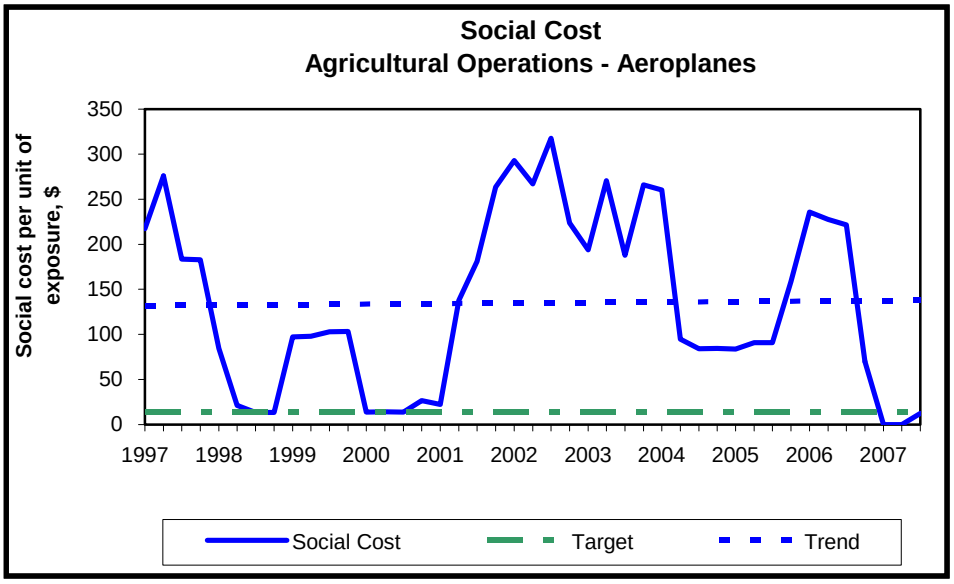
CIVIL AVIATION AUTHORITY
OF NEW ZEALAND

Aviation Safety Summary Report

1 July to 30 September 2007



The graph above shows the social cost per unit of person exposure for the Agricultural Operations - Aeroplanes Safety Target Group.

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.

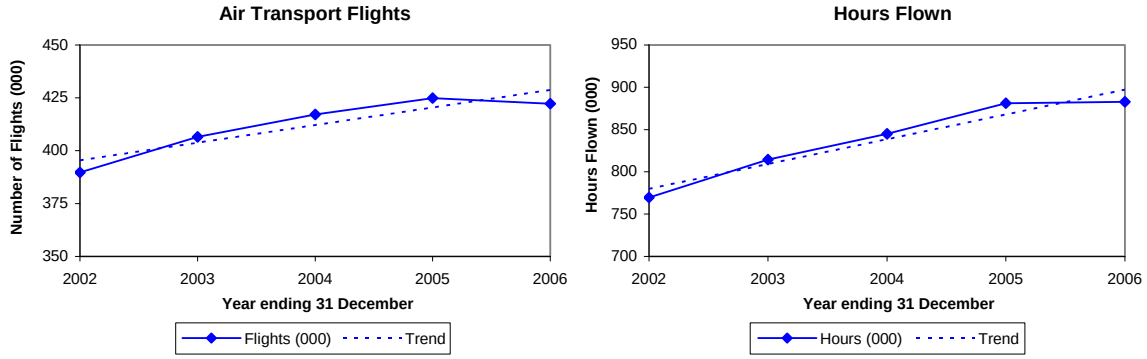
Activity

General

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 2002 to 31 December 2006 (includes the aircraft classes aeroplane, helicopter and balloon only).



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

Quarterly Comparison

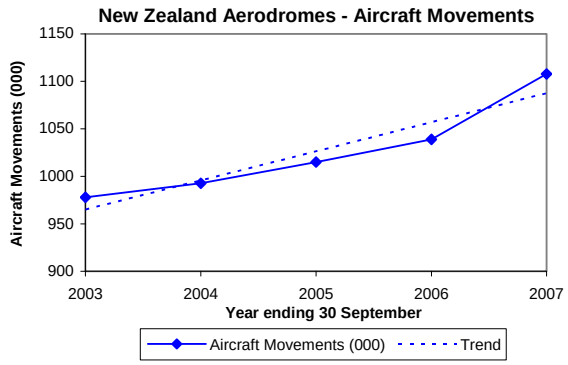
Activity	1 Oct to 31 Dec 2005	1 Oct to 31 Dec 2006	Change	
			Number	Percentage
Air Transport Flights	113,306	103,713	- 9,593	- 8.5
Total Hours	230,376	226,541	- 3,835	- 1.7

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 2006 (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 2002 to 30 September 2007.



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

Quarterly Comparison

Activity	1 Jul to 30 Sep 2006	1 Jul to 30 Sep 2007	Change	
			Number	Percentage
Aircraft Movements	263,142	289,005	+ 25,863	+ 9.8

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 Memorial Airport, Kerikeri/Bay of Islands, Manapouri, Mount Cook, Timaru, Wanganui, Westport, Whangarei and Wigram.

Registered Aircraft

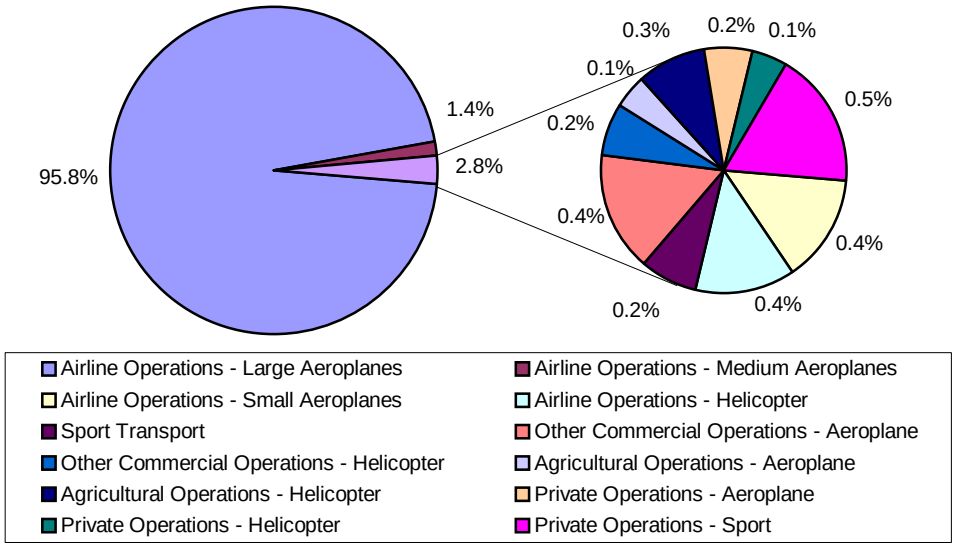
Quarterly Comparison

Aircraft Statistics Category	30 Sep 2006	30 Sep 2007	Change	
			Number	Percentage
Aeroplanes that must be operated under Part 121	119	118	- 1	- 0.8
Aeroplanes that must be operated under at least Part 125	81	81	0	0.0
Other Aeroplanes with Standard Airworthiness Certificate	1,411	1,444	+ 33	+ 2.3
Aeroplanes used for agricultural operations	127	126	- 1	- 0.8
Helicopters with Standard Category Airworthiness Certificate	648	675	+ 27	+ 4.2
Sport Aircraft	1,609	1,683	+ 74	+ 4.6
Total	**3,995**	**4,127**	**+ 132**	**+ 3.3**

Industry Size and Shape

The following graph shows 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 2006. 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 seat hours.

Percentage Sector Seat Hours



Safety Target Group	Percentage Sector Seat Hours
Airline Operations - Large Aeroplanes	95.8%
Airline Operations - Medium Aeroplanes	1.4%
Airline Operations - Small Aeroplanes	0.4%
Airline Operations - Helicopter	0.4%
Sport Transport	0.2%
Other Commercial Operations - Aeroplane	0.4%
Other Commercial Operations - Helicopter	0.2%
Agricultural Operations - Aeroplane	0.1%
Agricultural Operations - Helicopter	0.3%
Agricultural Operations - Sport Aircraft	-
Private Operations - Aeroplane	0.2%
Private Operations - Helicopter	0.1%
Private Operations - Sport	0.5%

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

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 quarter 1 July to 30 September 2007. Social cost is the cost of fatal, serious and minor injuries, and aircraft destroyed, expressed in 2006 dollars.

Safety Target Group	Social Cost $m
Airline Operations - Large Aeroplanes	-
Airline Operations - Medium Aeroplanes	-
Airline Operations - Small Aeroplanes	-
Airline Operations - Helicopter	-
Sport Transport	-
Other Commercial Operations - Aeroplane	0.48
Other Commercial Operations - Helicopter	2.14
Agricultural Operations - Aeroplane	0.80
Agricultural Operations - Helicopter	-
Agricultural Operations - Sport Aircraft	-
Private Operations - Aeroplane	-
Private Operations - Helicopter	0.26
Private Operations - Sport	0.61
Total	**4.29**

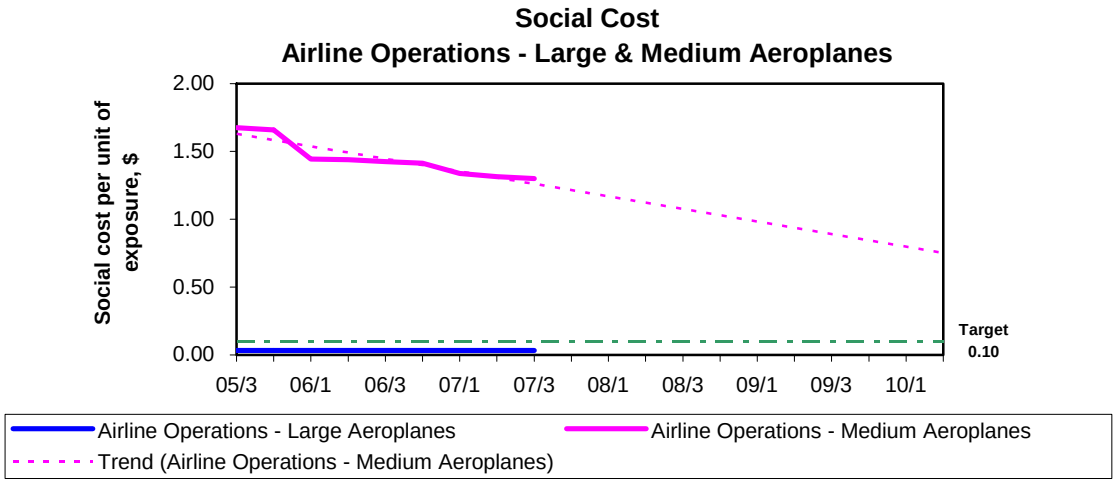
Note that the individual values in the table may not sum exactly to the total shown due to rounding.

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.

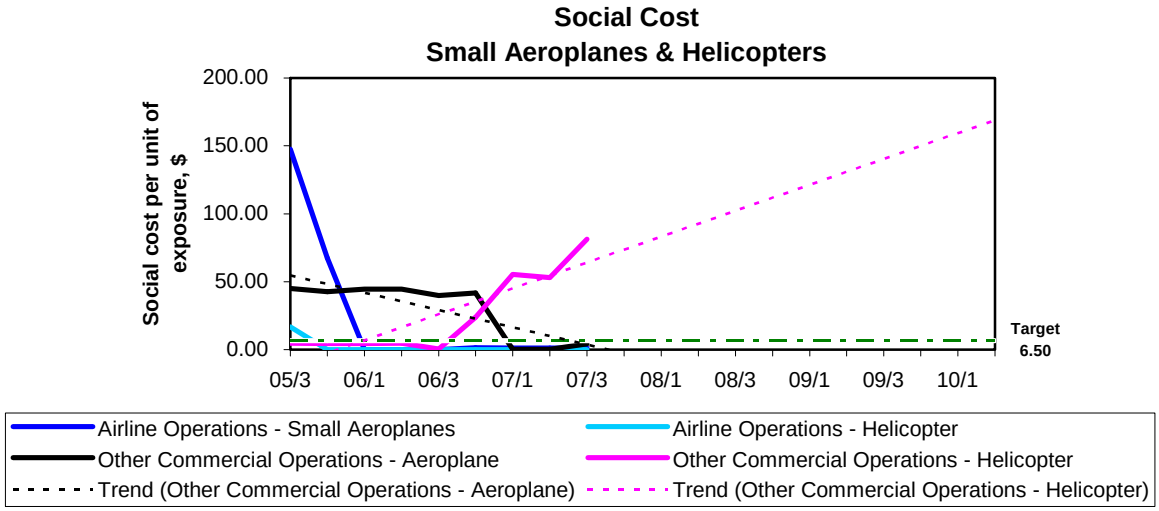
The results for the Airline Operations – Large Aeroplanes and Medium Aeroplanes groups are derived using 10 year averages; all other groups use 12 month averages.

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 (95.8% of total seat hours) has remained well below the target level of $0.10 per hour of exposure since the target regime was established in 2005. There is no discernable trend either up or down.

The outcome for Airline Operations – Medium Aeroplanes exceeds the target by a significant margin and although trending down the target will not be achieved until after 2010. This is because of the relatively small exposure (1.4% of total seat hours) associated with this sector.

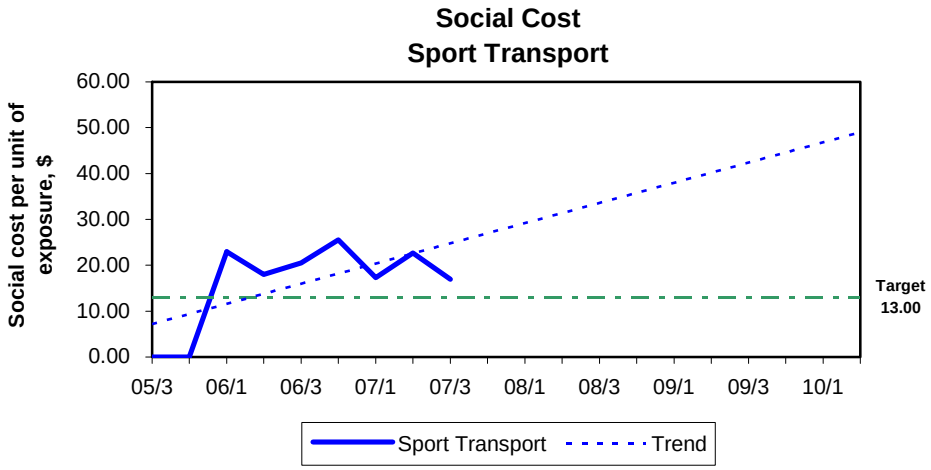


The outcome for Airline Operations – Small Aeroplanes (0.4% of total seat hours) shows a significant long term downward trend from the high starting point of $147.38 per hour of exposure generated by 6 fatalities and 2 serious injuries in the two quarters Oct 04 to Mar 05. The safety outcome for this group has been below the target level since 2006.

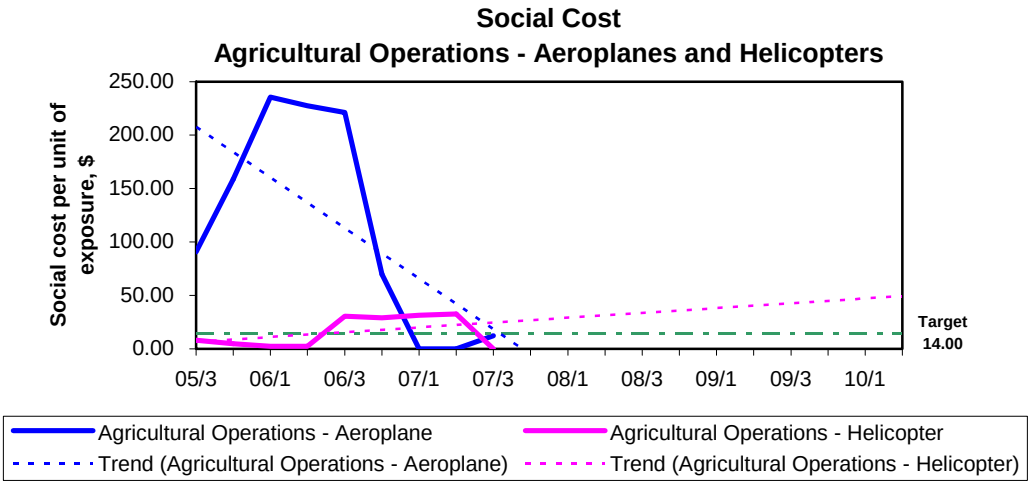
The outcome for Airline Operations – Helicopter remains level on zero as there have been no fatal or serious injuries in this group since 2003.

The outcome for Other Commercial Operations – Aeroplane is well below the target of $6.50. During the four quarters Oct 06 to Sep 07 there have been 1 serious and 3 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. One serious and 5 minor injuries in the two quarters Oct 06 to Mar 07 contribute to the result. The upturn in the most recent quarter Jul to Sep 07 represents the write off of one turbine powered helicopter.

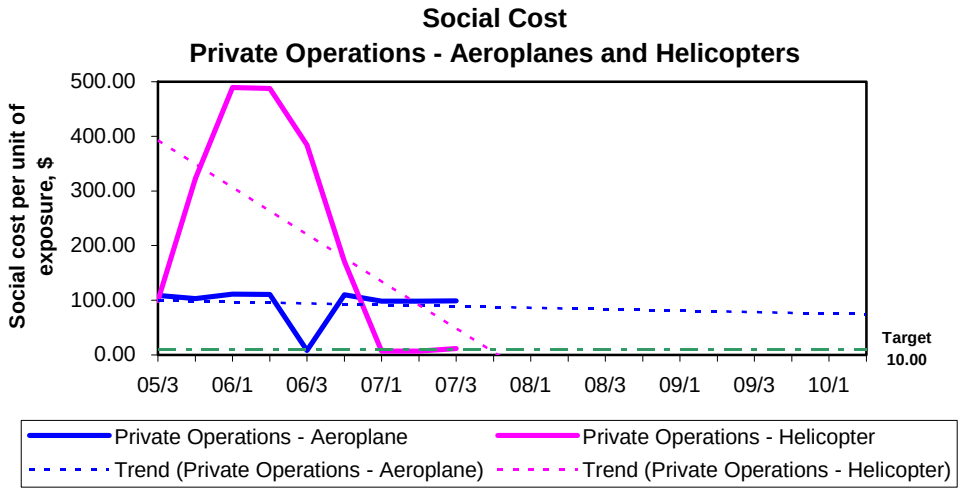


The outcome for Sport Transport peaked in the fourth quarter of 2006 and should trend downwards in subsequent quarters. There have been 6 serious injuries in this group in the three quarters Oct 06 to Jun 07. No injuries occurred in the Jul to Sep 07 quarter.



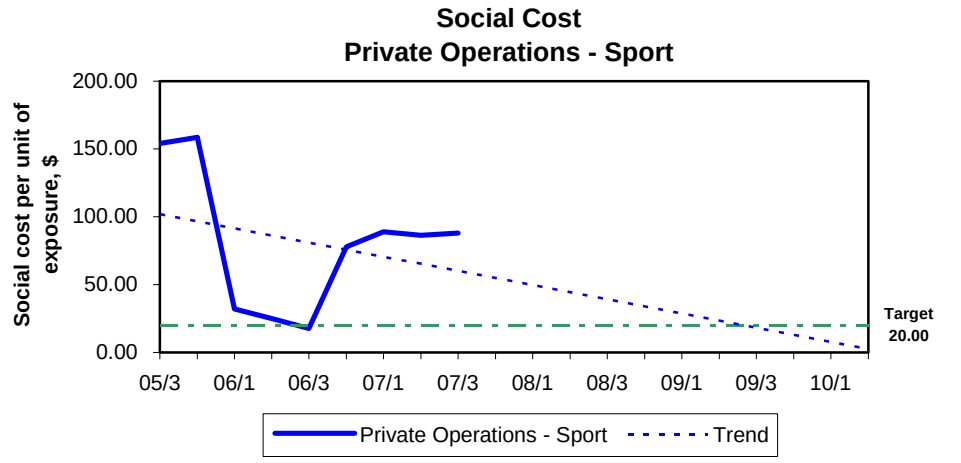
The outcome for Agricultural Operations – Aeroplanes having exceeded the target level for several quarters in 2005 and 2006 is now just below the desired target. It is expected that the long term trend line will fall below the required target by the end of 2007.

The outcome for Agricultural Operations – Helicopter turned sharply upwards during the third quarter of 2006 and remained above the target level for four quarters. There has been no social cost generated in this group for the four quarters Oct 06 to Sep 07 and the outcome is now well below the required target.



The outcome for Private Operations – Aeroplane remained around $100.00 for the first four quarters of the new regime and settled down below the required $10.00 target in the Jul to Sep 06 quarter. However, a double fatality accident towards the end of the Oct to Dec 06 quarter drove the outcome back to the $100.00 level again. Although there has been no social cost generated in the most recent two quarters, Apr to Sep 07, at least one more fatality free quarter will be required before the outcome level reaches the desired outcome target. Given current performance, it is unlikely the required target will be reached by 2010.

The outcome for Private Operations – Helicopters, having rapidly trended up in the last half of 2005 and down since mid 2006, is now around the required target level. This group has generated a significant number of injuries (5 fatal, 2 serious, and 13 minor in the nine quarters Jul 05 to Sep 07), although there have only been 5 minor injuries in the four quarters Oct 06 to Sep 07. It is anticipated that the long term trend line for the group will go below the target line towards 2008.

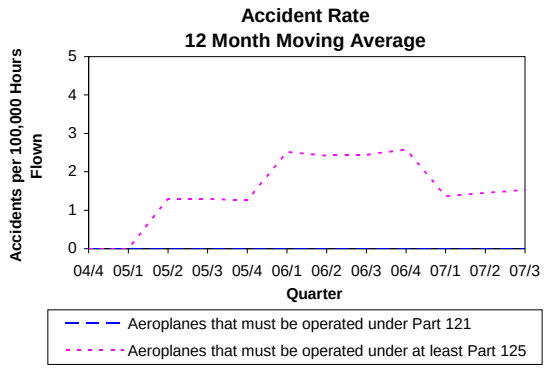


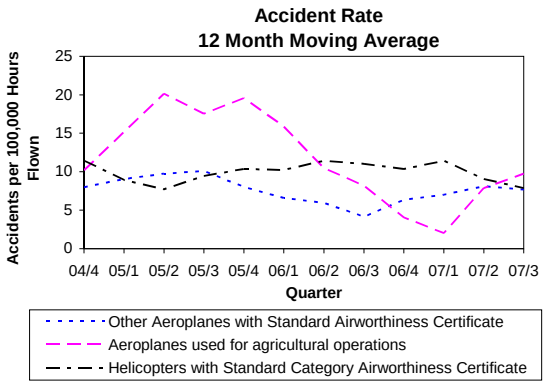
The outcome for Private Operations – Sport, which had been trending down since late 2005, reversed significantly in the Oct to Dec 06 quarter. This reversal was driven by accidents in which there were 4 fatal, 3 serious and 1 minor injuries. There were 2 serious injuries in the Jul to Sep 07 quarter. Although the long term (10 year) trend for this group is downward the short term steep upward trend is cause for concern.

Accidents

Trends

The following graphs show the aircraft accident rates (12 month moving average) for the three-year period 1 October 2004 to 30 September 2007 (includes the aircraft classes aeroplane, helicopter and balloon only).





Quarterly Comparison

Number of Accidents

Aircraft Statistics Category	1 Jul to 30 Sep 2006	1 Jul to 30 Sep 2007	Change
Aeroplanes that must be operated under Part 121	0	0	0
Aeroplanes that must be operated under at least Part 125	0	0	0
Other Aeroplanes with Standard Airworthiness Certificate	2	1	- 1
Aeroplanes used for agricultural operations	0	1	+ 1
Helicopters with Standard Category Airworthiness Certificate	4	2	- 2
Sport Aircraft	4	3	- 1
Hang Gliders	3	4	+ 1
Parachutes	1	0	- 1
Total	**14**	**11**	**- 3**

Severity of Accidents

Severity	1 Jul to 30 Sep 2006	1 Jul to 30 Sep 2007	Change
Critical	1	3	+ 2
Major	7	0	- 7
Minor	6	8	+ 2

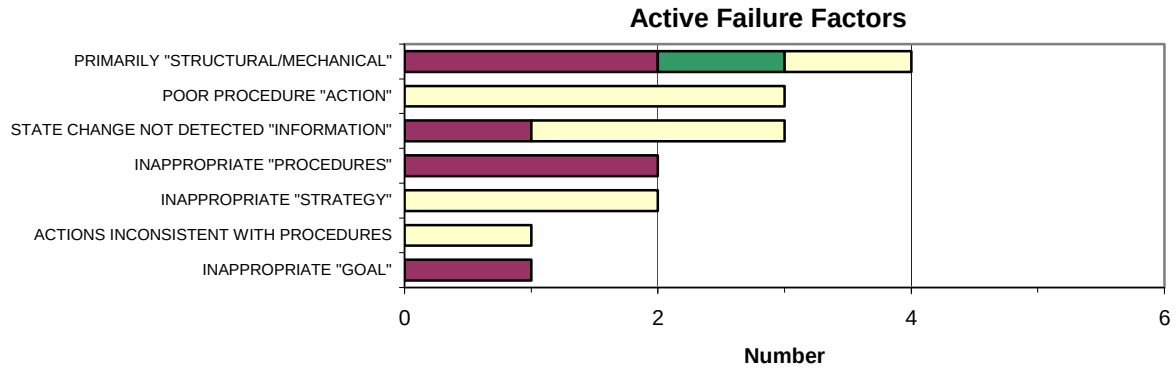
No accidents in the ‘Aeroplanes that must be operated under Part 121’ statistics category were classified as Critical in the 1 July to 30 September 2006 or 2007 quarters.

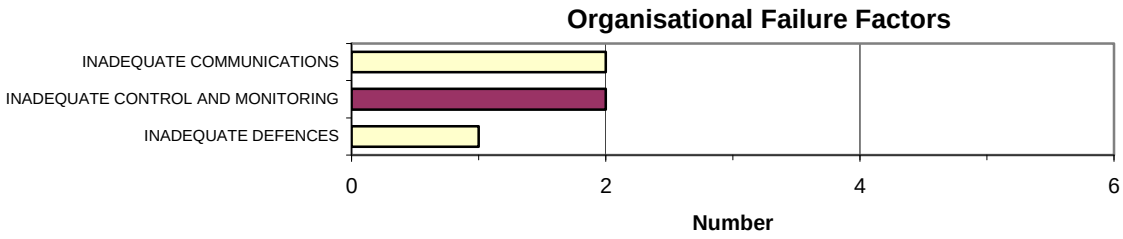
No accidents in the ‘Aeroplanes that must be operated under at least Part 125’ statistics category were classified as Critical in the 1 July to 30 September 2006 or 2007quarters.

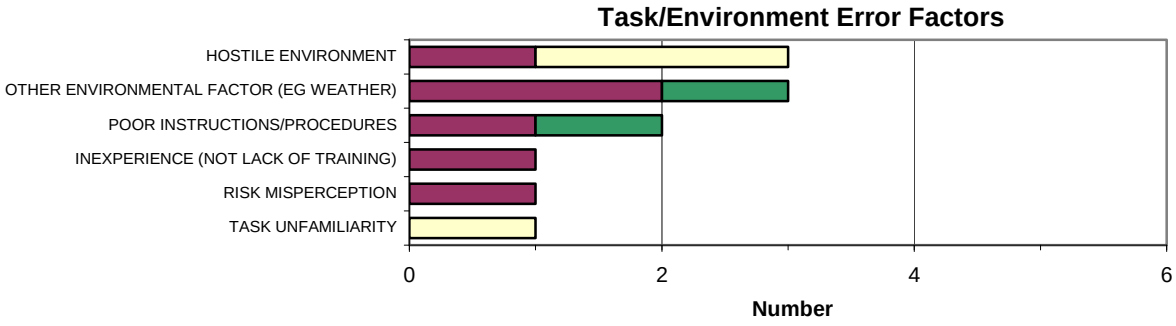
Accident Causal Factors by Aircraft Statistics Category

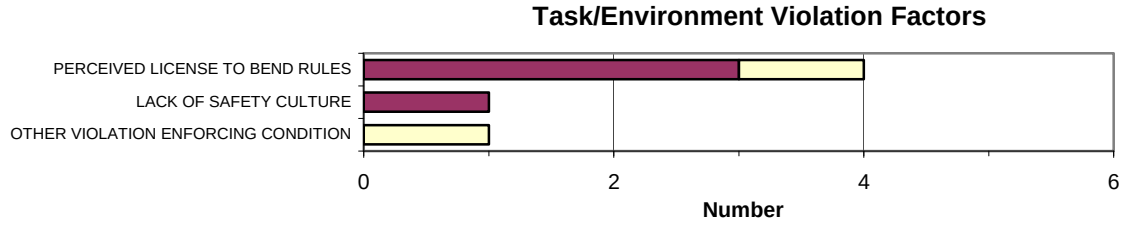
The following graphs show the number of causal factors recorded for accidents that occurred during the 12-month period 1 July 2006 to 30 June 2007 for the various aircraft statistics categories.
Causal factors have been assigned to 25 (28%) of the 90 accidents.

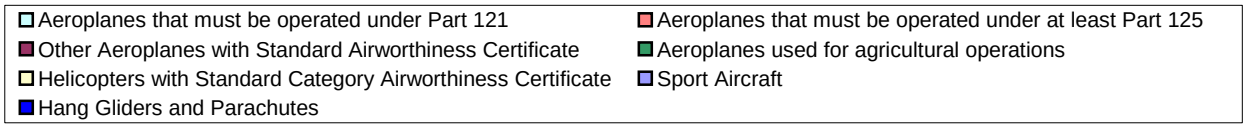
Note that causes are not yet available for all accidents that occurred in the 1 July to 30 September 2007 period.











Injuries

Number of Fatal Accidents (and Number of Fatal Injuries)

Aircraft Statistics Category	1 Jul to 30 Sep 2006	1 Jul to 30 Sep 2007	Change
Aeroplanes that must be operated under Part 121	0	0	0
Aeroplanes that must be operated under at least Part 125	0	0	0
Other Aeroplanes with Standard Airworthiness Certificate	0	0	0
Aeroplanes used for agricultural operations	0	0	0
Helicopters with Standard Category Airworthiness Certificate	0	0	0
Sport Aircraft	0	0	0
Hang Gliders	0	0	0
Parachutes	0	0	0
Total	**0**	**0**	**0**

Number of Serious Injuries

Aircraft Statistics Category	1 Jul to 30 Sep 2006	1 Jul to 30 Sep 2007	Change
Aeroplanes that must be operated under Part 121	0	0	0
Aeroplanes that must be operated under at least Part 125	0	0	0
Other Aeroplanes with Standard Airworthiness Certificate	0	1	+ 1
Aeroplanes used for agricultural operations	0	0	0
Helicopters with Standard Category Airworthiness Certificate	0	0	0
Sport Aircraft	0	0	0
Hang Gliders	1	2	+ 1
Parachutes	1	0	- 1
Total	**2**	**3**	**+ 1**

Number of Minor Injuries

Aircraft Statistics Category	1 Jul to 30 Sep 2006	1 Jul to 30 Sep 2007	Change
Aeroplanes that must be operated under Part 121	0	0	0
Aeroplanes that must be operated under at least Part 125	0	0	0
Other Aeroplanes with Standard Airworthiness Certificate	0	1	+ 1
Aeroplanes used for agricultural operations	0	0	0
Helicopters with Standard Category Airworthiness Certificate	2	1	- 1
Sport Aircraft	0	0	0
Hang Gliders	0	0	0
Parachutes	0	0	0
Total	**2**	**2**	**0**

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 2007.

Helicopters with Standard Category Airworthiness Certificate

Private Operations – Helicopter

- A Robinson R22 on a private flight lost power and crashed into a hillside. The passenger suffered minor injuries.

Significant Non-Injury Accidents

There were no significant non-injury accidents in the period 1 July to 30 September 2007.

Other Injury Accidents

This section describes other injury accidents that occurred during the period 1 July to 30 September 2007.

Other Aeroplanes with Standard Airworthiness Certificate

Other Commercial Operations - Aeroplane

- An aeroplane on a training dual flight was reported missing and found crashed. One occupant suffered serious injuries, the other minor injuries.

Sport Aircraft

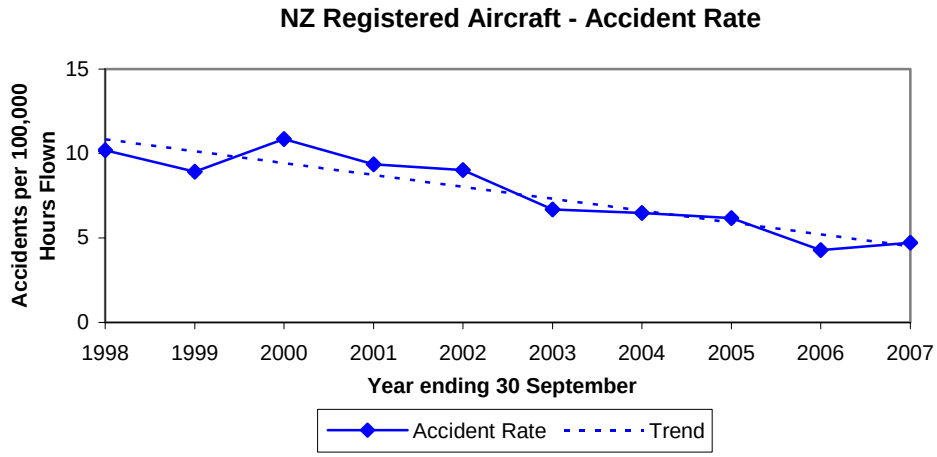
Private Operations - Sport

- A hang glider on a private flight fell approximately 90 feet after its wingtip clipped a tree. The pilot suffered serious injuries.

- A hang glider on a private flight failed to get airborne. The pilot suffered serious injuries.

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 1997 to 30 September 2007.



Note that this graph does not show a moving average.

Bird Incident Rates

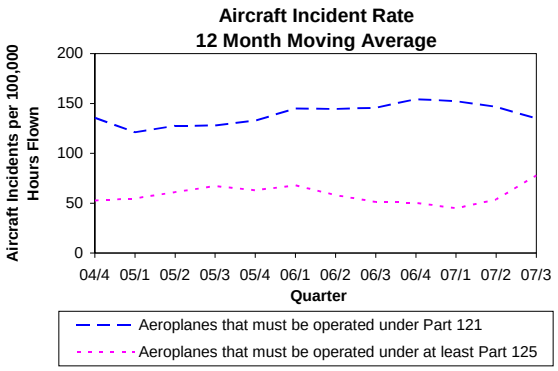
Bird hazard monitoring has been carried out against the CAA standard for the period ended 31 March 2007. Analysis shows that eight of the 18 monitored aerodromes have bird strike rates above the "trigger level" for CAA action.

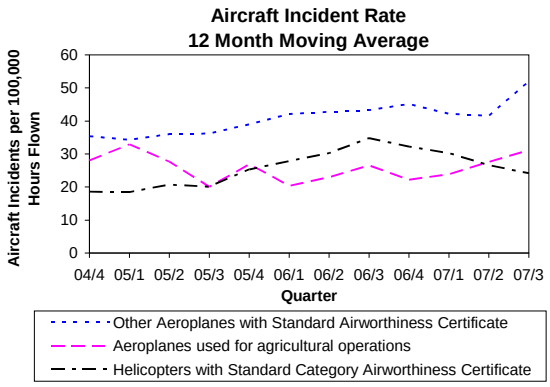
One aerodrome exhibited a strike rate in the high risk category of the CAA standard (above 10.0 bird strikes per 10,000 aircraft movements). Six aerodromes exhibited a strike rate in the medium risk category (5.0 to 10.0 per 10,000 movements) and four of these aerodromes displayed a long-term upward trend. Eleven aerodromes exhibited a strike rate in the low risk category (below 5.0 per 10,000 movements) and three of these aerodromes displayed a long-term upward trend.

Aircraft Incidents

Trends

The following graphs show the aircraft incident rates (12 month moving average) for the three-year period 1 October 2004 to 30 September 2007 (includes the aircraft classes aeroplane, helicopter and balloon only).





Quarterly Comparison

Number of Aircraft Incidents

Aircraft Statistics Category	1 Jul to 30 Sep 2006	1 Jul to 30 Sep 2007	Change
Aeroplanes that must be operated under Part 121	120	80	- 40
Aeroplanes that must be operated under at least Part 125	9	23	+ 14
Other Aeroplanes with Standard Airworthiness Certificate	23	52	+ 29
Aeroplanes used for agricultural operations	2	4	+ 2
Helicopters with Standard Category Airworthiness Certificate	13	9	- 4
Sport Aircraft	5	6	+ 1
Unknown Aircraft	24	27	+ 3
Total	**196**	**201**	**+ 5**

Severity of Aircraft Incidents

Severity	1 Jul to 30 Sep 2006	1 Jul to 30 Sep 2007	Change
Critical	1	0	- 1
Major	11	11	0
Minor	184	190	+ 6

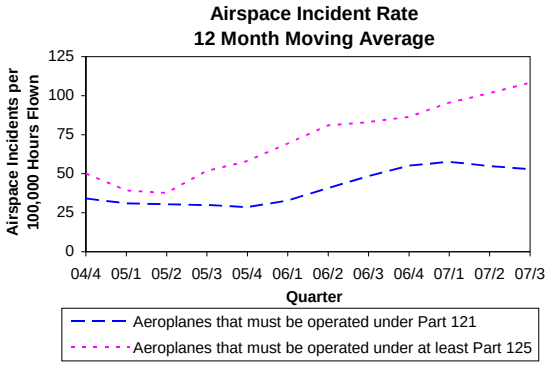
No aircraft incidents in the ‘Aeroplanes that must be operated under Part 121’ statistics category were classified as Critical in the 1 July to 30 September 2006 or 2007 quarters.

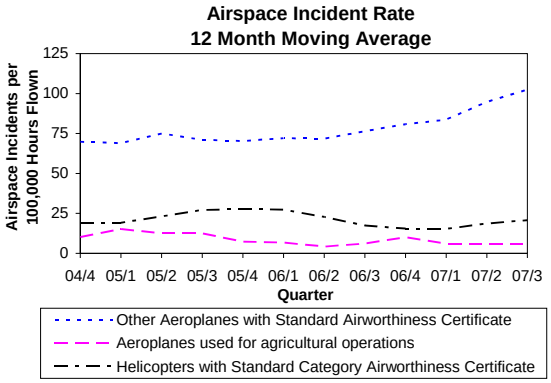
No aircraft incidents in the ‘Aeroplanes that must be operated under at least Part 125’ statistics category were classified as Critical in the 1 July to 30 September 2006 or 2007 quarters.

Airspace Incidents

Trends

The following graphs show the airspace incident rates (12 month moving average) for the three-year period 1 October 2004 to 30 September 2007 (includes the aircraft classes aeroplane, helicopter and balloon only).





Quarterly Comparison

Number of Airspace Incidents

Aircraft Statistics Category	1 Jul to 30 Sep 2006	1 Jul to 30 Sep 2007	Change
Aeroplanes that must be operated under Part 121	47	39	- 8
Aeroplanes that must be operated under at least Part 125	16	17	+ 1
Other Aeroplanes with Standard Airworthiness Certificate	45	68	+ 23
Aeroplanes used for agricultural operations	1	1	0
Helicopters with Standard Category Airworthiness Certificate	3	7	+ 4
Sport Aircraft	5	7	+ 2
Unknown Aircraft	71	87	+ 16
Total	**188**	**226**	**+ 38**

Severity of Airspace Incidents

Severity	1 Jul to 30 Sep 2006	1 Jul to 30 Sep 2007	Change
Critical	3	0	- 3
Major	6	11	+ 5
Minor	179	215	+ 36

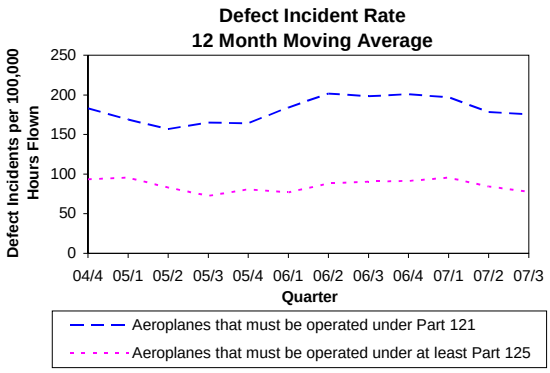
No airspace incidents in the ‘Aeroplanes that must be operated under Part 121’ statistics category were classified as Critical in the 1 July to 30 September 2006 or 2007 quarters.

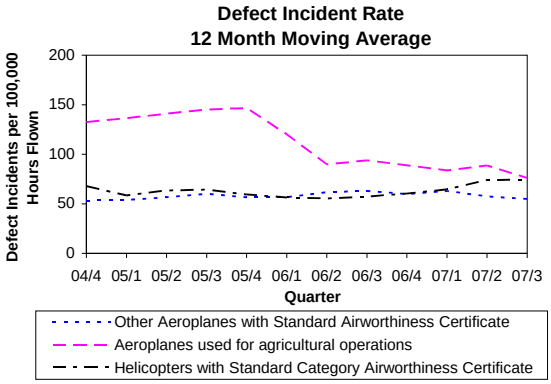
No airspace incidents in the ‘Aeroplanes that must be operated under at least Part 125’ statistics category were classified as Critical in the 1 July to 30 September 2006 or 2007 quarters.

Defect Incidents

Trends

The following graphs show the defect incident rates (12 month moving average) for the three-year period 1 October 2004 to 30 September 2007 (includes the aircraft classes aeroplane, helicopter and balloon only).





Quarterly Comparison

Number of Defect Incidents

Aircraft Statistics Category	1 Jul to 30 Sep 2006	1 Jul to 30 Sep 2007	Change
Aeroplanes that must be operated under Part 121	146	131	- 15
Aeroplanes that must be operated under at least Part 125	20	13	- 7
Other Aeroplanes with Standard Airworthiness Certificate	38	32	- 6
Aeroplanes used for agricultural operations	13	7	- 6
Helicopters with Standard Category Airworthiness Certificate	28	29	+ 1
Sport Aircraft	6	1	- 5
Unknown Aircraft	5	7	+ 2
Total	**256**	**220**	**- 36**

Severity of Defect Incidents

Severity	1 Jul to 30 Sep 2006	1 Jul to 30 Sep 2007	Change
Critical	0	1	+ 1
Major	14	21	+ 7
Minor	242	198	- 44

No defect incidents in the ‘Aeroplanes that must be operated under Part 121’ statistics category were classified as Critical in the 1 July to 30 September 2006 or 2007 quarters.

No defect incidents in the ‘Aeroplanes that must be operated under at least Part 125’ statistics category were classified as Critical in the 1 July to 30 September 2006 quarter.

One defect incident in the ‘Aeroplanes that must be operated under at least Part 125’ statistics category was classified as Critical in the 1 July to 30 September 2007 quarter. A possible crack was found in a landing gear actuator after hydraulic fluid was observed leaking from the area.

Rate Monitoring

Defect incident rate monitoring of individual types of medium and large air transport aircraft has been carried out against the CAA standard for the period ended 30 June 2007. Analysis shows that two of the fifteen monitored aircraft types have defect rates above the “trigger level” for CAA action.

Quarterly Statistics

Quarter	2004/4	2005/1	2005/2	2005/3	2005/4	2006/1
Number of Air Transport Flights[1]	108,865	118,483	98,333	94,778	113,306	117,941
Number of Hours Flown[1]	208,652	234,454	208,055	208,273	230,376	235,889
Number of Aircraft Movements[2]	239,658	264,617	249,893	260,951	254,085	263,245
Number of Aircraft on the Register[3]	3,795	3,828	3,872	3,896	3,937	3,991
Number of Licences						
Private Pilot Licence	3,649	3,655	3,683	3,683	3,580	3,643
Commercial Pilot Licence	3,470	3,484	3,524	3,540	3,530	3,589
Airline Transport Pilot Licence	1,733	1,746	1,791	1,802	1,814	1,803
Aircraft Maintenance Engineer Licence	1,983	2,003	2,019	2,055	2,075	2,090
Air Traffic Controller Licence	299	302	306	312	299	306
Number of Part 119 Certificated Operators						
Air Operator – Large Aeroplanes	12	11	11	12	12	12
Air Operator – Medium Aeroplanes	11	11	11	12	13	12
Air Operator – Helicopters and Small Aeroplanes	149	150	150	152	156	154
Air Operator – Pacific	1	1	2	2	2	2
Number of Aircraft Accidents[4]						
Aeroplanes that must be operated under Part 121	0	0	0	0	0	0
Aeroplanes that must be operated under at least Part 125	0	0	1	0	0	1
Other Aeroplanes with Standard Airworthiness Certificates	7	10	3	7	2	6
Aeroplanes used for agricultural operations	1	3	2	1	2	2
Helicopters with Standard Category Airworthiness Certificates	5	3	3	5	7	3
Sport Aircraft	12	11	6	3	5	12
Unknown Aircraft	0	0	0	0	0	1
Hang Gliders	2	6	0	1	1	7
Parachutes	0	0	0	0	0	2
Number of Fatal Accidents[4]	3	4	1	2	2	4
Number of Fatal Injuries[4]	4	7	2	3	4	5
Number of Serious + Minor Injuries[4]	9	6	6	9	6	16
Social Cost $ million[5]	17.17	23.60	7.92	10.65	16.40	19.55
Number of Incidents[6]	885	963	964	879	1,012	1,077
Number of Aviation Related Concerns	79	110	62	80	95	120

[1] New Zealand registered aircraft. Includes the aircraft classes aeroplane, helicopter and balloon only; excludes other aircraft classes, hang gliders and parachutes. Estimated for 2007/1, 2007/2 and 2007/3.

[2] 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 Memorial Airport, Kerikeri/Bay of Islands, Manapouri, Mount Cook, Timaru, Wanganui, Westport, Whangarei and Wigram.

[3] As at the last day of the quarter. Includes the sport aircraft statistics category. Excludes hang gliders and parachutes.

[4] All accidents. All aircraft statistics categories. Includes hang gliders and parachutes.

[5] All aircraft statistics categories. Includes hang gliders and parachutes. Cost of fatal, serious and minor injuries, and aircraft destroyed, in June 2006 dollars.

[6] All incident sub-types.

Quarter	2006/2	2006/3	2006/4	2007/1	2007/2	2007/3
Number of Air Transport Flights[1]	102,847	97,764	103,713	108,554	93,573	89,206
Number of Hours Flown[1]	210,259	210,079	226,541	231,831	205,854	206,284
Number of Aircraft Movements[2]	258,378	263,142	255,765	290,284	272,719	289005
Number of Aircraft on the Register[3]	3,991	3,995	4,033	4,075	4,105	4,127
Number of Licences						
Private Pilot Licence	3,483	3,616	3,465	3,500	3,742	3,788
Commercial Pilot Licence	3,593	3,645	3,620	3,603	3,726	3,779
Airline Transport Pilot Licence	1,789	1,810	1,818	1,804	1,893	1,927
Aircraft Maintenance Engineer Licence	2,114	2,135	2,151	2,161	2,181	2,203
Air Traffic Controller Licence	296	308	294	299	326	330
Number of Part 119 Certificated Operators						
Air Operator – Large Aeroplanes	11	11	11	11	11	11
Air Operator – Medium Aeroplanes	13	13	14	14	13	15
Air Operator – Helicopters and Small Aeroplanes	158	160	163	161	159	161
Air Operator – Pacific	3	3	3	2	3	4
Number of Aircraft Accidents[4]						
Aeroplanes that must be operated under Part 121	0	0	0	0	0	0
Aeroplanes that must be operated under at least Part 125	1	0	0	0	1	0
Other Aeroplanes with Standard Airworthiness Certificates	1	2	8	8	4	1
Aeroplanes used for agricultural operations	0	0	0	1	3	1
Helicopters with Standard Category Airworthiness Certificates	5	4	6	5	1	2
Sport Aircraft	7	4	4	8	10	3
Unknown Aircraft	0	0	2	0	0	0
Hang Gliders	2	3	4	4	1	4
Parachutes	0	1	1	4	1	0
Number of Fatal Accidents[4]	0	0	3	1	0	0
Number of Fatal Injuries[4]	0	0	6	1	0	0
Number of Serious + Minor Injuries[4]	6	4	15	9	8	5
Social Cost $ million[5]	0.71	3.38	22.67	6.47	0.96	4.29
Number of Incidents[6]	1,156	989	1,086	1,062	1,076	1,025
Number of Aviation Related Concerns	86	109	84	73	70	63

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 the 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 aircraft classes included in each aircraft statistics category.

Aircraft Statistics Category	Aircraft Class
Aeroplanes that must be operated under Part 121	Aeroplane
Aeroplanes that must be operated under at least Part 125	Aeroplane
Other Aeroplanes with Standard Airworthiness Certificates	Aeroplane
Aeroplanes used for agricultural operations	Aeroplane
Helicopters with Standard Category Airworthiness Certificates	Helicopter
Sport Aircraft	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.

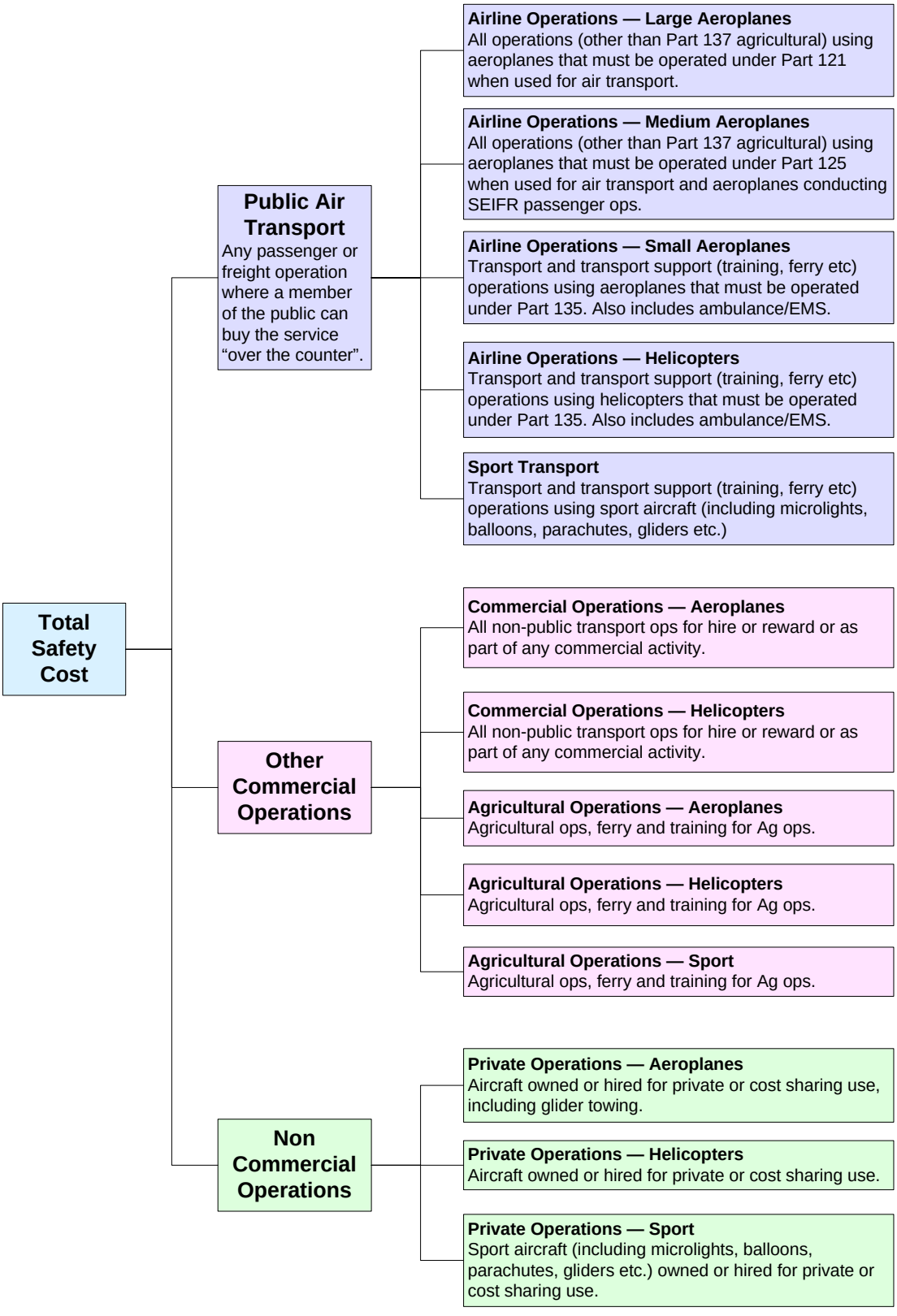
Incident

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:

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.

Errata for previous reports

Aviation Safety Summary Report for 1 April to 30 June 2007

Activity

General

Registered Aircraft

Quarterly Comparison

On page 2 in the Registered Aircraft – Quarterly Comparison table under the headings Change – Number and Percentage, there are some errors. The correct data is shown below:

Aircraft Statistics Category	30 Jun 2006	30 Jun 2007	Change	
			Number	Percentage
Aeroplanes that must be operated under Part 121	123	118	- 5	- 4.1
Aeroplanes that must be operated under at least Part 125	79	80	+ 1	+ 1.3
Other Aeroplanes with Standard Airworthiness Certificate	1,407	1,439	+ 32	+ 2.3
Aeroplanes used for agricultural operations	128	127	- 1	- 0.8
Helicopters with Standard Category Airworthiness Certificate	647	672	+ 25	+ 3.9
Sport Aircraft	1,607	1,669	+ 62	+ 3.9
Total	**3,991**	**4,105**	**+ 114**	**+ 2.9**

Safety Outcome Targets for 2010

On pages 4 and 5 in the Safety Target Structure and Safety Outcome Targets for 2010 sections, and pages 17 and 18 in the Social Cost row of the Quarterly Statistics table, there are some errors. These errors were due to the non availability of estimates of aircraft loss or damage and errors in the injury numbers used.

Corrected and updated graphs, and corrected values of quarterly social cost are shown in the report for 1 July to 30 September 2007.

The correct data for page 4, Safety Target Structure, is shown below:

The following table displays the social cost for each Safety Target Group for the quarter 1 April to 30 June 2007. Social cost per fatal, serious and minor injury, and aircraft destroyed, in 2006 dollars.

Safety Target Group	Social Cost $m
Airline Operations - Large Aeroplanes	-
Airline Operations - Medium Aeroplanes	-
Airline Operations - Small Aeroplanes	-
Airline Operations - Helicopter	-
Sport Transport	0.61
Other Commercial Operations - Aeroplane	-
Other Commercial Operations - Helicopter	-
Agricultural Operations - Aeroplane	-
Agricultural Operations - Helicopter	-
Agricultural Operations - Sport Aircraft	-
Private Operations - Aeroplane	-
Private Operations - Helicopter	0.02
Private Operations - Sport	0.33
Total	**0.96**

The correct data for page 5, Safety Outcome Targets for 2010, is shown below:

Safety Target Group	Injuries			Previous Estimate $ (31/3/07)	Current Estimate $ (30/6/07)	Target $
	Total Fatal	Total Serious	Total Minor			
Airline Operations - Large Aeroplanes*	2	3	5	0.03*	0.03*	0.10
Airline Operations - Medium Aeroplanes*	2		4	1.34*	1.31*	0.10
Airline Operations - Small Aeroplanes				1.28	1.15	6.50
Airline Operations - Helicopter				-	-	6.50
Sport Transport		7		17.28	22.65	13.00
Other Commercial Operations - Aeroplane			2	0.17	0.18	6.50
Other Commercial Operations - Helicopter		1	5	55.38	53.02	6.50
Agricultural Operations - Aeroplane				-	-	14.00
Agricultural Operations - Helicopter	1			31.30	32.63	14.00
Agricultural Operations - Sport Aircraft				-	-	28.00
Private Operations - Aeroplane	2		1	98.24	98.27	10.00
Private Operations - Helicopter			6	6.87	7.04	10.00
Private Operations - Sport	5	8	6	89.02	86.29	20.00

- for large and medium aeroplane operations 10 years of injury data*;
- for all other operations 1 year of injury data.