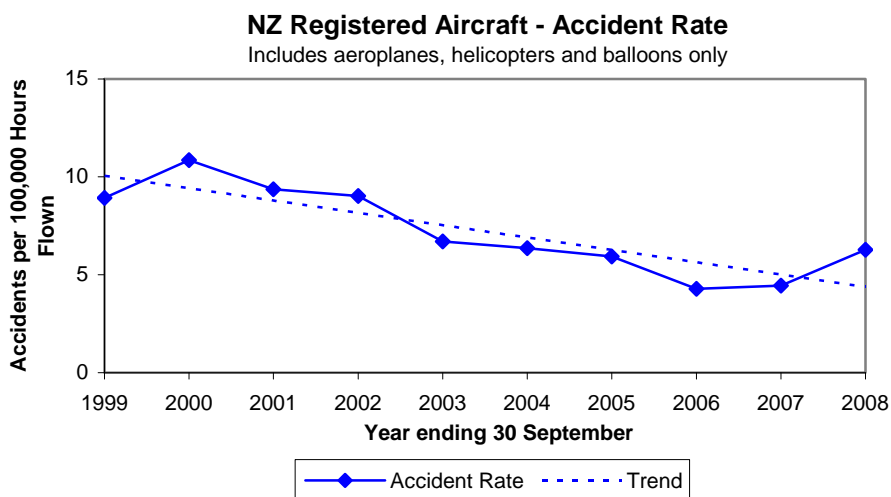
### Trends

The following graphs show the aircraft accident rates for the three-year period 1 October 2005 to 30 September 2008 (excluding the aircraft statistics categories Sport Aircraft, Hang Gliders and Parachutes). The graphs in previous reports used 12 month moving averages; the graphs in this report use 3 year moving averages.



### Overall Accident Rate

The following graph shows the overall accident rate per 100,000 hours flown (includes the aircraft classes aeroplane, helicopter and balloon only; excludes other aircraft classes, hang gliders and parachutes) for the 10-year period 1 October 1998 to 30 September 2008.



Note that this graph does not show a moving average.

## Safety Outcome Targets for 2010

### Safety Target Structure

The 2010 Safety Targets have all New Zealand aviation classified under three broad group headings: Public Air Transport, Other Commercial Operations, and Non-Commercial Operations.

Thirteen further sub-groups enable differentiation between aeroplanes, helicopters, and sport aircraft, and also allow for different weight groups. A diagram of the grouping is shown in the Definitions section.

The following table displays the social cost for each Safety Target Group for the quarters 1 July to 30 September 2007 and 2008. Social cost is the cost of fatal, serious and minor injuries, and aircraft destroyed, expressed in 2008 dollars.

Safety Target Group	1 Jul to 30 Sep 2007 \$m	1 Jul to 30 Sep 2008 \$m	Change \$m
Airline Operations - Large Aeroplanes	-	-	-
Airline Operations - Medium Aeroplanes	-	-	-
Airline Operations - Small Aeroplanes	-	0.15	+ 0.15
Airline Operations - Helicopter	-	0.03	+ 0.03
Sport Transport	-	-	-
Other Commercial Operations - Aeroplane	0.86	-	- 0.86
Other Commercial Operations - Helicopter	1.13	-	- 1.13
Agricultural Operations - Aeroplane	0.85	-	- 0.85
Agricultural Operations - Helicopter	-	0.92	+ 0.92
Agricultural Operations - Sport Aircraft	-	-	-
Private Operations - Aeroplane	-	0.72	+ 0.72
Private Operations - Helicopter	0.30	-	- 0.30
Private Operations - Sport	0.70	0.73	+ 0.03
<b>Total</b>	<b>3.85</b>	<b>2.56</b>	<b>- 1.29</b>

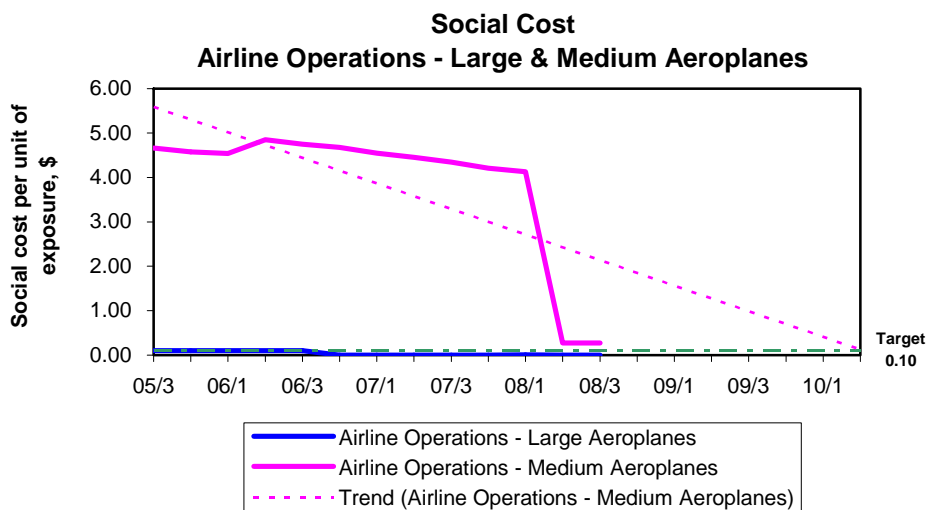
Note that the individual values in the table may not sum exactly to the total shown due to rounding.

### Safety Target Graphs

Each Safety Target Group has its own target level expressed as social cost per unit of person exposure, the unit being "one seat hour". For Safety Target Groups that are not predominantly passenger carrying a surrogate of 500 kg of aircraft weight is used instead of person exposure. These outcomes represent the maximum level of social cost considered acceptable for each group.

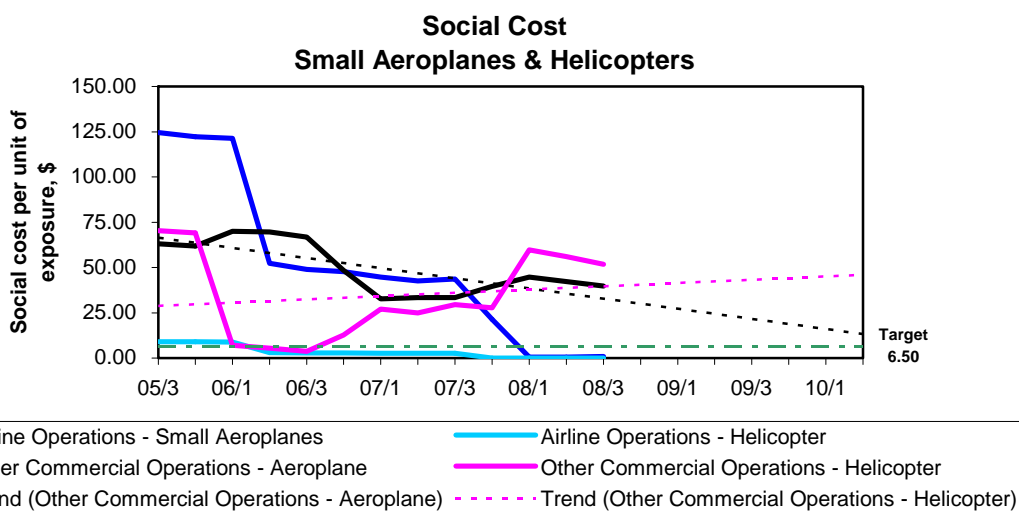
The results for previous reports were derived using 10 year averages for the Airline Operations - Large Aeroplanes and Medium Aeroplanes groups and 12 month averages for the other groups; the results in this report are derived using 3 year averages for all groups.

Graphs displaying the Safety Outcome Targets and the progress over each quarter are shown on the following pages.



The outcome for Airline Operations – Large Aeroplanes (95.7% of total seat hours) has remained at or below the target level of \$0.10 per hour of exposure since the target regime was established in 2005.

The outcome for Airline Operations – Medium Aeroplanes exceeds the target but is trending down and it is possible that the target may be achieved in 2010. The exposure (1.7% of total seat hours) associated with this sector is relatively small. There have been no injuries in this group during the period Jul 06 to Sep 08.

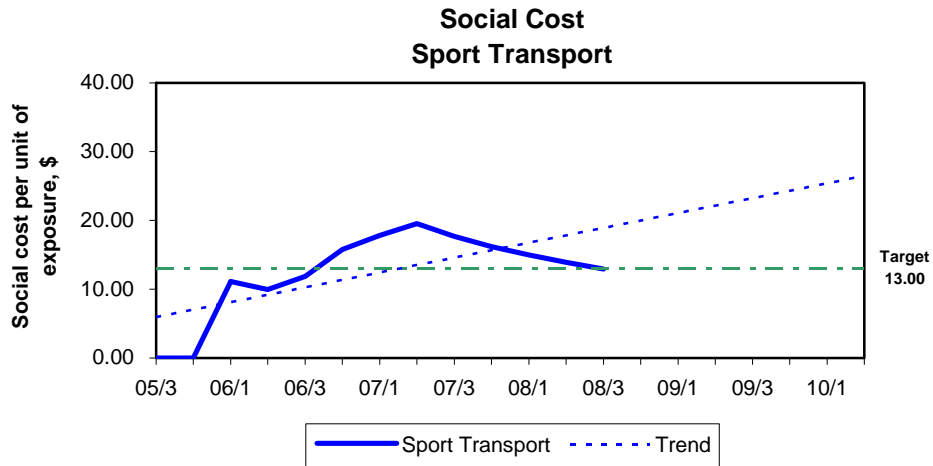


The outcome for Airline Operations – Small Aeroplanes (0.3% of total seat hours) shows a significant long term downward trend from the high starting point of \$124.57 per hour of exposure generated by 14 fatal and 4 serious injuries and 1 minor injury in the three years Oct 02 to Sep 05. There have been no fatal or serious injuries during the period Apr 05 to Sep 08. The safety outcome for this group has been below the target level since the quarter Jan to Mar 08.

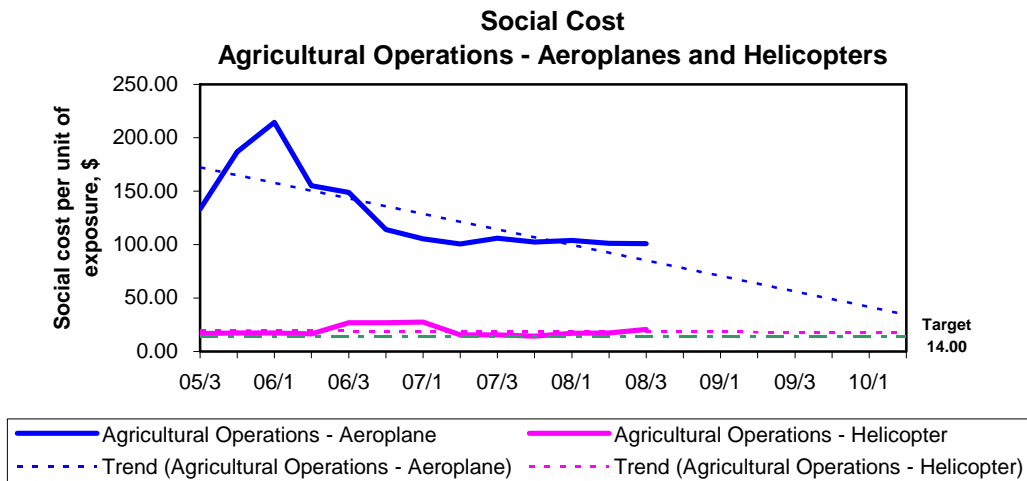
The outcome for Airline Operations – Helicopter has been close to zero since the quarter Apr to Jun 06 as there have been no fatal or serious injuries in this group since 2003.

The outcome for Other Commercial Operations – Aeroplane is well above the target of \$6.50. During the three years Oct 05 to Sep 08 there have been 6 fatal, 3 serious and 5 minor injuries in this group.

The outcome for Other Commercial Operations – Helicopter turned sharply upwards during the fourth quarter of 2006 and is now well above the target level. There have been 2 fatal, 1 serious and 8 minor injuries in this group in the three years Oct 05 to Sep 08.



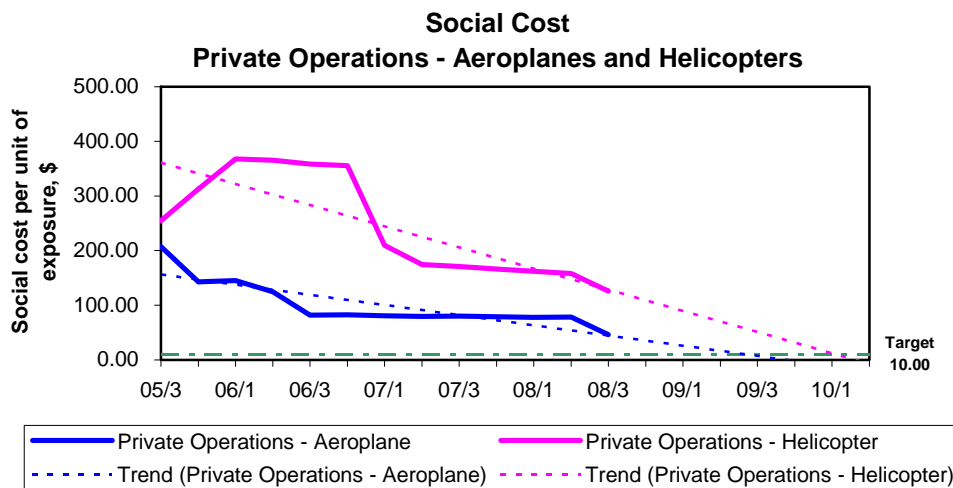
The outcome for Sport Transport peaked in the second quarter of 2007 and has trended downwards in subsequent quarters; it is now at the target level of \$13.00. There have been 11 serious and 3 minor injuries in this group in the three years Oct 05 to Sep 08.



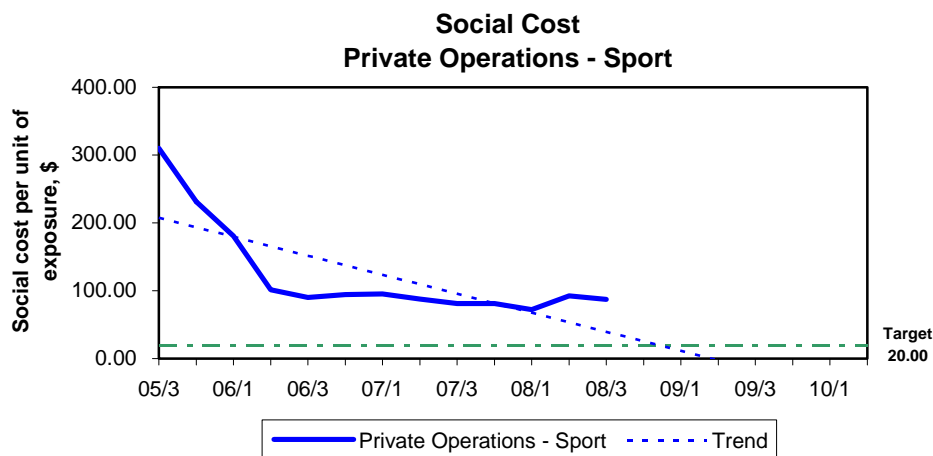
The outcome for Agricultural Operations – Aeroplanes is well above the target level of \$14.00. During the three years Oct 05 to Sep 08 there have been 4 fatal injuries and 1 serious injury in this group.

The outcome for Agricultural Operations – Helicopter is above the target level. There have been 3 injuries (1 fatal, 1 serious and 1 minor) in the three years Oct 05 to Sep 08.





The outcome for Private Operations – Aeroplanes has been trending down since late 2005. There have been 2 fatal, 2 serious and 3 minor injuries in the three years Oct 05 to Sep 08. The outcome for Private Operations – Helicopters has been trending down since early 2006. There have been 4 fatal, 1 serious and 11 minor injuries in the three years Oct 05 to Sep 08. There have been no fatal or serious injuries during the period Apr 06 to Sep 08. The long term trend line for the group is below the target line in 2010.



The outcome for Private Operations – Sport has been trending down since late 2005. There have been 12 fatal, 24 serious and 22 minor injuries in the three years Oct 05 to Sep 08.

## Activity

### Air Transport Flights, Total Hours

#### Quarterly Comparison

Activity	1 Oct to 31 Dec 2006	1 Oct to 31 Dec 2007	Change	
			Number	Percentage
Air Transport Flights	104,799	104,008	- 791	- 0.8
Total Hours	226,271	243,975	+ 17,704	+ 7.8

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 Aircraft Operating Statistics for periods up to the quarter ended 31 December 2007 (the most recent quarter for which these data are available).

### Aircraft Movements

#### Quarterly Comparison

Activity	1 Jul to 30 Sep 2007	1 Jul to 30 Sep 2008	Change	
			Number	Percentage
Aircraft Movements	289,005	291,661	+ 2,656	+ 0.9

Note that this covers certificated aerodromes only. Includes Auckland, Christchurch, Dunedin, Gisborne (from December 2004), Hamilton, Invercargill, Napier, Nelson, New Plymouth, Ohakea, Palmerston North, Queenstown, Rotorua, Taupo, Tauranga, Wellington and Woodbourne. Excludes Chatham Islands/Tuuta Airport, Kerikeri/Bay of Islands, Manapouri, Mount Cook, Timaru, Wanganui, Westport, Whangarei and Wigram.

### Registered Aircraft

#### Quarterly Comparison

Aircraft Statistics Category	30 September 2007	30 September 2008	Change	
			Number	Percentage
Large Aeroplanes	118	119	+ 1	+ 0.8
Medium Aeroplanes	81	82	+ 1	+ 1.2
Small Aeroplanes	1,443	1,478	+ 35	+ 2.4
Agricultural Aeroplanes	126	121	- 5	- 4.0
Helicopters	675	734	+ 59	+ 8.7
Sport Aircraft	1,684	1,781	+ 97	+ 5.8
<b>Total</b>	<b>4,127</b>	<b>4,315</b>	<b>+ 188</b>	<b>+ 4.6</b>

### Licences

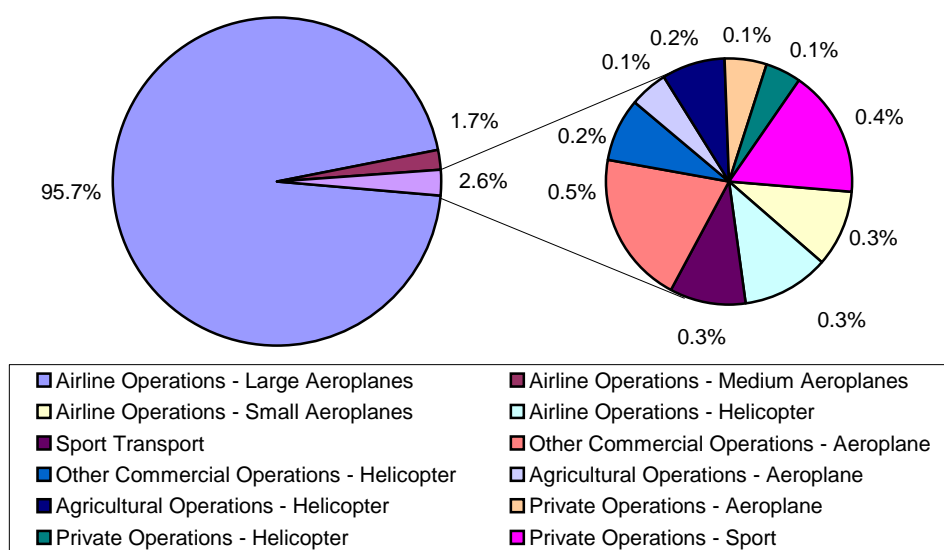
#### Recreational Pilot Licence

In August 2008 the CAA issued the first of a new type of pilot licence, the Recreational Pilot Licence. The number of Recreational Pilot Licences is shown in the Quarterly Statistics table on page 19.

## Industry Size and Shape

The following graph and table show the size and shape of the aviation industry as determined from Aircraft Operating Statistics in the relevant 2010 Safety Target Group categories for the period 1 October to 31 December 2007. 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	95.7
Airline Operations - Medium Aeroplanes	1.7
Airline Operations - Small Aeroplanes	0.3
Airline Operations - Helicopter	0.3
Sport Transport	0.3
Other Commercial Operations - Aeroplane	0.5
Other Commercial Operations - Helicopter	0.2
Agricultural Operations - Aeroplane	0.1
Agricultural Operations - Helicopter	0.2
Agricultural Operations - Sport Aircraft	-
Private Operations - Aeroplane	0.1
Private Operations - Helicopter	0.1
Private Operations - Sport	0.4

Note that the percentages may not sum exactly to 100.0% due to rounding.

## Accidents

### Quarterly Comparison

#### Number of Accidents

Aircraft Statistics Category	1 Jul to 30 Sep 2007	1 Jul to 30 Sep 2008	Change
Large Aeroplanes	0	0	0
Medium Aeroplanes	0	0	0
Small Aeroplanes	1	7	+ 6
Agricultural Aeroplanes	1	2	+ 1
Helicopters	2	5	+ 3
Sport Aircraft	3	4	+ 1
Hang Gliders	4	0	- 4
Parachutes	0	0	0
<b>Total</b>	<b>11</b>	<b>18</b>	<b>+ 7</b>

#### Severity of Accidents

Severity	1 Jul to 30 Sep 2007	1 Jul to 30 Sep 2008	Change
Critical	3	2	- 1
Major	0	14	+ 14
Minor	8	2	- 6

No accidents in the 'Large Aeroplanes' statistics category were classified as Critical in the 1 July to 30 September 2007 or 2008 quarters.

No accidents in the 'Medium Aeroplanes' statistics category were classified as Critical in the 1 July to 30 September 2007 or 2008 quarters.

### Significant Accidents and Other Injury Accidents

#### Significant Injury Accidents

This section describes significant injury accidents that occurred during the period 1 July to 30 September 2008.

#### Helicopters

##### Airline Operations - Helicopter

- A helicopter on a transport passenger A to B flight had an accident. Two people suffered minor injuries but no other information is available at this time.

#### Sport Aircraft

##### Private Operations - Sport

- A microlight had an engine failure after takeoff. The pilot turned 180 degrees and made a hard landing back on the airstrip. The aircraft suffered substantial damage and the pilot received minor injuries.

### ***Significant Non-Injury Accidents***

This section describes significant non-injury accidents that occurred during the period 1 July to 30 September 2008.

#### **Small Aeroplanes**

##### **Airline Operations - Small Aeroplanes**

- An aeroplane on a transport passenger A to B flight suffered a loss of power and made a forced landing in a paddock. There were no injuries amongst the seven persons on board. The aircraft suffered minor damage, but was damaged beyond repair during recovery.

##### **Other Commercial Operations - Aeroplane**

- An aeroplane on a training dual flight suffered damage when its undercarriage retracted as it slowed after landing.

#### **Helicopters**

##### **Airline Operations - Helicopter**

- A helicopter on a transport passenger A to B flight suffered rollover on landing.

##### **Agricultural Operations - Helicopter**

- A helicopter on an agricultural flight crashed when the pilot tried to gain speed by diving into a gully immediately after takeoff on the first flight of the day. The helicopter was destroyed.

##### **Private Operations - Helicopter**

- A helicopter crashed after being hit by a wind gust at 4,000 feet and making a rapid descent.

### ***Other Injury Accidents***

This section describes other injury accidents that occurred during the period 1 July to 30 September 2008.

#### **Small Aeroplanes**

##### **Private Operations - Aeroplane**

- An aeroplane missed its approach, struck power lines and crashed into a bush reserve. Two of the people on board suffered serious injuries, the third person suffered minor injuries.

#### **Helicopters**

##### **Agricultural Operations - Helicopter**

- A helicopter on an agricultural operation struck power lines and the pilot was seriously injured. The helicopter was destroyed.

#### **Sport Aircraft**

##### **Private Operations - Sport**

- Both occupants of a microlight suffered serious injuries when it crashed into a hillside.

**Injuries*****Number of Fatal Accidents (and Number of Fatal Injuries)***

<b>Aircraft Statistics Category</b>	<b>1 Jul to 30 Sep 2007</b>	<b>1 Jul to 30 Sep 2008</b>	<b>Change</b>
Large Aeroplanes	0	0	0
Medium Aeroplanes	0	0	0
Small Aeroplanes	0	0	0
Agricultural Aeroplanes	0	0	0
Helicopters	0	0	0
Sport Aircraft	0	0	0
Hang Gliders	0	0	0
Parachutes	0	0	0
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>

***Number of Serious Injuries***

<b>Aircraft Statistics Category</b>	<b>1 Jul to 30 Sep 2007</b>	<b>1 Jul to 30 Sep 2008</b>	<b>Change</b>
Large Aeroplanes	0	0	0
Medium Aeroplanes	0	0	0
Small Aeroplanes	2	2	0
Agricultural Aeroplanes	0	0	0
Helicopters	0	1	+ 1
Sport Aircraft	0	2	+ 2
Hang Gliders	2	0	- 2
Parachutes	0	0	0
<b>Total</b>	<b>4</b>	<b>5</b>	<b>+ 1</b>

***Number of Minor Injuries***

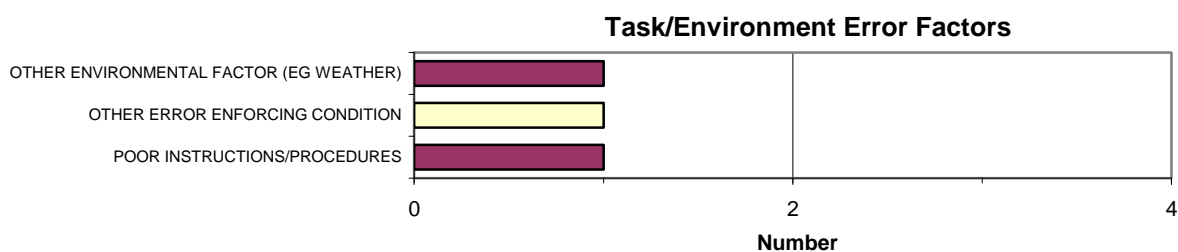
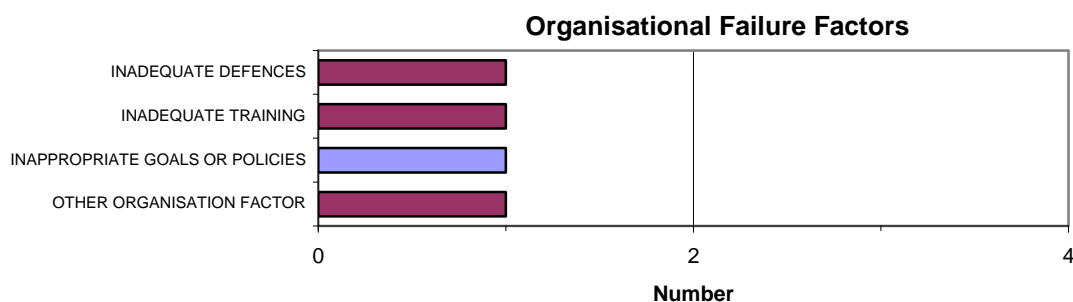
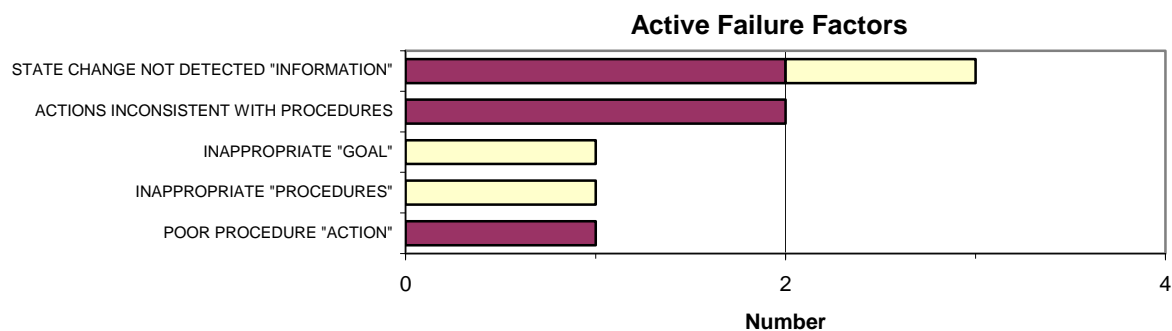
<b>Aircraft Statistics Category</b>	<b>1 Jul to 30 Sep 2007</b>	<b>1 Jul to 30 Sep 2008</b>	<b>Change</b>
Large Aeroplanes	0	0	0
Medium Aeroplanes	0	0	0
Small Aeroplanes	0	1	+ 1
Agricultural Aeroplanes	0	0	0
Helicopters	1	2	+ 1
Sport Aircraft	0	1	+ 1
Hang Gliders	0	0	0
Parachutes	0	0	0
<b>Total</b>	<b>1</b>	<b>4</b>	<b>+ 3</b>

### Accident Causal Factors by Aircraft Statistics Category

The following graphs show the number of causal factors recorded for accidents that occurred during the 12-month period 1 July 2007 to 30 June 2008 for the various aircraft statistics categories.

Causal factors have been assigned to 12 (14%) of the 87 accidents.

Note that causes are not yet available for all accidents that occurred in the 1 July to 30 September 2008 period.



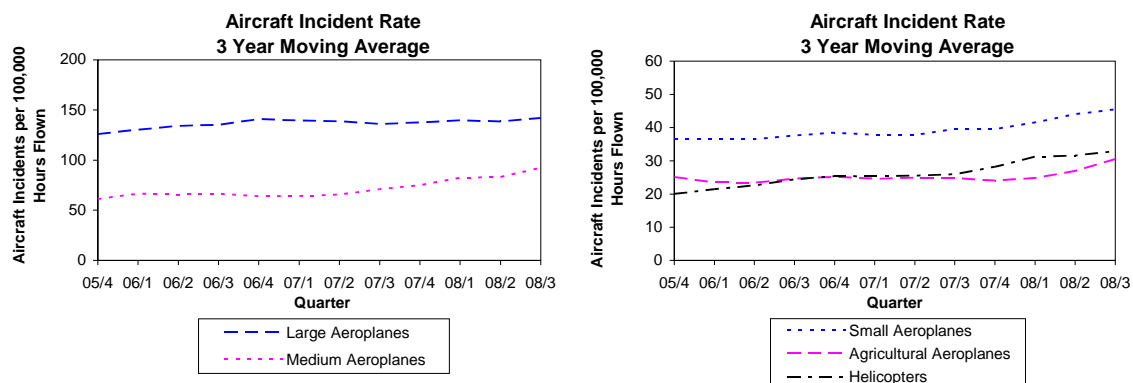
Large Aeroplanes	Medium Aeroplanes	Small Aeroplanes	Agricultural Aeroplanes
Helicopters	Sport Aircraft	Hang Gliders and Parachutes	

Note that Task/Environment Violation Factors have not been recorded for any accidents that occurred during the period 1 July 2007 to 30 June 2008.

## Aircraft Incidents

### Trends

The following graphs show the aircraft incident rates for the three-year period 1 October 2005 to 30 September 2008 (excluding the Sport Aircraft statistics category). The graphs in previous reports used 12 month moving averages; the graphs in this report use 3 year moving averages.



### Quarterly Comparison

#### Number of Aircraft Incidents

Aircraft Statistics Category	1 Jul to 30 Sep 2007	1 Jul to 30 Sep 2008	Change
Large Aeroplanes	83	142	+ 59
Medium Aeroplanes	20	32	+ 12
Small Aeroplanes	42	42	0
Agricultural Aeroplanes	3	6	+ 3
Helicopters	9	13	+ 4
Sport Aircraft	4	1	- 3
Unknown Aircraft	24	13	- 11
<b>Total</b>	<b>185</b>	<b>249</b>	<b>+ 64</b>

#### Severity of Aircraft Incidents

Severity	1 Jul to 30 Sep 2007	1 Jul to 30 Sep 2008	Change
Critical	0	1	+ 1
Major	11	27	+ 16
Minor	174	221	+ 47

No aircraft incidents in the 'Large Aeroplanes' statistics category were classified as Critical in the 1 July to 30 September 2007 or 2008 quarters.

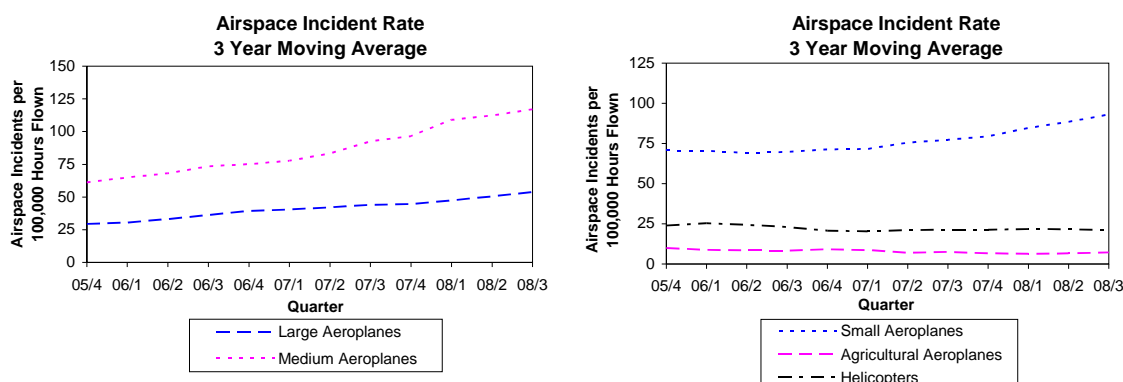
No aircraft incidents in the 'Medium Aeroplanes' statistics category were classified as Critical in the 1 July to 30 September 2007 or 2008 quarters.



## Airspace Incidents

### Trends

The following graphs show the airspace incident rates for the three-year period 1 October 2005 to 30 September 2008 (excluding the Sport Aircraft statistics category). The graphs in previous reports used 12 month moving averages; the graphs in this report use 3 year moving averages.



### Quarterly Comparison

#### Number of Airspace Incidents

Aircraft Statistics Category	1 Jul to 30 Sep 2007	1 Jul to 30 Sep 2008	Change
Large Aeroplanes	42	53	+ 11
Medium Aeroplanes	22	23	+ 1
Small Aeroplanes	68	86	+ 18
Agricultural Aeroplanes	1	1	0
Helicopters	7	9	+ 2
Sport Aircraft	7	9	+ 2
Unknown Aircraft	77	76	- 1
<b>Total</b>	<b>224</b>	<b>257</b>	<b>+ 33</b>

#### Severity of Airspace Incidents

Severity	1 Jul to 30 Sep 2007	1 Jul to 30 Sep 2008	Change
Critical	1	1	0
Major	11	8	- 3
Minor	212	248	+ 36

No airspace incidents in the 'Large Aeroplanes' statistics category were classified as Critical in the 1 July to 30 September 2007 or 2008 quarters.

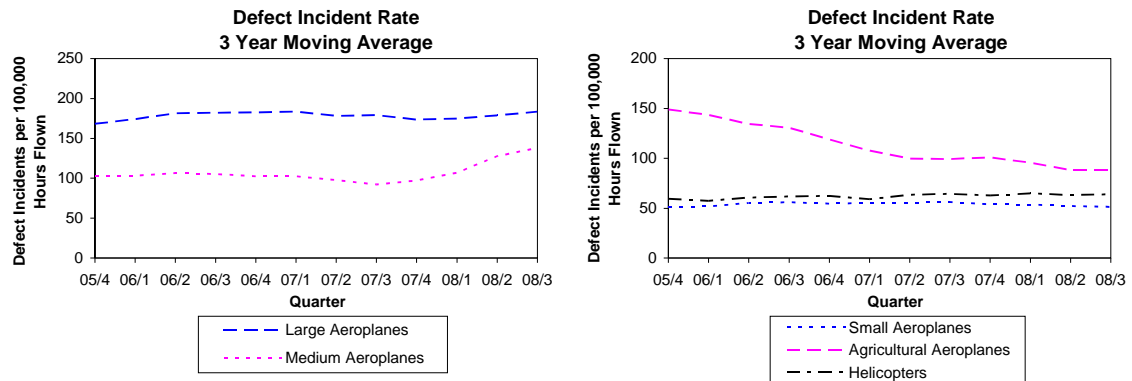
One airspace incident in the 'Medium Aeroplanes' statistics category was classified as Critical in the 1 July to 30 September 2007 quarter.

No airspace incidents in the 'Medium Aeroplanes' statistics category were classified as Critical in the 1 July to 30 September 2008 quarter.

## Defect Incidents

### Trends

The following graphs show the defect incident rates for the three-year period 1 October 2005 to 30 September 2008 (excluding the Sport Aircraft statistics category). The graphs in previous reports used 12 month moving averages; the graphs in this report use 3 year moving averages.



### Quarterly Comparison

#### Number of Defect Incidents

Aircraft Statistics Category	1 Jul to 30 Sep 2007	1 Jul to 30 Sep 2008	Change
Large Aeroplanes	131	191	+ 60
Medium Aeroplanes	15	38	+ 23
Small Aeroplanes	42	33	- 9
Agricultural Aeroplanes	8	11	+ 3
Helicopters	29	29	0
Sport Aircraft	3	4	+ 1
Unknown Aircraft	8	9	+ 1
<b>Total</b>	<b>236</b>	<b>315</b>	<b>+ 79</b>

#### Severity of Defect Incidents

Severity	1 Jul to 30 Sep 2007	1 Jul to 30 Sep 2008	Change
Critical	1	0	- 1
Major	22	28	+ 6
Minor	213	287	+ 74

No defect incidents in the 'Large Aeroplanes' statistics category were classified as Critical in the 1 July to 30 September 2007 or 2008 quarters.

One defect incident in the 'Medium Aeroplanes' statistics category was classified as Critical in the 1 July to 30 September 2007 quarter.

No defect incidents in the 'Medium Aeroplanes' statistics category were classified as Critical in the 1 July to 30 September 2008 quarter.

### Rate Monitoring

Defect incident rate monitoring of individual types of large and medium air transport aircraft has been carried out against the CAA standard for the period ended 30 June 2008. Analysis shows that four of the 14 monitored aircraft types have defect rates above the "trigger level" for CAA action.

## **Bird Incident Rates**

Bird hazard monitoring has been carried out against the CAA standard for the period ended 30 June 2008. Analysis shows that three of the 18 monitored aerodromes have bird strike rates above the “trigger level” for CAA action.

Two aerodromes had strike rates in the high risk category of the CAA standard (above 10.0 bird strikes per 10,000 aircraft movements), one having a long-term upward trend and the other a long-term downward trend. Three aerodromes had strike rates in the medium risk category (5.0 to 10.0 per 10,000 movements), all having long-term downward trends. Thirteen aerodromes had strike rates in the low risk category (below 5.0 per 10,000 movements) with one of these having a long-term upward trend.

## Quarterly Statistics

Quarter	2005/4	2006/1	2006/2	2006/3	2006/4	2007/1
<b>Number of Air Transport Flights<sup>1</sup></b>	113,987	118,130	102,086	98,282	104,799	115,226
<b>Number of Hours Flown<sup>1</sup></b>	230,351	235,453	210,867	211,067	226,271	250,670
<b>Number of Aircraft Movements<sup>2</sup></b>	254,085	263,245	258,378	263,142	255,765	290,284
<b>Number of Aircraft on the Register<sup>3</sup></b>	3,937	3,991	3,991	3,995	4,033	4,075
<b>Number of Licences</b>						
Recreational Pilot Licence	0	0	0	0	0	0
Private Pilot Licence	3,580	3,643	3,483	3,616	3,465	3,500
Commercial Pilot Licence	3,530	3,589	3,593	3,645	3,620	3,603
Airline Transport Pilot Licence	1,814	1,803	1,789	1,810	1,818	1,804
Aircraft Maintenance Engineer Licence	2,075	2,090	2,114	2,135	2,151	2,161
Air Traffic Controller Licence	299	306	296	308	294	299
<b>Number of Part 119 Certificated Operators</b>						
Air Operator – Large Aeroplanes	12	12	11	11	11	11
Air Operator – Medium Aeroplanes	13	12	13	13	14	14
Air Operator – Helicopters and Small Aeroplanes	156	154	158	160	163	161
Air Operator – Pacific	2	2	3	3	3	2
<b>Number of Aircraft Accidents<sup>4</sup></b>						
Large Aeroplanes	0	0	0	0	0	0
Medium Aeroplanes	0	1	1	0	0	0
Small Aeroplanes	2	6	1	2	8	8
Agricultural Aeroplanes	2	2	0	0	0	1
Helicopters	7	3	5	4	6	5
Sport Aircraft	5	11	7	4	4	8
Unknown Aircraft	0	1	0	0	2	0
Hang Gliders	1	7	2	3	4	4
Parachutes	0	2	0	1	1	4
<b>Number of Fatal Accidents<sup>4</sup></b>	2	4	0	0	3	1
<b>Number of Fatal Injuries<sup>4</sup></b>	4	5	0	0	6	1
<b>Number of Serious + Minor Injuries<sup>4</sup></b>	6	18	6	4	15	9
<b>Social Cost \$ million<sup>5</sup></b>	17.53	22.01	1.39	4.10	25.09	7.46
<b>Number of Incidents<sup>6</sup></b>	1,026	1,088	1,167	995	1,095	1,070
<b>Number of Aviation Related Concerns</b>	95	120	86	109	84	75

<sup>1</sup> New Zealand registered aircraft. Includes the aircraft classes aeroplane, helicopter and balloon only; excludes other aircraft classes, hang gliders and parachutes. Estimated for 2008/1, 2008/2 and 2008/3.

<sup>2</sup> Certificated aerodromes. Includes Auckland, Christchurch, Dunedin, Gisborne (from December 2004), Hamilton, Invercargill, Napier, Nelson, New Plymouth, Ohakea, Palmerston North, Queenstown, Rotorua, Taupo, Tauranga, Wellington and Woodbourne. Excludes Chatham Islands/Tuuta Airport, Kerikeri/Bay of Islands, Manapouri, Mount Cook, Timaru, Wanganui, Westport, Whangarei and Wigram.

<sup>3</sup> As at the last day of the quarter. Includes the sport aircraft statistics category. Excludes hang gliders and parachutes.

<sup>4</sup> All accidents. All aircraft statistics categories. Includes hang gliders and parachutes.

<sup>5</sup> All aircraft statistics categories. Includes hang gliders and parachutes. Cost of fatal, serious and minor injuries, and aircraft destroyed, in June 2008 dollars.

<sup>6</sup> All incident sub-types.

Quarter	2007/2	2007/3	2007/4	2008/1	2008/2	2008/3
<b>Number of Air Transport Flights<sup>1</sup></b>	100,420	85,937	104,008	114,802	99,784	84,979
<b>Number of Hours Flown<sup>1</sup></b>	227,923	218,463	243,975	257,058	233,377	221,129
<b>Number of Aircraft Movements<sup>2</sup></b>	272,719	289,005	300,512	321,583	306,863	291,661
<b>Number of Aircraft on the Register<sup>3</sup></b>	4,105	4,127	4,193	4,250	4,301	4,315
<b>Number of Licences</b>						
Recreational Pilot Licence	0	0	0	0	0	10
Private Pilot Licence	3,742	3,788	3,819	3,873	3,856	3,849
Commercial Pilot Licence	3,726	3,779	3,817	3,876	3,925	3,991
Airline Transport Pilot Licence	1,893	1,927	1,968	1,978	1,999	2,020
Aircraft Maintenance Engineer Licence	2,181	2,203	2,227	2,241	2,276	2,311
Air Traffic Controller Licence	326	330	325	325	332	340
<b>Number of Part 119 Certificated Operators</b>						
Air Operator – Large Aeroplanes	11	11	11	11	11	10
Air Operator – Medium Aeroplanes	13	15	16	16	16	15
Air Operator – Helicopters and Small Aeroplanes	159	161	164	163	161	163
Air Operator – Pacific	3	4	3	2	3	3
<b>Number of Aircraft Accidents<sup>4</sup></b>						
Large Aeroplanes	0	0	0	0	0	0
Medium Aeroplanes	1	0	0	0	0	0
Small Aeroplanes	4	1	7	8	6	7
Agricultural Aeroplanes	3	1	1	6	3	2
Helicopters	1	2	4	5	6	5
Sport Aircraft	10	3	5	13	5	4
Unknown Aircraft	0	0	1	0	0	0
Hang Gliders	1	4	2	1	2	0
Parachutes	1	0	1	0	0	0
<b>Number of Fatal Accidents<sup>4</sup></b>	0	0	3	5	2	0
<b>Number of Fatal Injuries<sup>4</sup></b>	0	0	3	7	4	0
<b>Number of Serious + Minor Injuries<sup>4</sup></b>	8	5	8	2	4	9
<b>Social Cost \$ million<sup>5</sup></b>	1.81	3.85	11.96	27.25	14.61	2.56
<b>Number of Incidents<sup>6</sup></b>	1,083	1,027	1,032	1,231	1,271	1,289
<b>Number of Aviation Related Concerns</b>	72	72	73	101	75	58

## Definitions

### **Accident**

Means 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, rotors, 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**

Means any incident, not otherwise classified, associated with the operation of an aircraft.

### **Aircraft Statistics Category**

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

<b>Aircraft Statistics Category</b>	<b>Definition</b>	<b>Aircraft Class</b>
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

### **Airspace Incident**

Means 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**

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

### **Fatal Injury**

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

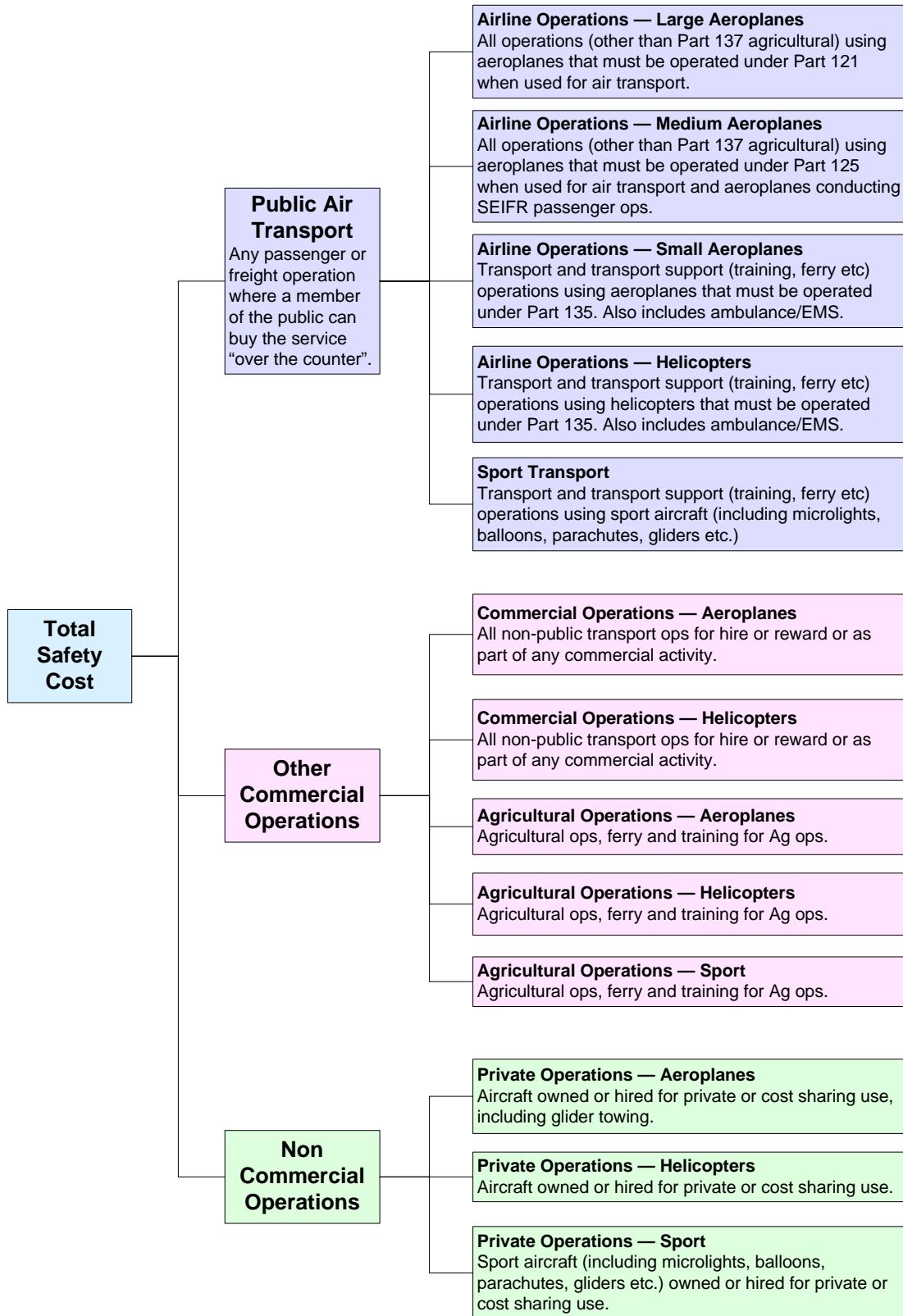
### **Incident**

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

### **Occurrence**

Means an accident or incident.

## Safety Target Structure





### **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:

<b>Severity</b>	<b>Definition</b>
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.