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# Introduction

This report uses calendar years; the first quarter is 1 January to 31 March. Data in tables may not sum exactly due to rounding.

## Occurrence statistics

The "Twelve Month Moving Average" graphs in the Occurrence Statistics section give an indication of the level of safety failure during the period 1 January to 31 December 2006. They are constructed from data in the CAA Safety Monitoring database, and use actual data reported to the CAA.

# Industry Activity Statistics

## Registered Aircraft

The following table summarises the number of aircraft on the register by aircraft group at 31 March 2007 and 6 months prior:

| Aircraft Group | 30-Sep-06 | | 31-Mar-07 | | Change | |
|---|---|---|---|---|---|---|
| | Number | Percent | Number | Percent | Number | Percent |
| Aeroplanes that must be operated under Part 121 | 119 | 3.0% | 115 | 2.9% | -4 | -3.4% |
| Aeroplanes that must be operated under at least Part 125 | 100 | 2.5% | 99 | 2.5% | -1 | -1.0% |
| Other Aeroplanes with Standard Cs of A | 1392 | 34.8% | 1413 | 35.4% | 21 | 1.5% |
| Helicopters with Standard Category Cs of A | 648 | 16.2% | 658 | 16.5% | 10 | 1.5% |
| Sport Aircraft (Aeropl, FB, Helo only) | 1609 | 40.3% | 1663 | 41.6% | 54 | 3.4% |
| Aeroplanes used for agricultural operations | 127 | 3.2% | 127 | 3.2% | 0 | 0.0% |
| **Total** | **3995** | | **4075** | | **80** | **2.0%** |

## Licences

The following table summarises the number of private pilot, commercial pilot, airline transport pilot, air traffic controller and aircraft maintenance engineer licences on the register at 31 March 2007 and 6 months prior:

| Licence Type (Medical Certificate) | 30 Sep 2006 | 31 Mar 2007 | Change | |
|---|---|---|---|---|
| | | | Number | Percent |
| PPL (Class 1 & 2) | 3616 | 3500 | -116 | -3.2% |
| CPL (Class 2 only) | 1537 | 1788 | 251 | 16.3% |
| CPL (Class 1) | 2108 | 1815 | -293 | -13.9% |
| ATPL (Class 2 only) | 780 | 885 | 105 | 13.5% |
| ATPL (Class 1) | 1030 | 919 | -111 | -10.8% |
| ATCL (Class 3) | 308 | 299 | -9 | -2.9% |
| LAME (N/A) | 2135 | 2161 | 26 | 1.2% |
| **Total Licences** | **11514** | **11367** | **-147** | **-1.3%** |

***Note —*** The statistics above for pilot licences count only those with active class 1 or active class 2 medical certificates. 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). The statistics above for Air Traffic Controller Licences count only those with an active class 3 medical certificate.

The statistics above do not show the number of licence holders as each client may hold more than one licence [e.g. PPL (helicopter) and PPL (aeroplane), or PPL (Helicopter) and CPL (Balloon), held by one client counts as two licences].

## Certificated Operators

The following tables show the number of Civil Aviation Rule Part certificate holders at 31 March 2007 and 6 months prior.

| Rule part | 30 Sep 2006 | 31 Mar 2007 | Change | |
|---|---|---|---|---|
| | | | Number | Percent |
| Part 119 Air Operator | 173 | 174 | 1 | 0.6% |
| Part 119 Air Operator - Pacific | 3 | 2 | -1 | -33.3% |
| Part 119 Transitional Air Operator - ASC | 0 | 0 | 0 | 0.0% |
| Part 119 Transitional Air Operator - AWC | 0 | 0 | 0 | 0.0% |
| Part 129 Foreign Air Operator | 40 | 41 | 1 | 2.5% |
| Part 137 Agricultural Aircraft Operator | 117 | 115 | -2 | -1.7% |
| Part 139 Aerodromes | 25 | 25 | 0 | 0.0% |
| Part 140 Aviation Security Service | 1 | 1 | 0 | 0.0% |
| Part 141 Aviation Training Organisation | 48 | 47 | -1 | -2.1% |
| Part 141 Restricted Training Organisation | 0 | 0 | 0 | 0.0% |
| Part 145 Aircraft Maintenance Organisation | 54 | 56 | 2 | 3.7% |
| Part 146 Aircraft Design Organisation | 12 | 12 | 0 | 0.0% |
| Part 148 Aircraft Manufacturing Organisation | 22 | 24 | 2 | 9.1% |
| Part 149 Aviation Recreation Organisation | 7 | 8 | 1 | 14.3% |
| Part 171 Aeronautical Telecommunication Service Organisation | 3 | 3 | 0 | 0.0% |
| Part 172 Air Traffic Service | 1 | 1 | 0 | 0.0% |
| Part 174 Meteorological Service Organisation | 2 | 2 | 0 | 0.0% |
| Part 175 Aeronautical Information Service Organisation | 2 | 2 | 0 | 0.0% |
| Part 19 Supply Oganisation Certificate of Approval | 57 | 60 | 3 | 5.3% |
| Part 92 Dangerous Goods Packaging Approval | 36 | 44 | 8 | 22.2% |

Note: the figures show the total number of approvals held by organisations with Part 92 certificates.

| 119 Air Operator | 30 Sep 2006 | 31 Mar 2007 | Change | |
|---|---|---|---|---|
| | | | Number | Percent |
| Part 108 Security Programme | 19 | 19 | 0 | 0.0% |
| Part 121 Large Aeroplanes | 11 | 11 | 0 | 0.0% |
| Part 125 Medium Aeroplanes | 13 | 14 | 1 | 7.7% |
| Part 135 Helicopters and Small Aeroplanes | 160 | 161 | 1 | 0.6% |

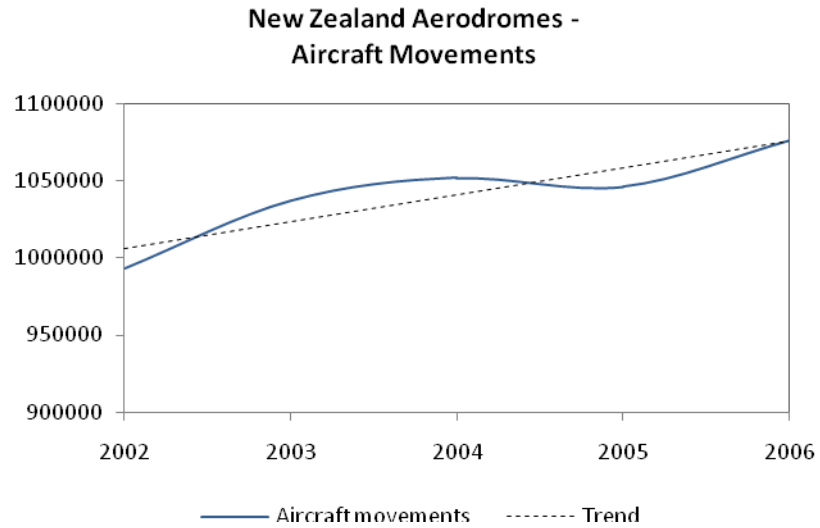
| 129 Foreign Air Operator | 30 Sep 2006 | 31 Mar 2007 | Change | |
|---|---|---|---|---|
| | | | Number | Percent |
| Part 108 Security Programme | 31 | 33 | 2 | 6.5% |

## Aircraft Movements

The following tables and graphs show the number of aircraft movements at aerodromes (excluding Oceanic overflights). Aircraft movements at Taupo are supplied by the aerodrome operator. Aircraft movements at the other aerodromes are supplied by ACNZ. Aircraft movements from ACNZ include takeoffs, landings, and missed approaches (vicinity movements and domestic overflights are not included).

### Long-Term Change in Aircraft Movements

The following graph shows the number of aircraft movements for the five-year period 1 July 2001 to 30 June 2006.




The number of aircraft movements increased at an average of 2.2% each year to 1,033,495 in the year ended 30 June 2006.

## Six-Monthly Comparison

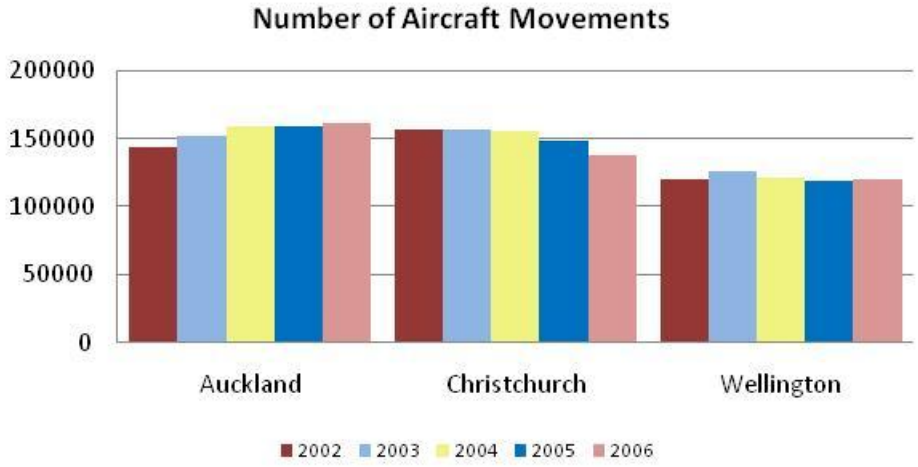
### *Number of Aircraft Movements*

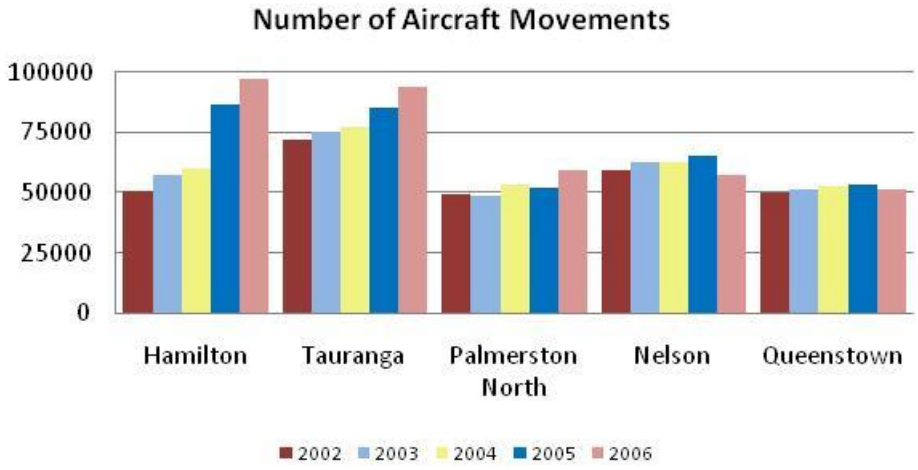
| Activity | 1 Jul to 31 Dec 2005 | 1 Jul to 31 Dec 2006 | Change | |
|---|---|---|---|---|
| | | | Number | Percent |
| Aircraft Movements | 533410 | 538162 | 4752 | 0.9% |

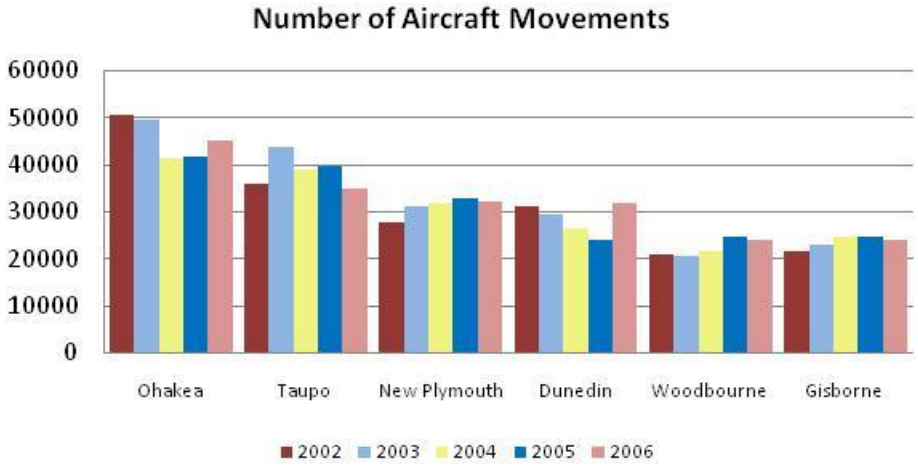
## Aircraft Movements at Aerodromes

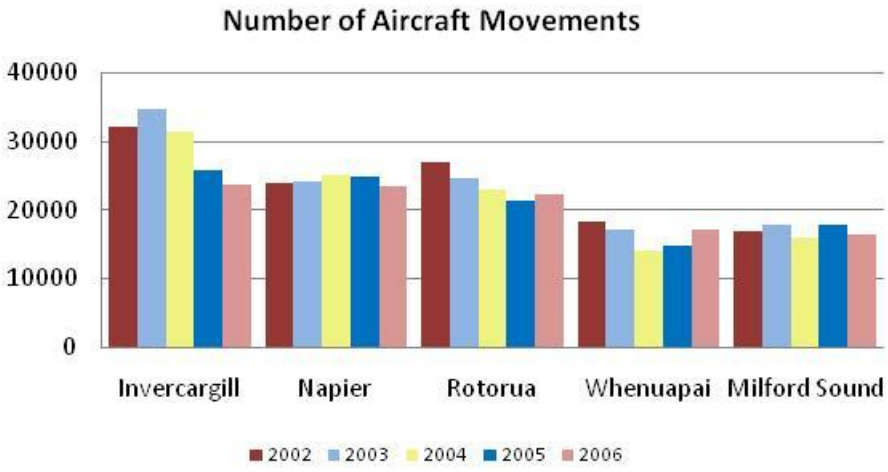
The aerodromes are shown in descending order of the number of aircraft movements in 2006.

| Aerodrome | 2002 | 2003 | 2004 | 2005 | 2006 |
|---|---|---|---|---|---|
| Auckland | 142371 | 149571 | 157780 | 158926 | 159191 |
| Christchurch | 153407 | 155558 | 158067 | 148850 | 148506 |
| Wellington | 120505 | 123933 | 122021 | 119585 | 119275 |
| Tauranga | 68489 | 76211 | 78793 | 82060 | 85010 |
| Hamilton | 49647 | 54433 | 57530 | 84291 | 86511 |
| Nelson | 58463 | 61959 | 62282 | 66133 | 65543 |
| Queenstown | 50069 | 51006 | 55056 | 51434 | 53469 |
| Palmerston North | 50261 | 46827 | 54040 | 52236 | 52143 |
| Ohakea | 47590 | 49166 | 44182 | 41244 | 41751 |
| Taupo | 33732 | 42063 | 41010 | 38128 | 39640 |
| New Plymouth | 26455 | 31188 | 32109 | 31602 | 33002 |
| Dunedin | 29868 | 31257 | 26774 | 23684 | 24143 |
| Gisborne | 21402 | 22917 | 24321 | 25094 | 24768 |
| Woodbourne | 20587 | 20399 | 21214 | 23824 | 24642 |
| Invercargill | 29436 | 35000 | 32509 | 26610 | 25823 |
| Napier | 23958 | 23758 | 25093 | 24761 | 24842 |
| Rotorua | 26262 | 25535 | 24206 | 21141 | 21287 |
| Milford Sound | 16540 | 17711 | 17169 | 16421 | 17726 |
| Whenuapai | 19771 | 18470 | 14871 | 14617 | 14771 |


Number of Aircraft Movements
200000
150000
100000
50000
0
Auckland
Christchurch
Wellington
2002
2003
2004
2005
2006


Number of Aircraft Movements
100000
75000
50000
25000
0
Hamilton
Tauranga
Palmerston North
Nelson
Queenstown
2002
2003
2004
2005
2006

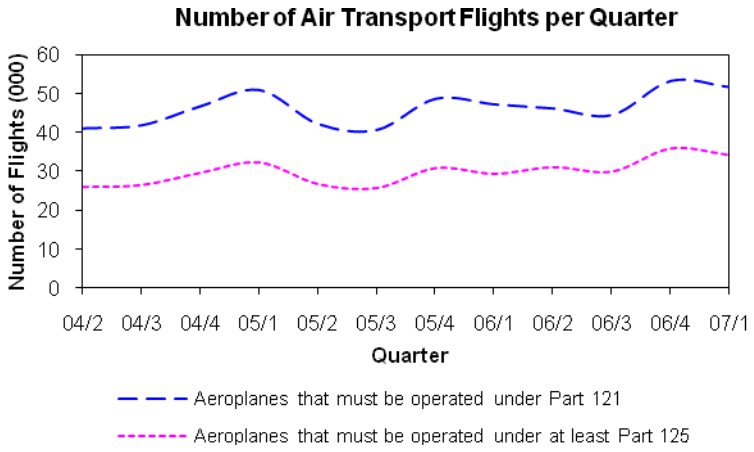

Number of Aircraft Movements
60000
50000
40000
30000
20000
10000
0
Ohakea
Taupo
New Plymouth
Dunedin
Woodbourne
Gisborne
2002
2003
2004
2005
2006

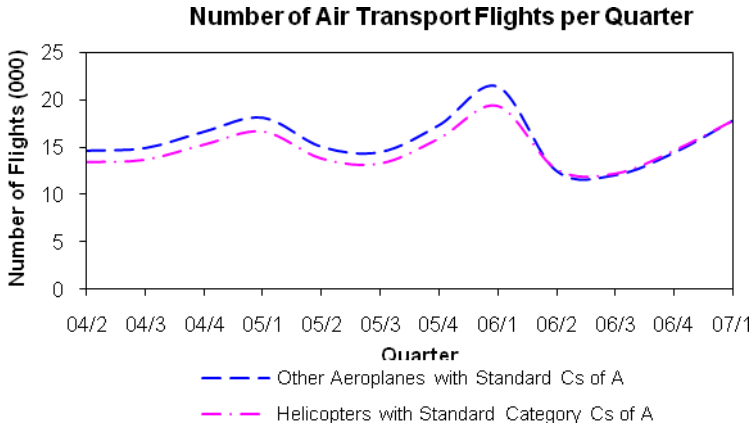

Number of Aircraft Movements
40000
30000
20000
10000
0
Invercargill
Napier
Rotorua
Whenuapai
Milford Sound
2002
2003
2004
2005
2006

## Air Transport Flights

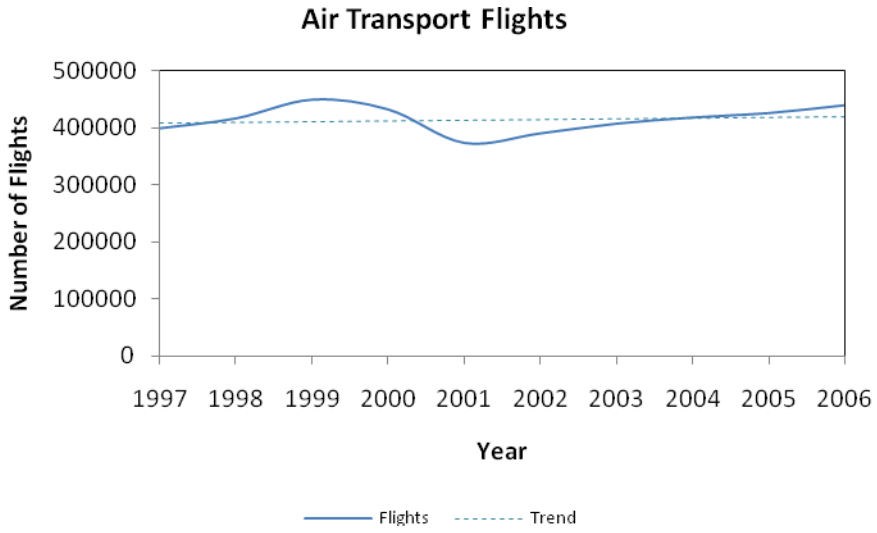
Note that these graphs exclude sport aircraft, hang gliders and parachutes, and foreign registered aircraft that are operated in New Zealand.

The following graphs show the number of air transport flights per quarter during the period 1 April 2004 to 31 March 2007.



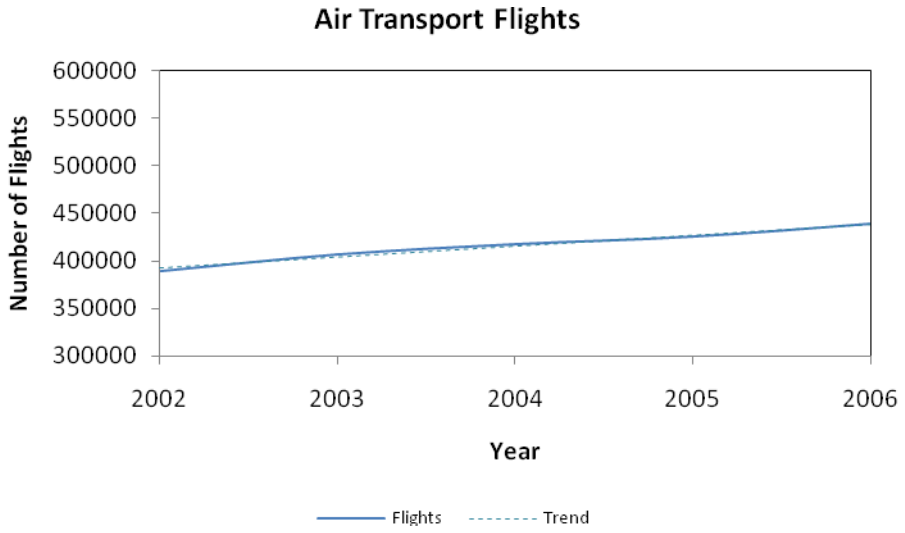



The following graph shows the number of air transport flights (excluding the sport group) for the years 1997 to 2006.




### Long-Term Change in Air Transport Flights

The following graph shows the number of air transport flights (excluding the sport group) for the five-year period 1 January 2002 to 31 December 2006.




The number of air transport flights increased at an average of 2.3% each year from the year ended 31 December 2002 until the year ended 31 December 2006 (438,424 air transport flights).

### Six-Monthly Comparison

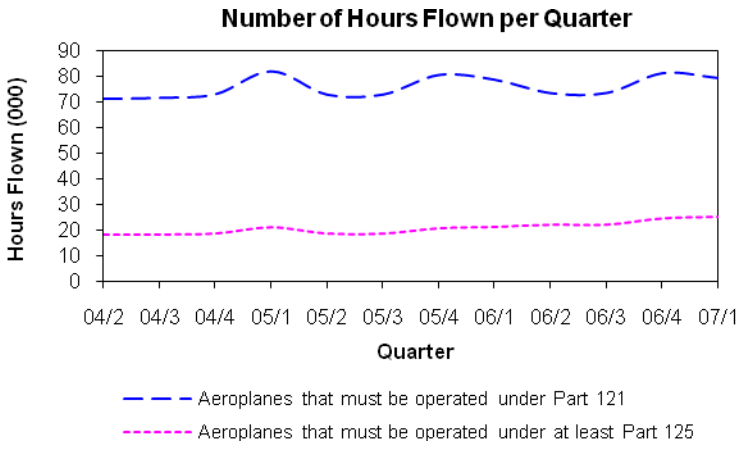
***Number of Air Transport Flights***

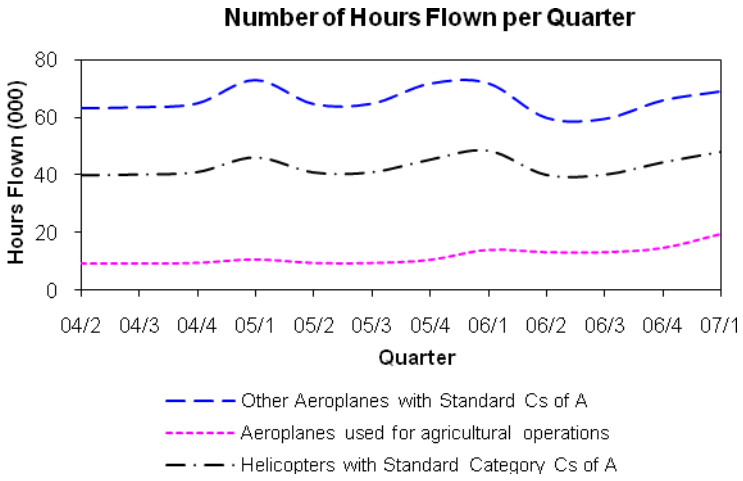
| Activity | 1 Jul to 31 Dec 2005 | 1 Jul to 31 Dec 2006 | Change | |
|---|---|---|---|---|
| | | | Number | Percent |
| Aeroplanes that must be operated under Part 121 | 89585 | 97944 | 8359 | 9.3% |
| Aeroplanes that must be operated under at least Part 125 | 56856 | 65983 | 9127 | 16.1% |
| Other Aeroplanes with Standard Cs of A | 31834 | 26466 | -5367 | -16.9% |
| Helicopters with Standard Category Cs of A | 29261 | 26919 | -2342 | -8.0% |
| Sport Aircraft (Aeropl, FB, Helo only) | 549 | 324 | -225 | -41.0% |

## Hours Flown

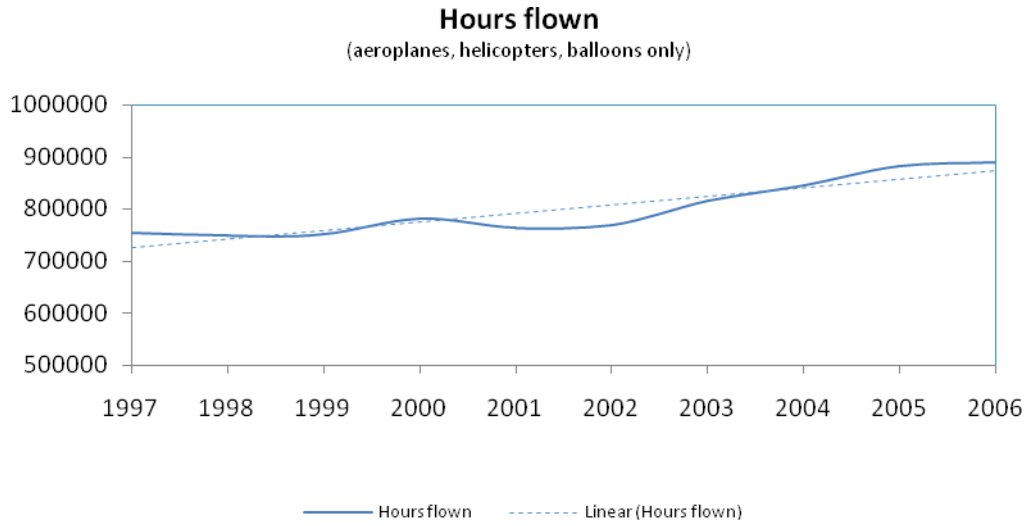
Note that these graphs exclude sport aircraft, hang gliders and parachutes, and foreign registered aircraft that are operated in New Zealand.

The following graphs show the number of hours flown by aircraft during the period 1 April 2004 to 31 March 2007.



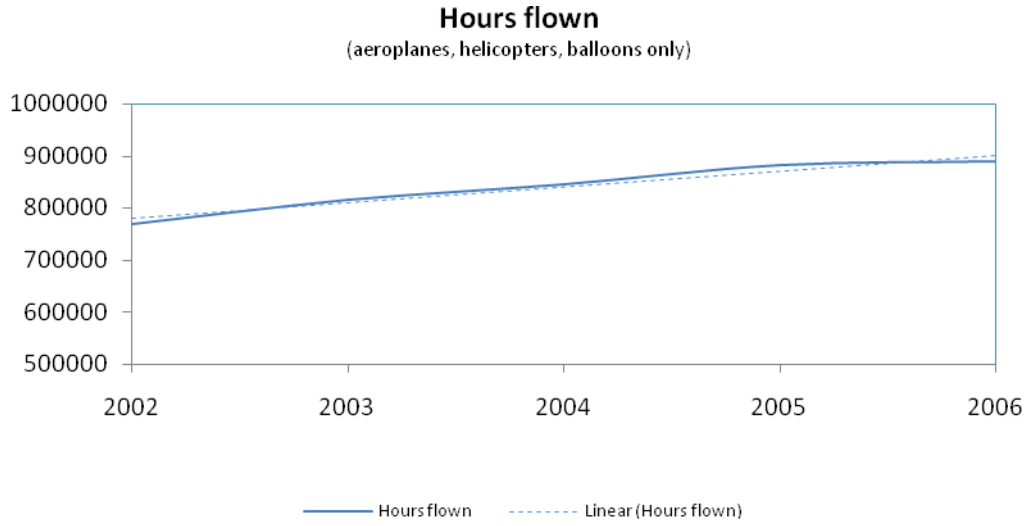



The following graph shows the number of hours flown by aircraft (excluding the sport group) for the years 1997 to 2006.




### Long-Term Change in Hours Flown

The following graph shows the number of hours flown (excluding the sport group) for the five-year period 1 January 2001 to 31 December 2005.




The total number of hours flown increased at an average of 2.9% each year from the year ended 31 December 2002 until the year ended 31 December 2006 when a peak of 888,403 hours was reached.

### Six-Monthly Comparison

***Number of Hours Flown***

| Aircraft Group | 1 Jul - 31 Dec 2005 | 1 Jul - 31 Dec 2006 | Change | |
|---|---|---|---|---|
| | | | Number | Percent |
| Airline Operations - Large Aeroplanes | 299005.52 | 301510.80 | 2505.27 | 0.01 |
| Airline Operations - Medium Aeroplanes | 75766.57 | 89579.62 | 13813.06 | 0.18 |
| Airline Operations - Small Aeroplanes | 65317.84 | 85451.34 | 20133.50 | 0.31 |
| Airline Operations - Helicopter | 65076.80 | 66216.14 | 1139.34 | 0.02 |
| Sport Transport (Aeropl, FB, Helo only) | 1927.76 | 1048.30 | -879.46 | -0.46 |
| Other Commercial Operations - Aeroplane | 156941.20 | 116439.79 | -40501.41 | -0.26 |
| Other Commercial Operations - Helicopter | 32713.84 | 36082.03 | 3368.19 | 0.10 |
| Agricultural Operations - Aeroplane | 39748.90 | 54694.41 | 14945.51 | 0.38 |
| Agricultural Operations - Helicopter | 54755.72 | 44138.89 | -10616.84 | -0.19 |
| Private Operations - Aeroplane | 45057.63 | 44416.27 | -641.36 | -0.01 |
| Private Operations - Helicopter | 15931.39 | 18570.71 | 2639.32 | 0.17 |
| Private Operations - Sport (Aeropl, FB, Helo only) | 2734.58 | 4351.02 | 1616.44 | 0.59 |
| **Total** | **854977.74** | **862499.31** | **7521.567** | **0.9%** |

## Industry Size and Shape

The following table shows the size and shape of the industry as determined by aircraft that returned Aircraft Operating Statistics in the relevant safety target group categories for the period 1 January to 31 December 2006. The number of seats for aircraft with no seats recorded on the database was estimated using (maximum takeoff weight (lb) of the aircraft/1000). This does not take into account aircraft that are used for freight only, because the small number of aircraft in this category has a minimal effect on the overall outcome. For each safety target group the average number of seats is multiplied by the total hours flown, to give the number of seat hours offered by the group.

| Aircraft Group | Average No. Of seats | Seat Hours Offered (000's) | Percent seat hours |
|---|---|---|---|
| Airline Operations - Large Aeroplanes | 172.12 | 38536871 | 96.1% |
| Airline Operations - Medium Aeroplanes | 13.93 | 740589 | 1.8% |
| Airline Operations - Small Aeroplanes | 3.82 | 199830 | 0.5% |
| Airline Operations - Helicopter | 3.60 | 153620 | 0.4% |
| Sport Transport (Aeropl, FB, Helo only) | | 9500 | 0.0% |
| Other Commercial Operations - Aeroplane | 2 | 123962 | 0.3% |
| Other Commercial Operations - Helicopter | 3.6 | 66962 | 0.2% |
| Agricultural Operations - Aeroplane | 2 | 61464 | 0.2% |
| Agricultural Operations - Helicopter | 3.6 | 92197 | 0.2% |
| Agricultural Operations - Sport | | 0 | 0.0% |
| Private Operations - Aeroplane | 2.00 | 66103 | 0.2% |
| Private Operations - Helicopter | 3.60 | 46565 | 0.1% |
| Private Operations - Sport (Aeropl, FB, Helo only) | | 14292 | 0.0% |

* - sport aircraft do not report hours or seats, so a standard estimate of seat hours offered is used for these groups.

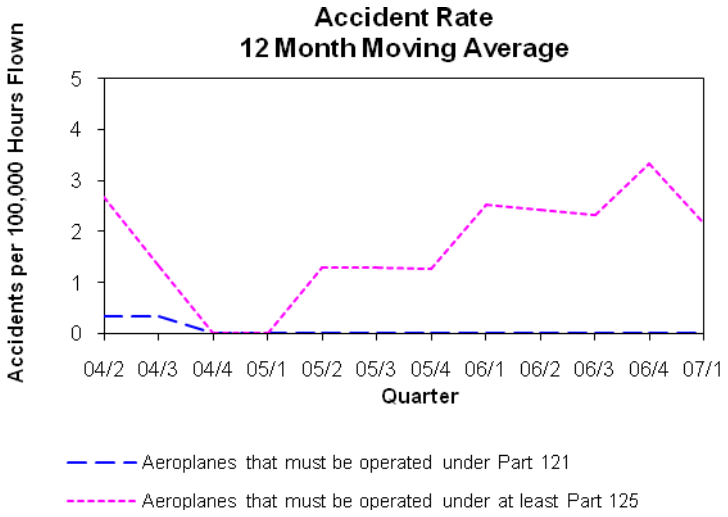
Around 96% of seat hours offered by the industry are offered by the Airline Operations – Large Aeroplanes group, around 1.8% by the Airline Operations – Medium Aeroplanes group, with the remaining 2.1% of seat hours being split between the other safety target groups.

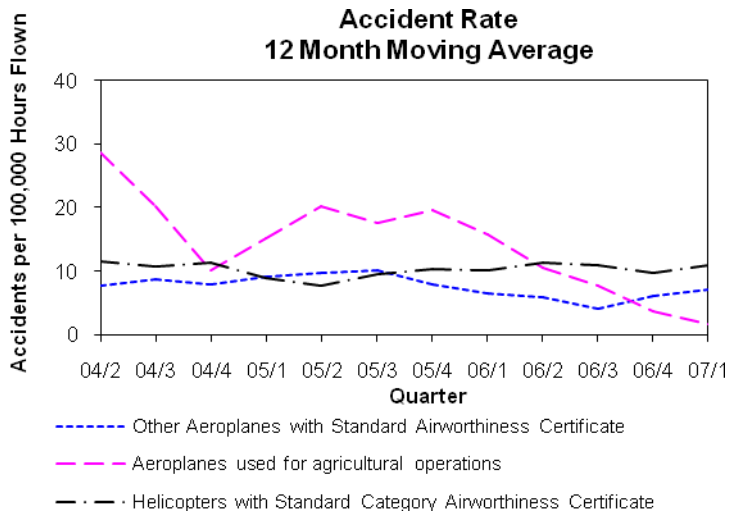
# Occurrence Statistics

## Aircraft Accidents

### Occurrence Trend

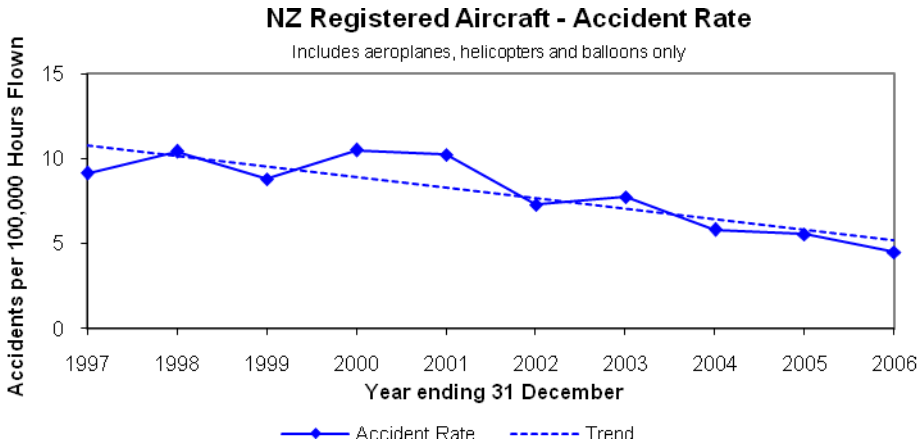
The following graphs show the aircraft accident rates (accidents per 100,000 hours flown) twelve month moving average for the three-year period 1 April 2004 to 31 March 2007 (excluding Sport).



| Aircraft Group | Straight Line Trend of 12 month moving Average |
|---|---|
| Aeroplanes that must be operated under Part 121 | Constant |
| Aeroplanes that must be operated under at least Part 125 | Trending up |
| Other Aeroplanes with Standard Cs of A | Constant |
| Helicopters with Standard Category Cs of A | Constant |
| Sport Aircraft | Trending up |
| Aeroplanes used for agricultural operations | Trending down |

The following graph shows the overall accident rate per 100,000 hours flown (excluding the sport group, hang gliders and parachutes) for the years 1997 to 2006.



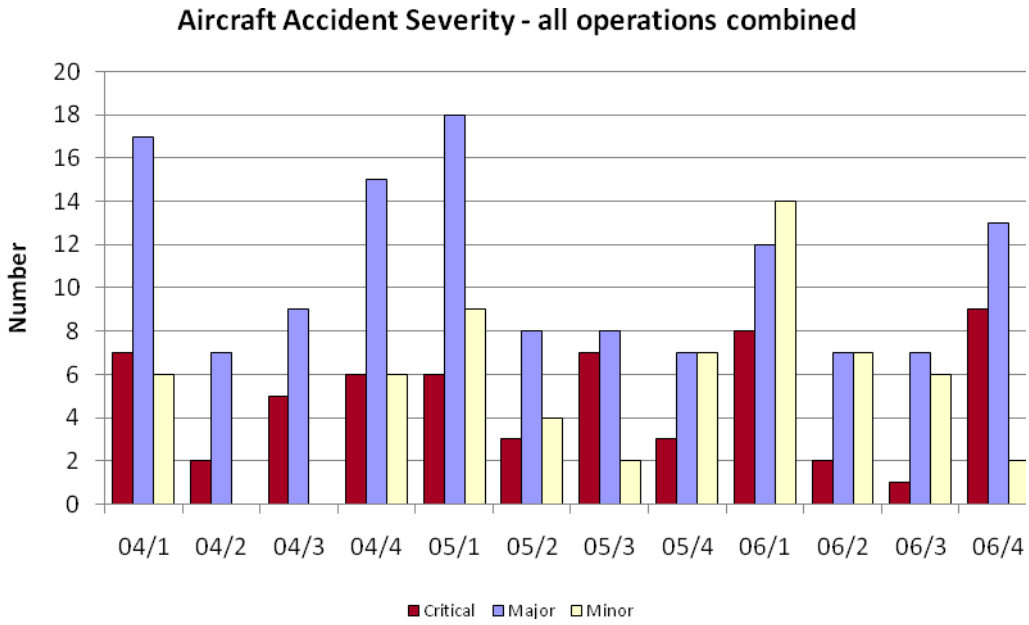

Note that this graph does not show a moving average.

## Six-Monthly Comparison

### *Number of Aircraft Accidents*

| Activity | 1 Jul to 31 Dec 2005 | 1 Jul to 31 Dec 2006 | Change |
|---|---|---|---|
| Aeroplanes that must be operated under Part 121 | 0 | 0 | 0 |
| Aeroplanes that must be operated under at least Part 125 | 0 | 1 | 1 |
| Other Aeroplanes with Standard Cs of A | 7 | 9 | 2 |
| Helicopters with Standard Category Cs of A | 5 | 9 | 4 |
| Sport Aircraft | 3 | 8 | 5 |
| Hangliders | 1 | 0 | -1 |
| Parachutes | 0 | 2 | 2 |
| Unknown | 1 | 7 | 6 |

## Severity


Aircraft Accident Severity - all operations combined
Number
20
18
16
14
12
10
8
6
4
2
0
04/1
04/2
04/3
04/4
05/1
05/2
05/3
05/4
06/1
06/2
06/3
06/4
Critical
Major
Minor

## *Six-Monthly Comparison*

| Activity | Severity | 1 Jan to 30 Jul 2005 | 1 Jan to 30 Jul 2006 | Change |
|---|---|---|---|---|
| Aeroplanes that must be operated under Part 121 | Critical | 0 | 0 | 0 |
| | Major | 0 | 0 | 0 |
| | Minor | 0 | 0 | 0 |
| Aeroplanes that must be operated under at least Part 125 | Critical | 1 | 2 | 1 |
| | Major | 0 | 0 | 0 |
| | Minor | 0 | 0 | 0 |
| Other Aeroplanes with Standard Cs of A | Critical | 3 | 2 | -1 |
| | Major | 6 | 3 | -3 |
| | Minor | 4 | 2 | -2 |
| Helicopters with Standard Category Cs of A | Critical | 2 | 2 | 0 |
| | Major | 4 | 5 | 1 |
| | Minor | 0 | 1 | 1 |
| Sport Aircraft | Critical | 3 | 0 | -3 |
| | Major | 9 | 8 | -1 |
| | Minor | 5 | 11 | 6 |
| Hangliders | Critical | 0 | 0 | 0 |
| | Major | 0 | 0 | 0 |
| | Minor | 0 | 1 | 1 |
| Parachutes | Critical | 0 | 2 | 2 |
| | Major | 4 | 3 | -1 |
| | Minor | 2 | 4 | 2 |
| Unknown | Critical | 0 | 1 | 1 |
| | Major | 3 | 0 | -3 |
| | Minor | 2 | 1 | -1 |
| **Total** | **Critical** | **0** | **1** | **1** |
| | **Major** | **0** | **0** | **0** |
| | **Minor** | **0** | **1** | **1** |

## Accident Reduction Targets

### *Number of Accidents*

The following table shows the number of accidents for the years 2003 to 2006.

| Safety Target Group | 2003 | 2004 | 2005 | 2006 |
|---|---|---|---|---|
| Aeroplanes that must be operated under Part 121 | 2 | 1 | 1 | 1 |
| Aeroplanes that must be operated under at least Part 125 | 4 | 4 | 2 | 1 |
| Other Aeroplanes with Standard Airworthiness Certificate | 20 | 21 | 20 | 23 |
| Helicopters with Standard Category Airworthiness Certificate | 21 | 19 | 19 | 18 |
| Sport Aircraft - Aeroplanes, Helicopters and Balloons only | 22 | 27 | 23 | 22 |
| Aeroplanes used for agricultural operations | 15 | 13 | 11 | 8 |

The following table shows the number of accidents in six-monthly periods.

| Activity | 1 Jul to 31 Dec 2005 | 1 Jul to 31 Dec 2006 | Change |
|---|---|---|---|
| Aeroplanes that must be operated under Part 121 | 0 | 0 | 0 |
| Aeroplanes that must be operated under at least Part 125 | 0 | 1 | 1 |
| Other Aeroplanes with Standard Airworthiness Certificate | 9 | 9 | 0 |
| Helicopters with Standard C's of A | 12 | 9 | -3 |
| Sport Aircraft | 8 | 8 | 0 |
| Aeroplanes used for agricultural operations | 3 | 0 | -3 |

### *Safety Outcome Targets for 2010*

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

The table below shows the new Safety Outcome Targets for the period ending 31 December 2006. The target groups highlighted in yellow are groups where major safety improvements need to be achieved. Red highlighting has been used to draw attention to groups with significant recent safety failure.

.

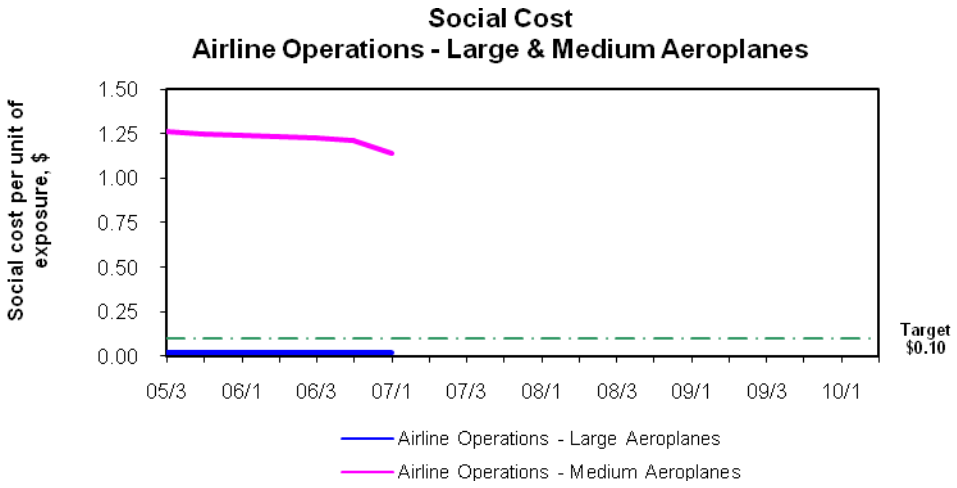
| Safety Outcome Target Group | Injuries | | | Current Estimate $ | Target $ |
|---|---|---|---|---|---|
| | Total Fatal | Total Serious | Total Minor | | |
| Airline Operations - Large Aeroplanes* | 0 | 0 | 1 | 0.02 | 0.10 |
| Airline Operations - Medium Aeroplanes* | 0 | 0 | 0 | 1.21 | 0.10 |
| Airline Operations - Small Aeroplanes | 0 | 0 | 0 | - | 6.50 |
| Airline Operations - Helicopter | 0 | 0 | 0 | - | 6.50 |
| Sport Transport | 0 | 3 | 0 | 64.53 | 13.00 |
| Other Commercial Operations - Aeroplane | 0 | 0 | 2 | 38.59 | 6.50 |
| Other Commercial Operations - Helicopter | 0 | 1 | 4 | 6.24 | 6.50 |
| Agricultural Operations - Aeroplane | 0 | 0 | 0 | 64.18 | 14.00 |
| Agricultural Operations - Helicopter | 1 | 0 | 0 | 29.19 | 14.00 |
| Private Operations - Aeroplane | 2 | 0 | 0 | 94.23 | 10.00 |
| Private Operations - Helicopter | 0 | 0 | 4 | 152.76 | 10.00 |
| Private Operations - Sport | 4 | 4 | 1 | 257.58 | 20.00 |

**Current Estimate:**

This is the estimated social cost of injuries over exposure during the averaging period ending 31 December 2006.

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

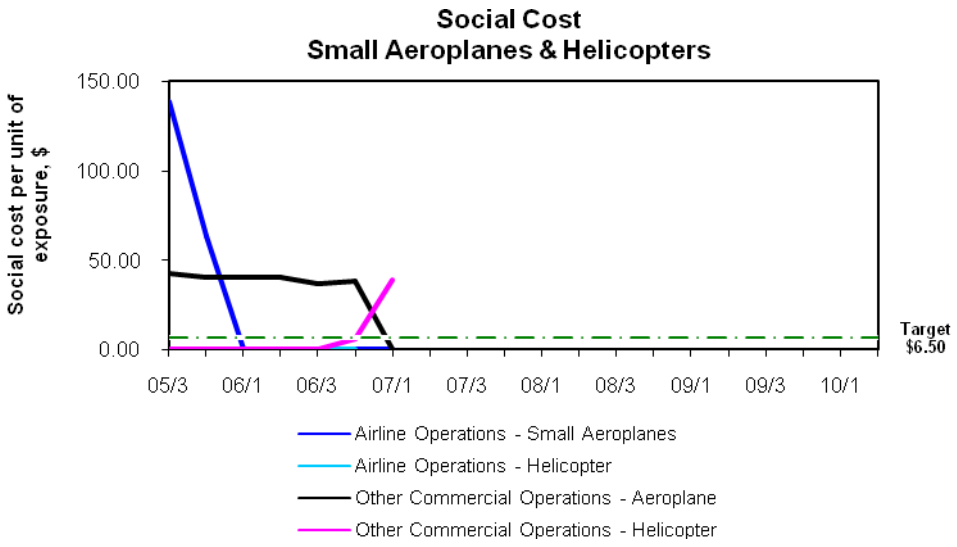
***Graphs***




The outcome for Airline Operations – Large Aeroplanes 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 considerable margin and although trending down, because of the relatively small exposure associated with this sector, it will not be possible for the target to be achieved until after 2010.

The results for both of these groups are derived using 10 year averages; all other groups use 12 month averages.

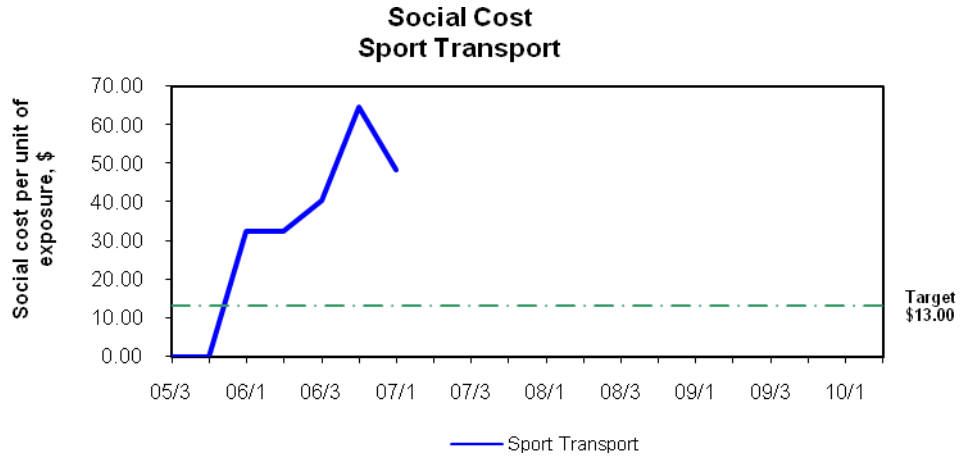



The outcome for Airline Operations – Small Aeroplanes shows a significant downward trend from the high starting point generated by 6 fatalities in late 2004 and early 2005. The safety outcome for this group has been below the target level since April 2006.

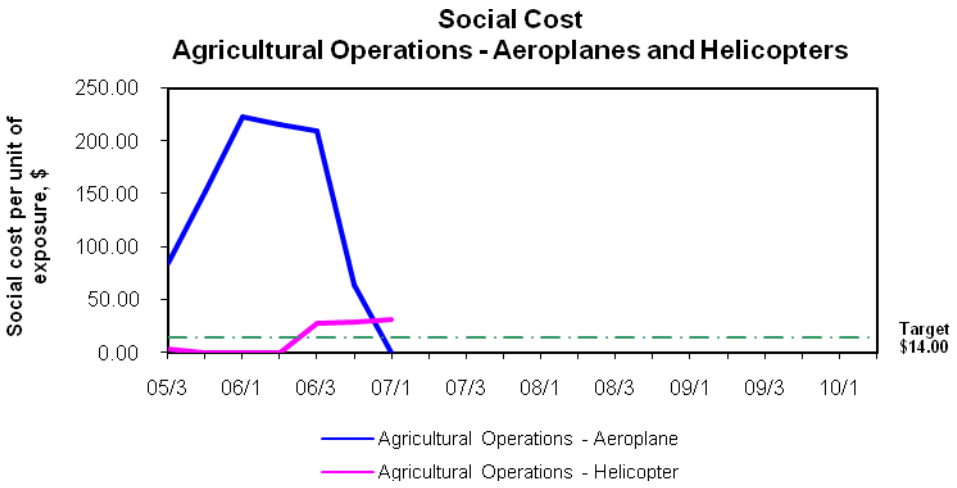
The outcome for Airline Operations – Helicopter and Other Commercial Operations – Helicopter remain level on zero as there have been no fatal or serious injuries in these groups since 2003.

The outcome for Other Commercial Operations – Aeroplane has reduced to zero from previous high values.

The outcome for Other Commercial Operations – Helicopters shows a significant upward trend due to injuries and airframe losses in the last quarter of 2006 and the first quarter of 2007.

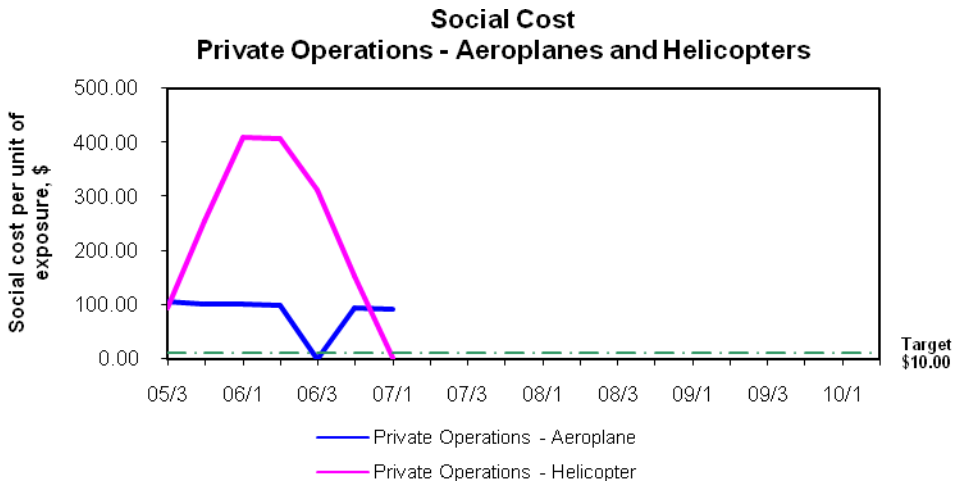



The outcome for Sport Transport is rapidly trending up due to the continuing number of serious injuries suffered by participants in this activity.



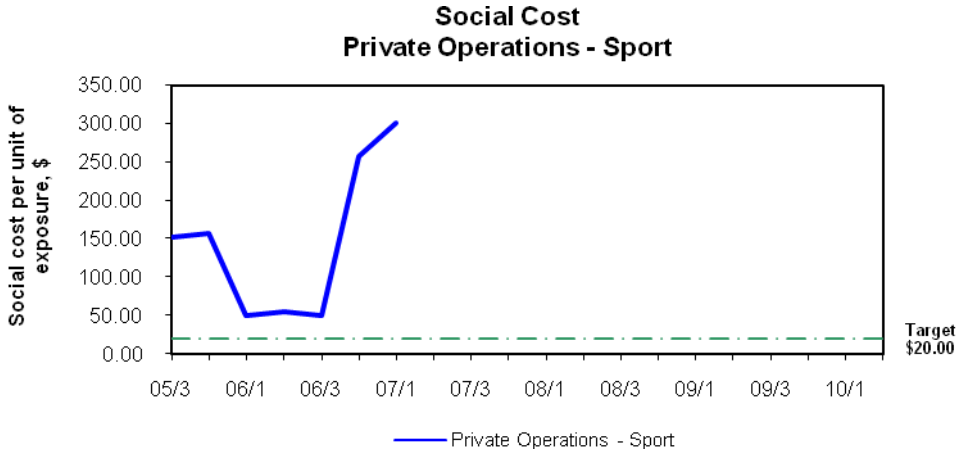

The outcome for Agricultural Operations – Aeroplanes has met the target level for the first time since the target regime was established in 2005.

The outcome for Agricultural Operations – Helicopter has exceeded the target due to a single fatality in 2006.




The outcome for Private Operations – Aeroplane returned to the previous level of approximately $100.00 after decreasing to $0.00 following a year with no fatalities or serious injuries.

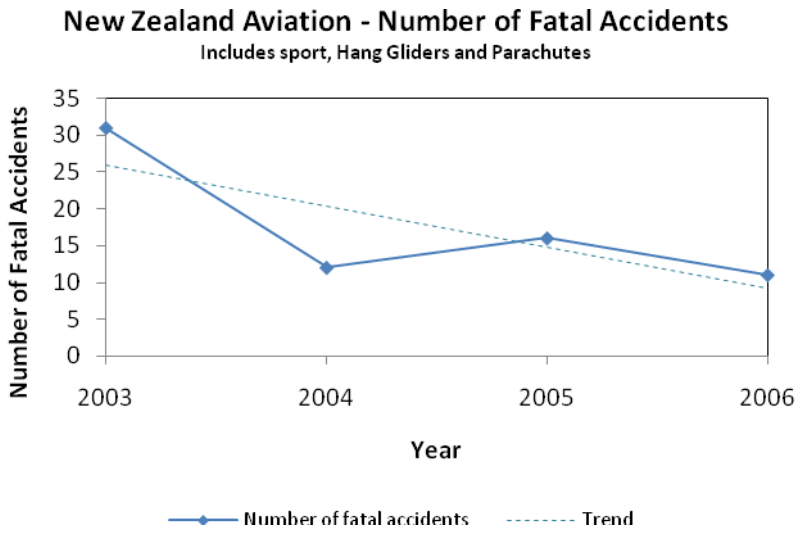
The outcome for Private Operations – Helicopter having rapidly trended up in the initial stages has now reduced to $0.00 following a year with no fatalities or serious injuries.



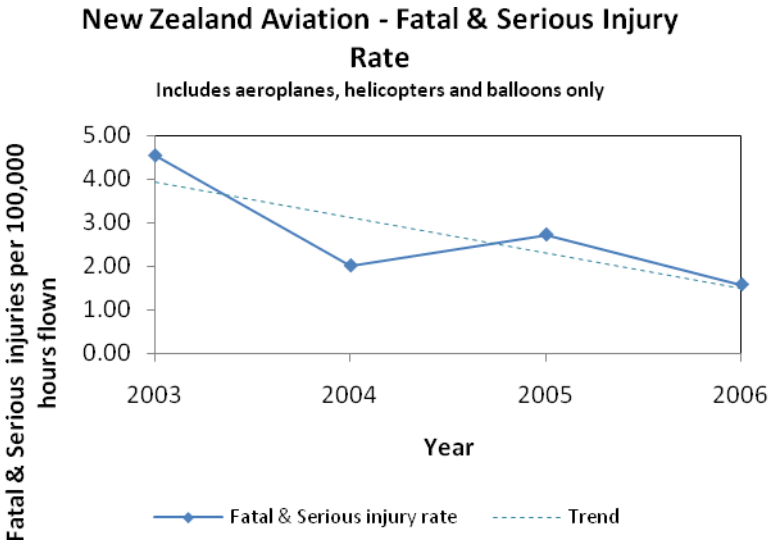

The outcome for Private Operations – Sport has increased sharply after initially decreasing. The group could still meet its target if there are no fatalities or serious injuries by April of 2008.

### Injury Accidents

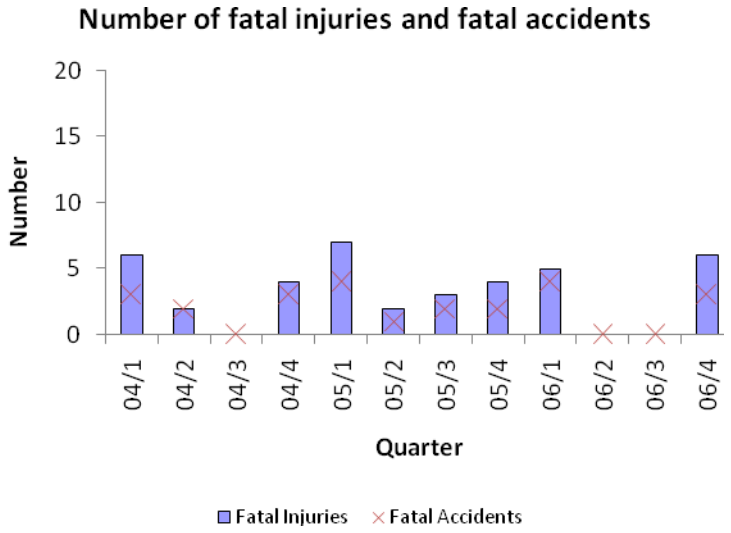
The following graph shows the number of fatal accidents in the years 2003 to 2006 (including sport, hang gliders and parachutes).




The following graph shows the overall fatal and serious injury rate per 100,000 hours flown (excluding sport, hang gliders and parachutes) for the years 2003 to 2006.



The following graph shows the number of fatal injuries and fatal accidents (including sport, hang gliders and parachutes) for the period 1 January 2004 to 31 December 2006.




### *Six-Monthly Comparison*

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

| Activity | 1 Jul to 31 Dec 2005 | | 1 Jul to 31 Dec 2006 | | Change | |
|---|---|---|---|---|---|---|
| | Accidents | Fatalities | Accidents | Fatalities | Accidents | Fatalities |
| 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 | 0 | 0 | 0 | 0 |
| Other Aeroplanes with Standard Airworthiness Certificate | 2 | 2 | 1 | 2 | -1 | 0 |
| Helicopters with Standard C's of A | 3 | 3 | 0 | 0 | -3 | -3 |
| Sport Aircraft | 0 | 0 | 1 | 2 | 1 | 2 |
| Aeroplanes used for agricultural operations | 2 | 2 | 0 | 0 | -2 | -2 |
| Unknown | 0 | 0 | 1 | 2 | 1 | 2 |
| Hangliders | 0 | 0 | 0 | 0 | 0 | 0 |
| Parachutes | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 7 | 7 | 3 | 6 | -4 | -1 |

*Number of Serious Injuries*

| Activity | 1 Jul to 31 Dec 2005 | 1 Jul to 31 Dec 2006 | 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 |
| Helicopters with Standard C's of A | 2 | 1 | -1 |
| Sport Aircraft | 3 | 0 | -3 |
| Aeroplanes used for agricultural operations | 0 | 0 | 0 |
| Unknown | 0 | 0 | 0 |
| Hangliders | 1 | 5 | 4 |
| Parachutes | 0 | 2 | 2 |
| **Total** | **6** | **8** | **2** |

*Number of Minor Injuries*

| Activity | 1 Jul to 31 Dec 2005 | 1 Jul to 31 Dec 2006 | 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 | 3 | 2 | -1 |
| Helicopters with Standard C's of A | 5 | 8 | 3 |
| Sport Aircraft | 1 | 1 | 0 |
| Aeroplanes used for agricultural operations | 0 | 0 | 0 |
| Unknown | 0 | 0 | 0 |
| Hangliders | 0 | 0 | 0 |
| Parachutes | 0 | 0 | 0 |
| **Total** | **9** | **11** | **2** |

## Flight Phase

The following table shows the flight phase recorded for accidents.

| Flight Phase | 1 Jul to 31 Dec 2005 | 1 Jul to 31 Dec 2006 | Change |
|---|---|---|---|
| CIRCUIT | 1 | 1 | 0 |
| CLIMB | 0 | 2 | 2 |
| CRUISE | 11 | 12 | 1 |
| HOVER | 1 | 1 | 0 |
| HOVER TAXI | 1 | 1 | 0 |
| LANDING | 11 | 7 | -4 |
| PARKED | 2 | 1 | -1 |
| TAKEOFF | 2 | 3 | 1 |
| TAXIING | 1 | 0 | -1 |
| UNKNOWN | 1 | 0 | -1 |
| **Total** | **31** | **28** | **-3** |

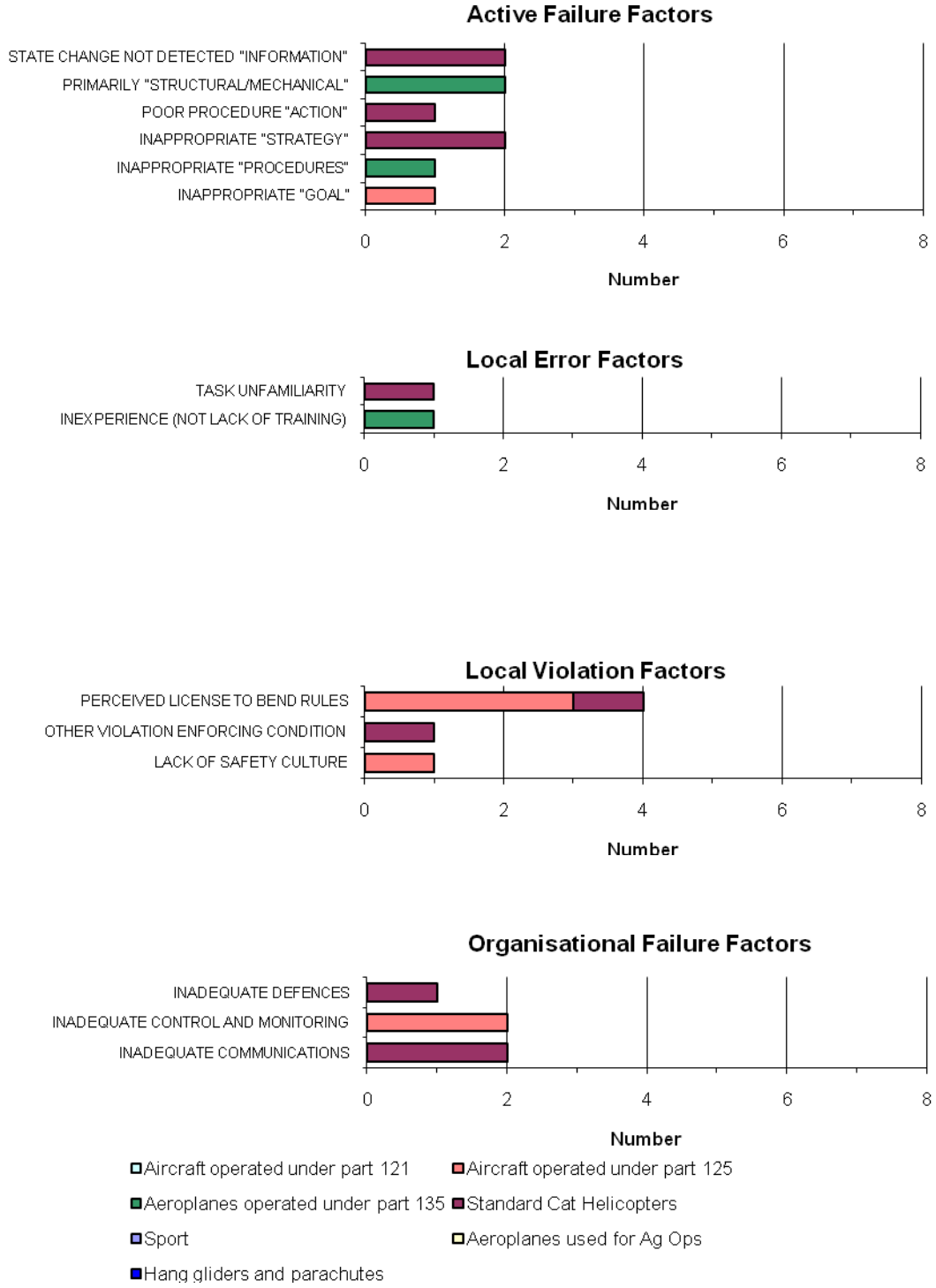
Accidents in the period 1 July to 31 December 2006 were most common during the Cruise phase (43%).

Analysis of recorded occurrence descriptors for Cruise phase accidents in the 1 July to 31 December 2006 period shows that the most common group of descriptors are collision terrain and engine power loss (25% each).

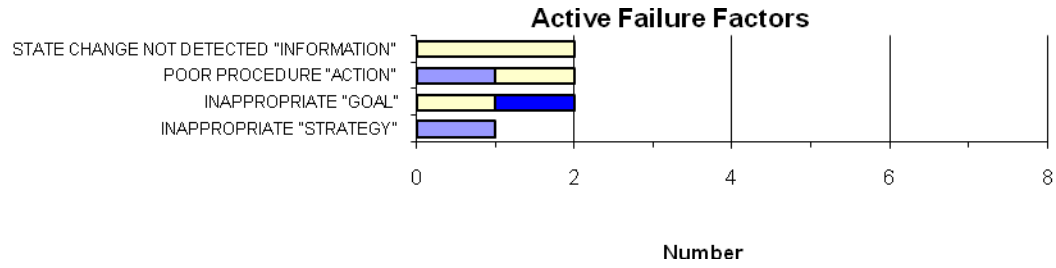
At the time of writing no cause factors had been recorded for cruise phase accidents.

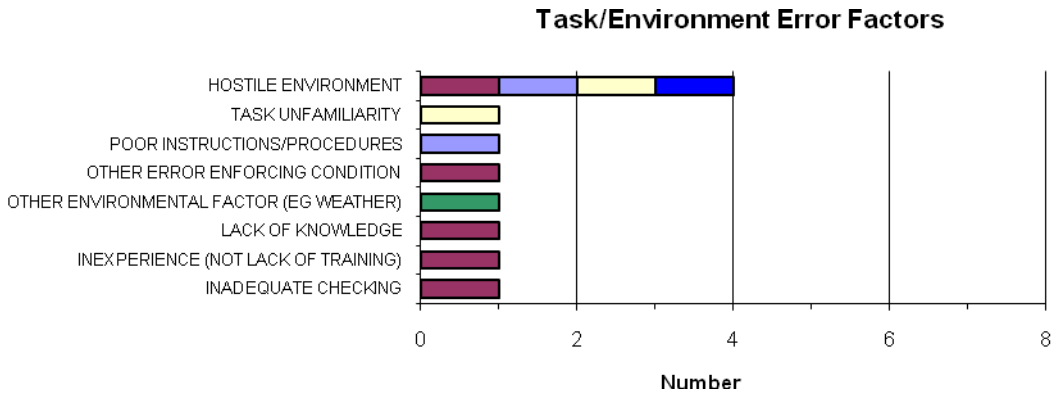
### Accident Causal Factors by Aircraft Group

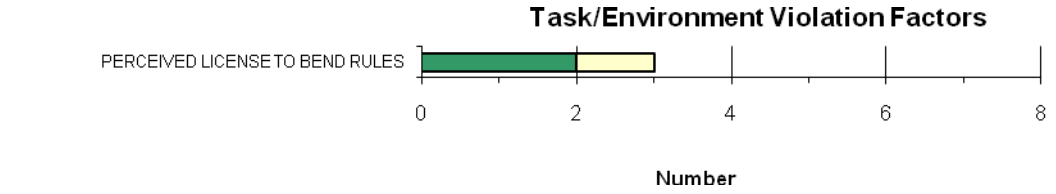
The following graphs show the number of causal factors recorded for accidents that occurred during the period 1 July to 31 December 2006 for the various aircraft groups. Causal factors have been assigned to 11 (38%) of the 29 accidents.

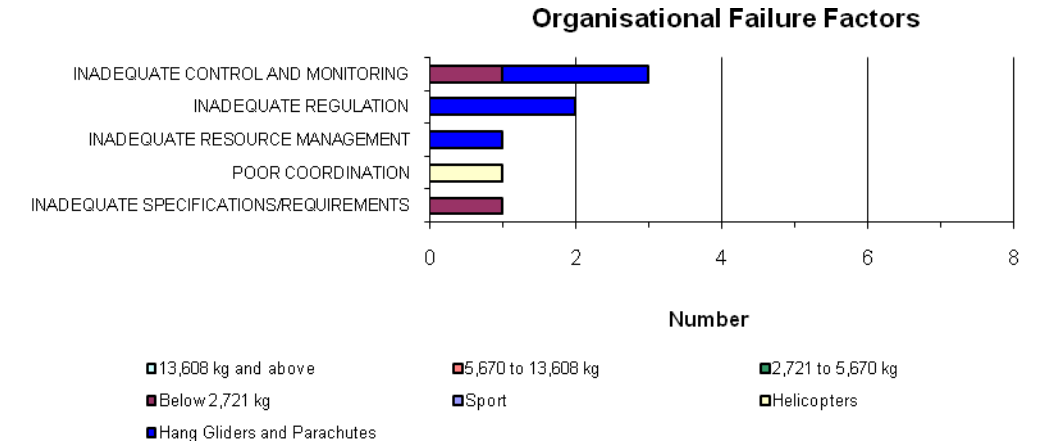


The following graphs show the number of causal factors recorded for accidents that occurred during the period 1 January to 30 June 2006 for the various aircraft groups in use at that time. These differ from those in use in the latest period. Causal factors have been assigned to 16 (41%) of the 39 accidents.

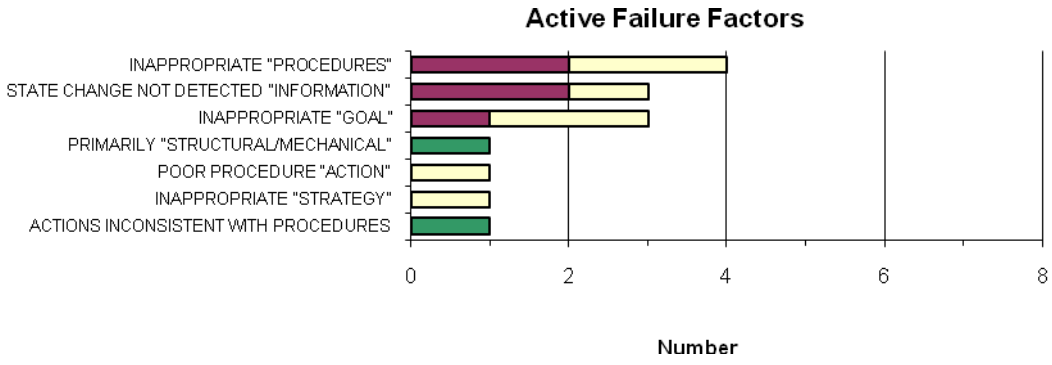


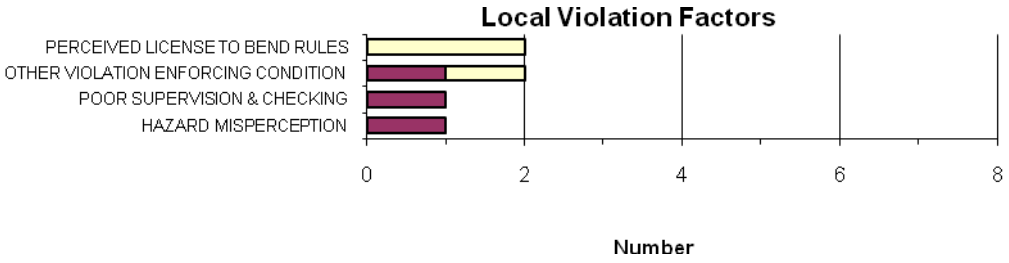



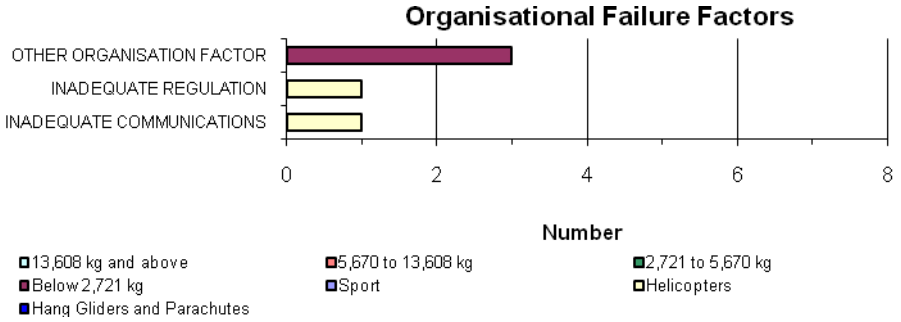



The following graphs show the number of causal factors recorded for accidents that occurred during the period 1 July to 31 December 2005 for the various aircraft groups in use at that time. These differ from those in use in the latest period. Causal factors have been assigned to 19 (59%) of the 32 accidents.





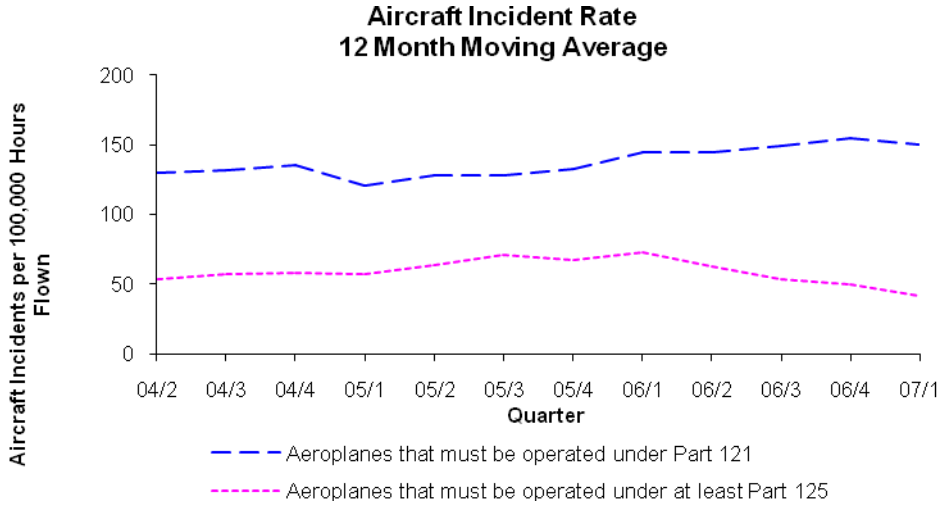


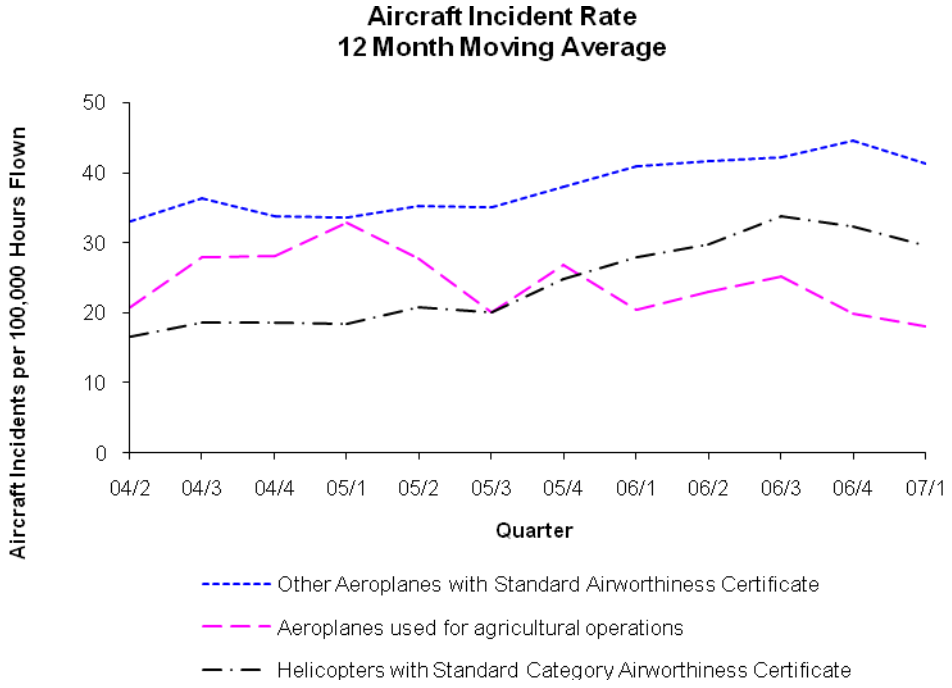



## Aircraft Incidents

### Occurrence Trend

The following graphs show the aircraft incident rates (incidents per 100,000 hours flown) twelve month moving average for the three-year period 1 April 2004 to 31 March 2007 (excluding Sport).



| Aircraft Group | Straight line trend of 12 month moving average |
|---|---|
| Aeroplanes that must be operated under Part 121 | Trending up |
| Aeroplanes that must be operated under at least Part 125 | Trending down |
| Other Aeroplanes with Standard Cs of A | Trending up |
| Helicopters with Standard Category Cs of A | Trending up |
| Aeroplanes used for agricultural operations | Trending down |

The ratios of reported aircraft incidents for the below 2,721 kg and helicopter groups to the respective number of reported accidents continue to be low.

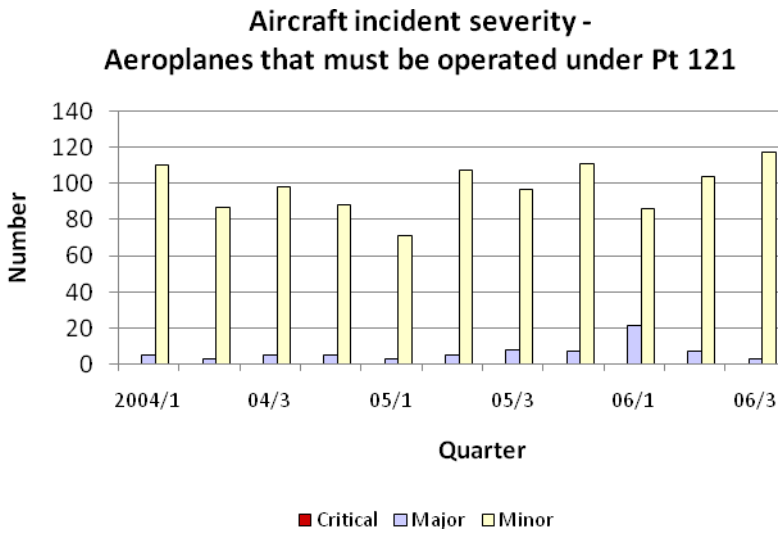
## Six-Monthly Comparison

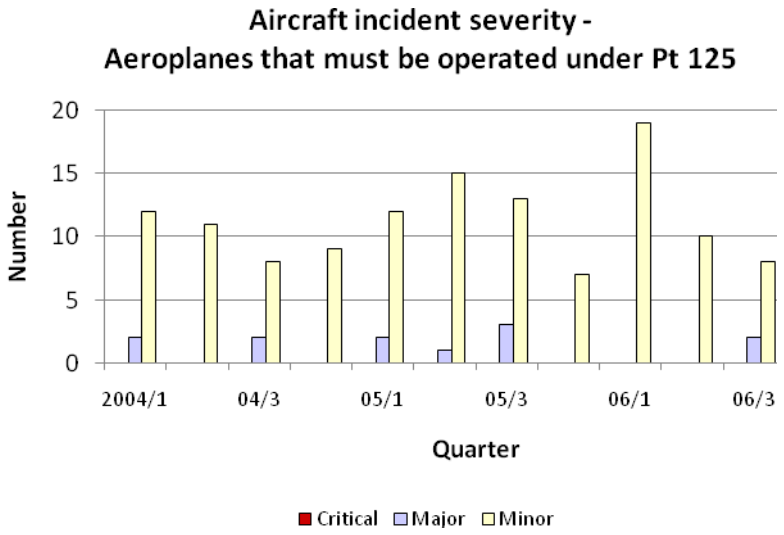
### *Number of Aircraft Incidents*

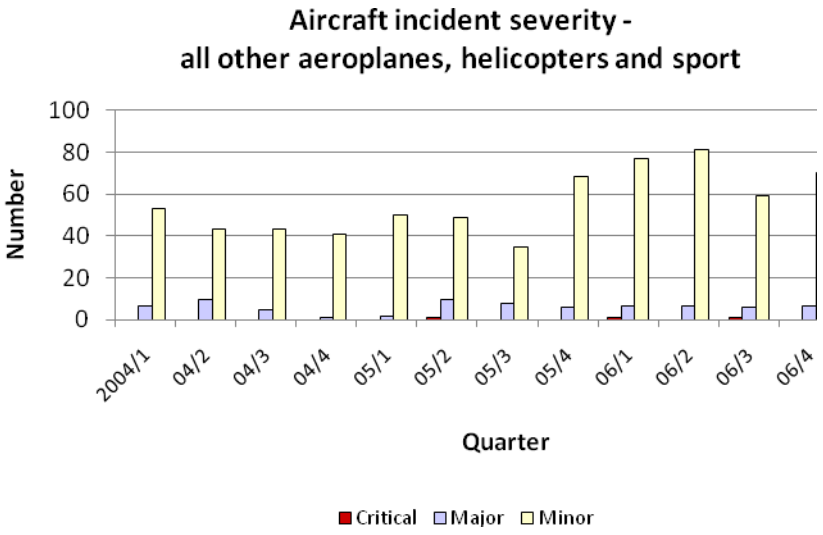
| Aircraft group | 1 Jul to 31 Dec 2005 | 1Jul to 31 Dec 2006 | Change | |
|---|---|---|---|---|
| | | | Number | Percent |
| Aeroplanes that must be operated under Part 121 | 223 | 258 | 35 | 15.7% |
| Aeroplanes that must be operated under at least Part 125 | 23 | 16 | -7 | -30.4% |
| Other Aeroplanes with Standard Airworthiness Certificate | 50 | 53 | 3 | 6.0% |
| Helicopters with Standard C's of A | 24 | 28 | 4 | 16.7% |
| Sport Aircraft | 9 | 9 | 0 | 0.0% |
| Aeroplanes used for agricultural operations | 5 | 5 | 0 | 0.0% |
| Unknown | 29 | 48 | 19 | 65.5% |
| **Total** | **363** | **417** | **54** | **14.9%** |

## Severity

The following graphs show the severity of aircraft incidents recorded over the period 1 January 2004 to 31 December 2006.





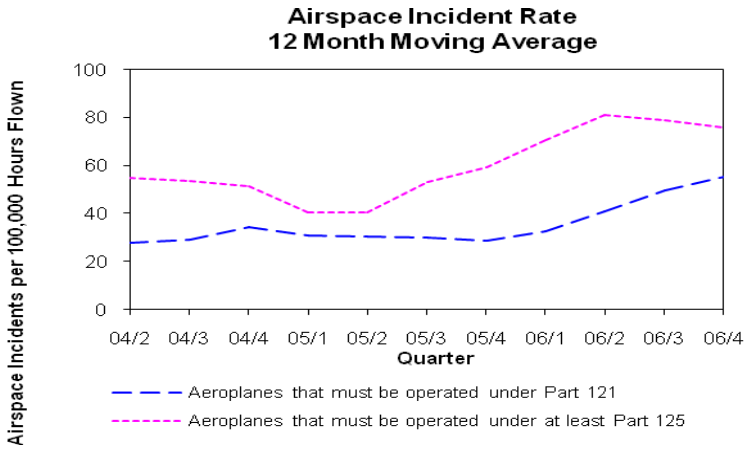

## *Six-Monthly Comparison*

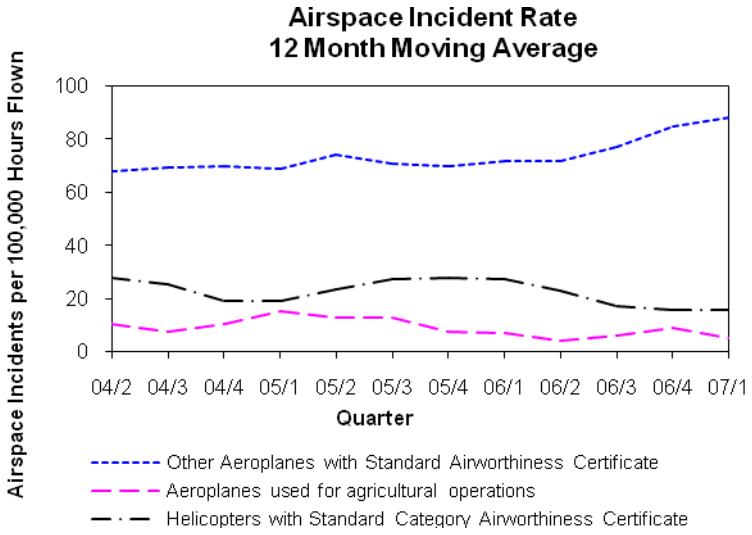
| Activity | Severity | 1 Jul to 31 Dec 2005 | 1 Jul to 31 Dec 2006 | Change |
|---|---|---|---|---|
| Aeroplanes that must be operated under Part 121 | Critical | 0 | 0 | 0 |
| | Major | 15 | 9 | -6 |
| | Minor | 208 | 249 | 41 |
| Aeroplanes that must be operated under at least Part 125 | Critical | 0 | 0 | 0 |
| | Major | 3 | 4 | 1 |
| | Minor | 20 | 12 | -8 |
| Other Aeroplanes with Standard Cs of A | Critical | 0 | 0 | 0 |
| | Major | 7 | 5 | -2 |
| | Minor | 43 | 48 | 5 |
| Helicopters with Standard Category Cs of A | Critical | 0 | 1 | 1 |
| | Major | 2 | 2 | 0 |
| | Minor | 22 | 25 | 3 |
| Sport Aircraft | Critical | 0 | 0 | 0 |
| | Major | 2 | 1 | -1 |
| | Minor | 7 | 8 | 1 |
| Aircraft used for Agricultural operations | Critical | 0 | 0 | 0 |
| | Major | 1 | 1 | 0 |
| | Minor | 4 | 4 | 0 |
| Unknown | Critical | 0 | 0 | 0 |
| | Major | 2 | 4 | 2 |
| | Minor | 27 | 44 | 17 |
| **Total** | **Critical** | **0** | **1** | **1** |
| | **Major** | **32** | **26** | **-6** |
| | **Minor** | **331** | **390** | **59** |

## Airspace Incidents

### Occurrence Trend

The following graphs show the airspace incident rates (incidents per 100,000 hours flown) twelve month moving average for the three-year period 1 July 2004 to 31 December 2006 (excluding Sport). The graphs do not differentiate between incidents that are pilot or ATS attributable.




| Aircraft Group | Straight Line Trend of 12 Month Moving Average |
|---|---|
| Part 121 | Trending up |
| Part 125 | Trending up |
| Other aeroplanes | Trending up |
| Ag' aeroplanes | Trending down |
| Helicopters | Trending down |

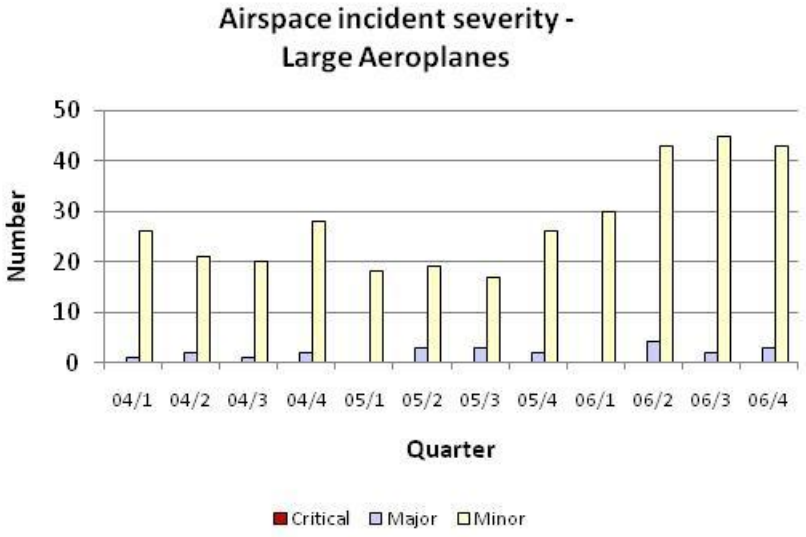
## Six-Monthly Comparison

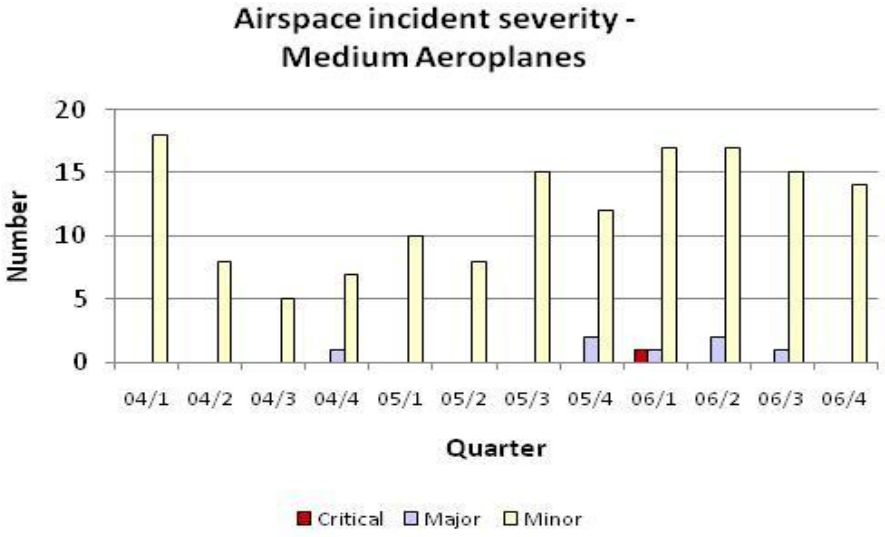
***Number of Airspace Incidents***

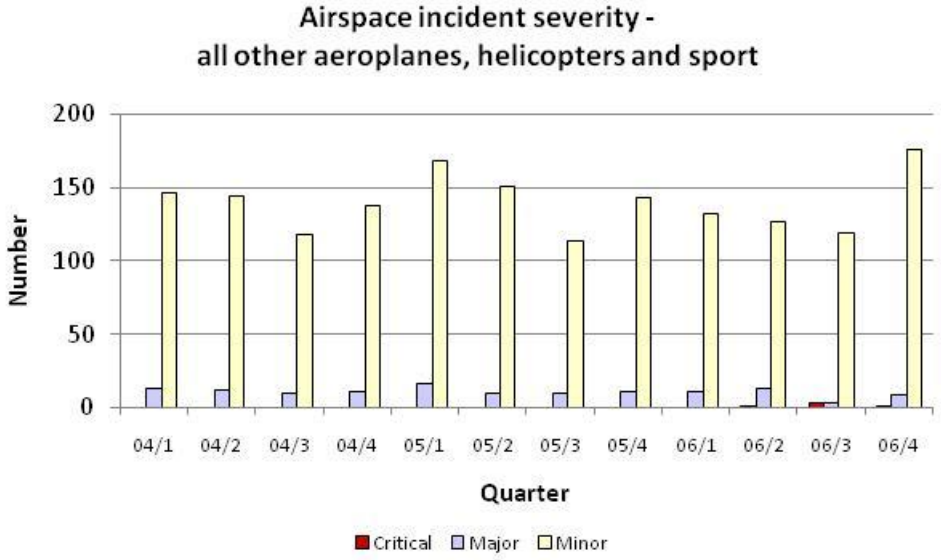
| Aircraft Group | 1 Jul to 31 Dec 2005 | 1 Jul to 31 Dec 2006 | Change | |
|---|---|---|---|---|
| | | | Number | Percentage |
| Part 121 | 48 | 93 | + 45 | + 93.8% |
| Part 125 | 29 | 30 | + 1 | + 3.5% |
| Other aeroplanes | 85 | 110 | + 25 | + 29.4% |
| Helicopters | 24 | 11 | - 13 | - 54.2% |
| Sport | 8 | 10 | + 2 | - 25.0% |
| Ag' aeroplanes | 0 | 3 | + 3 | -- |
| Unknown | 161 | 177 | + 16 | + 9.9% |
| **Total** | 355 | 434 | + 79 | + 22.3% |

## Severity

The following graphs show the severity of airspace incidents recorded over the period 1 April 2004 to 31 December 2006.




Airspace incident severity -
Medium Aeroplanes
Number
20
15
10
5
0
04/1 04/2 04/3 04/4 05/1 05/2 05/3 05/4 06/1 06/2 06/3 06/4
Quarter
Critical Major Minor


Airspace incident severity -
all other aeroplanes, helicopters and sport
Number
200
150
100
50
0
04/1 04/2 04/3 04/4 05/1 05/2 05/3 05/4 06/1 06/2 06/3 06/4
Quarter
Critical Major Minor

## *Six-Monthly Comparison*

| Aircraft Group | Severity | 1 Jul to 31 Dec 2005 | 1 Jul to 31 Dec 2006 | Change |
|---|---|---|---|---|
| 13,608 kg and above | Critical | 0 | 0 | 0 |
| | Major | 4 | 2 | - 2 |
| | Minor | 32 | 81 | + 49 |
| 5,670 to 13,608 kg | Critical | 0 | 0 | 0 |
| | Major | 3 | 3 | 0 |
| | Minor | 30 | 30 | 0 |
| Below 5,670 kg, Helicopters and Sport | Critical | 0 | 1 | + 1 |
| | Major | 5 | 1 | - 4 |
| | Minor | 130 | 139 | + 9 |
| Unknown | Critical | 0 | 3 | + 3 |
| | Major | 16 | 13 | - 3 |
| | Minor | 148 | 161 | - 13 |
| **Total** | **Critical** | **0** | **4** | **+4** |
| | **Major** | **28** | **19** | **- 9** |
| | **Minor** | **330** | **411** | **+ 81** |

## Air Traffic Service (ATS) and Pilot Attributable Airspace Incidents

### Introduction

Airspace incidents are categorised as ATS, pilot, or ATS and pilot attributable. For the purposes of this analysis airspace incidents have been divided into those that have been identified to have an ATS attributable element and those that have a pilot attributable element. Accordingly there is some overlap in the number of occurrences reported where both ATS and pilot elements are involved. The following pages of this section report on apparent trends in ATS and pilot attributable occurrences.

ATS attributable airspace occurrences include those that are attributable to both New Zealand and external ATS organisations. External ATS organisations are included where information coordination problems have arisen or where a New Zealand registered aircraft has reported a conflict in non-NZ airspace.

The criteria used to identify which airspace incidents are ATS attributable and pilot attributable in reports for 1 January to 30 June 2004 and later have been changed from the criteria used in previous reports. This has resulted in changes to the number of airspace incidents identified as ATS attributable and pilot attributable compared to previous reports.

The change in the number of ATS attributable airspace incidents is not significant. However, the number of pilot attributable airspace incidents has reduced significantly. This is due to changing one of the criteria from airspace occurrence descriptors that are associated with pilots or could be associated with either ATS or pilots (shown in the second and third tables on the next page), to airspace occurrence descriptors that are associated with pilots only (i.e. this criteria now includes airspace occurrence descriptors that are associated with pilots only, shown in the second table on the next page).

## Descriptors

Occurrence descriptors have been established for 386 (88.9%) of the 434 airspace incidents in the period 1 July to 31 December 2006.

Note: each airspace incident may have more than one airspace occurrence descriptor.

### *Six-Monthly Comparison*

The following table shows the airspace occurrence descriptors that are associated with ATS.

| Descriptor | 1 Jul to 31 Dec 2005 | 1 Jul to 31 Dec 2006 | Change |
|---|---|---|---|
| ATS Coordination Deficiency | 25 | 50 | + 25 |
| ATS Clearance/Instruction Deficiency | 31 | 33 | + 2 |
| ATS Flight Planning System Deficiency | 16 | 13 | - 3 |
| ATS Flight Information Deficiency | | 11 | + 11 |
| **Total** | **72** | **107** | **+ 35** |

The following table shows the airspace occurrence descriptors that are associated with pilots.

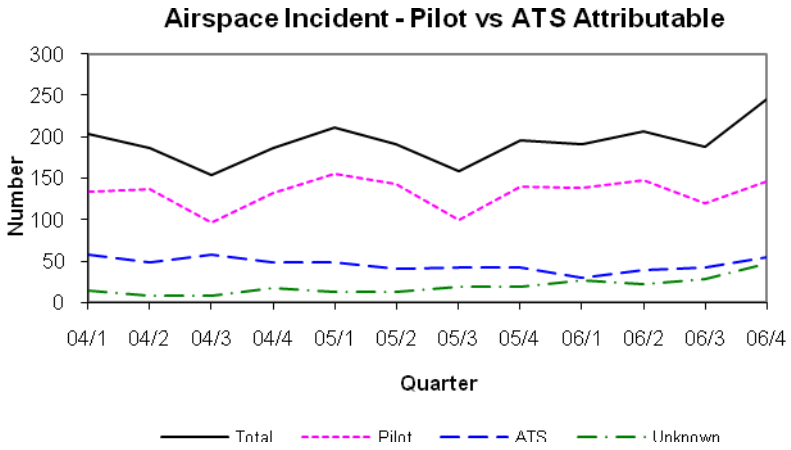
| Descriptor | 1 Jul to 31 Dec 2005 | 1 Jul to 31 Dec 2006 | Change |
|---|---|---|---|
| Unauth Airspace Incursion | 99 | 88 | - 11 |
| Breach of Other Clearance | 67 | 61 | - 6 |
| Unauth Altitude Penetration | 21 | 35 | + 14 |
| Pilot Position Reporting Deficiency | 20 | 10 | - 10 |
| Pilot Flight Planning Deficiency | 9 | 8 | - 1 |
| Flight Assist | 1 | 2 | + 1 |
| Pilot Readback Deficiency | 20 | 10 | - 10 |
| **Total** | **237** | **214** | **- 23** |

The following table shows the airspace occurrence descriptors that could be associated with either ATS or pilots.

| Descriptor | 1 Jul to 31 Dec 2004 | 1 Jul to 31 Dec 2005 | Change |
|---|---|---|---|
| Traffic Collision Avoidance System | 44 | 64 | + 20 |
| Loss of Separation | 29 | 23 | - 6 |
| Other | 8 | 17 | + 9 |
| Near Collision | 4 | 9 | + 5 |
| Controller/Pilot Datalink Communications | 0 | 1 | + 1 |
| Short Term Conflict Alert | 0 | 1 | + 1 |
| Reduced Navigation Performance | 0 | 0 | 0 |
| Reduced Vertical Separation Minima | 0 | 0 | 0 |
| **Total** | **85** | **115** | **+** 30 |

### *Trend*

The following graph shows the number of ATS attributable, pilot attributable, "unknown" attributable, and total number of airspace incidents for the three-year period 1 January 2004 to 31 December 2006.




The numbers of ATS attributable, pilot attributable and "unknown" attributable incidents show downward trends. The slope of the trend line for pilot attributable incidents is close to zero.

The number of "unknown" attributable airspace incidents reflects difficulties with coding of reports received by the CAA. Note that there is a time delay between incidents occurring, being investigated, and attributability being assigned to either ATS or Pilot.

The following table shows the attributability of airspace incidents.

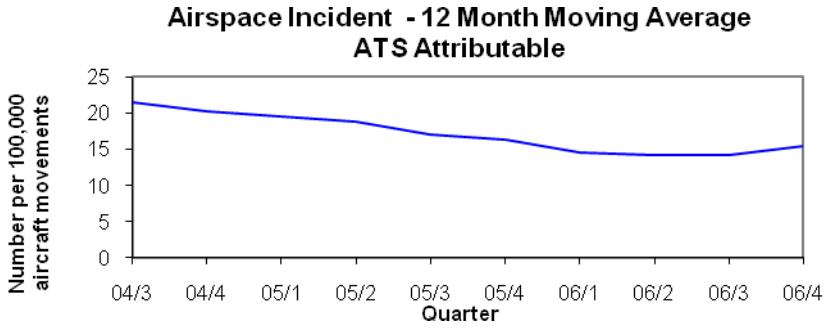
| Attributablility | 1 Jul to 31 Dec 2005 | 1 Jul to 31 Dec 2006 | Change | |
|---|---|---|---|---|
| | | | Number | Percentage |
| ATS only | 72 | 107 | - 35 | +48.6 |
| Pilot only | 211 | 211 | 0 | 0 |
| ATS & Pilot | 85 | 115 | + 30 | + 35.3 |
| **Total** | **403** | **399** | **- 4** | **- 1.0** |

### ATS Attributable

The criteria used to identify which airspace incidents are ATS attributable in reports for 1 January to 30 June 2005 and later have been changed from the criteria used in previous reports. This has resulted in changes to the number of airspace incidents identified as ATS attributable compared to previous reports. However, these changes are not significant.

#### *Occurrence Trend*

The following graph shows the Air Traffic Service (ATS) attributable airspace incident rate (incidents per 100,000 reported aircraft movements) twelve-month moving average for the three-year period 1 July 2004 to 31 December 2006.

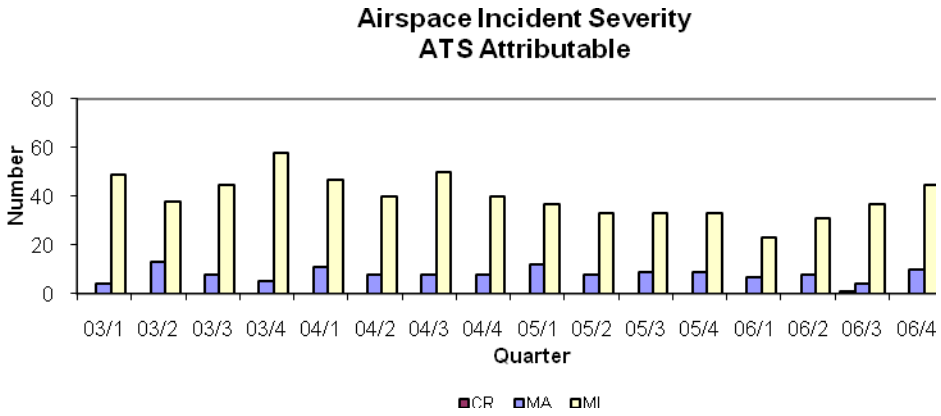



The ATS attributable airspace incident rate is trending down.

#### *Six-Monthly Comparison and Severity*

| Severity | 1 Jul to 31 Dec 2005 | 1 Jul to 31 Dec 2006 | Change | |
|---|---|---|---|---|
| | | | Number | Percentage |
| Critical | 0 | 1 | 1 | - |
| Major | 18 | 14 | - 4 | - 22.2 |
| Minor | 66 | 82 | + 16 | + 24.2 |
| **Total** | **90** | **69** | **- 21** | **- 23.3** |

The following graph shows the severity of ATS attributable incidents recorded over the period 1 January 2003 to 31 December 2006.



## *Discussion*

### *Causal Factors*

The following table shows the causal factors for ATS attributable airspace incidents in the 1 July to 31 December 2006 period associated with ATS providers, air traffic controllers, and flight service officers.

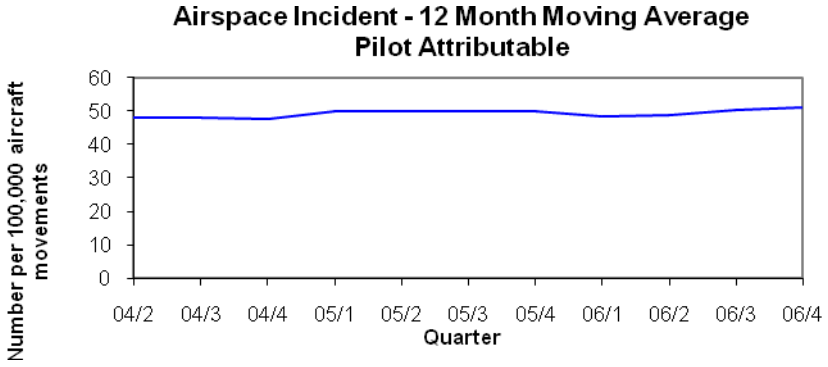
| Descriptor | 1 Jul to 31 Dec 2005 | 1 Jul to 31 Dec 2006 | Change |
|---|---|---|---|
| Local Error Factor: Inadequate Checking | 38 | 34 | - 4 |
| Active Failure Factor: Poor Procedure "Action" | 19 | 19 | 0 |
| Active Failure Factor: Inaccurate System "Diagnosis" | 14 | 11 | - 3 |
| Organisation Factor: Inadequate Resource Management | 3 | 11 | + 8 |
| Organisation Factor: Inadequate Specifications/Requirements | 5 | 8 | + 3 |
| Organisation Factor: Inadequate Procedures | 9 | 7 | - 2 |
| Organisation Factor: Design Deficiencies | 6 | 6 | 0 |
| Local Error Factor: Lack Of Knowledge | 2 | 5 | + 3 |
| Local Violation Factor: Hazard Misperception | 3 | 5 | + 2 |
| Organisation Factor: Inadequate Defences | 2 | 5 | + 3 |
| Local Error Factor: Task Overload | 4 | 4 | 0 |
| Local Error Factor: Task Unfamiliarity | 0 | 3 | + 3 |
| Active Failure Factor: Inappropriate “Procedures” | 0 | 2 | + 2 |
| Local Violation Factor: Complacency (I.e. It Can’t Happen) | 0 | 2 | + 2 |
| Organisation Factor: Inadequate Communications | 1 | 2 | + 1 |
| Organisation Factor: Poor Coordination | 0 | 2 | + 2 |
| Active Failure Factor: Inappropriate “Strategy” | 5 | 1 | - 4 |
| Active Failure Factor: State Change Not Detected “Information” | 1 | 1 | 0 |
| Local Error Factor: Hostile Environment | 0 | 1 | + 1 |
| Local Error Factor: Interpretation Difficulties | 0 | 1 | + 1 |
| Local Error Factor: Negative Task Transfer (Habits) | 1 | 1 | 0 |
| Local Error Factor: Physiological Other | 0 | 1 | + 1 |
| Local Error Factor: Poor Instructions/Procedures | 0 | 1 | + 1 |
| Local Error Factor: Poor Signal:Noise | 3 | 1 | - 2 |
| Local Error Factor: Risk Misperception | 3 | 1 | - 2 |
| Organisation Factor: Inadequate Planning | 0 | 1 | + 1 |
| Organisation Factor: Other Organisational Factor | 4 | 1 | - 3 |
| Organisation Factor: Unsuitable Materials | 0 | 1 | + 1 |
| **Total** | **123** | **140** | **+ 17** |

## Pilot Attributable

The criteria used to identify which airspace incidents are pilot attributable in reports for 1 January to 30 June 2004 and later have been changed from the criteria used in previous reports. This has resulted in a significant reduction to the number of airspace incidents identified as pilot attributable compared to previous reports.

### *Occurrence Trend*

The following graph shows the pilot attributable airspace incident rate (incidents per 100,000 reported aircraft movements) twelve-month moving average for the three-year period 1 April 2004 to 31 December 2006.

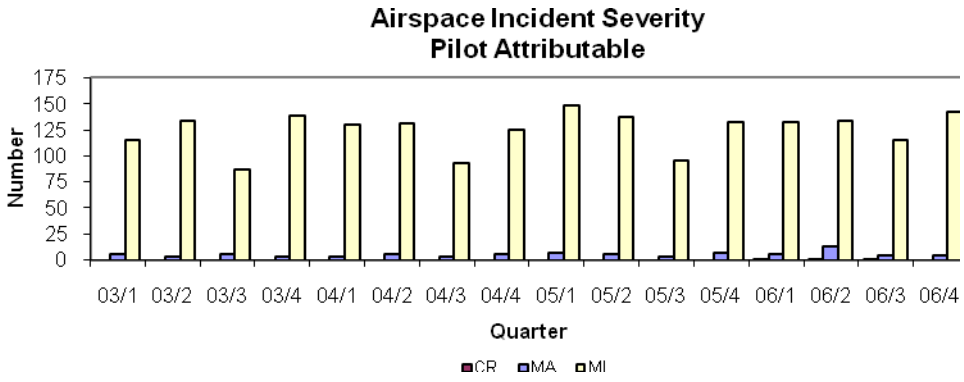



The pilot attributable airspace incident rate shows a very slight upward trend.

### *Six-Monthly Comparison and Severity*

| Severity | 1 Jul to 31 Dec 2005 | 1 Jul to 31 Dec 2006 | Change | |
|---|---|---|---|---|
| | | | Number | Percentage |
| Critical | 0 | 1 | + 1 | - |
| Major | 10 | 8 | - 2 | - 20.0 |
| Minor | 228 | 257 | + 29 | + 12.7 |
| **Total** | **297** | **286** | **- 11** | **- 3.7** |

The following graph shows the severity of pilot attributable incidents recorded over the period 1 January 2003 to 31 December 2006.



### *Discussion*

The majority of pilot attributable airspace incidents continue to be reported to the Authority by the ATS provider and not by the pilot or aircraft operator.

### *Causal Factors*

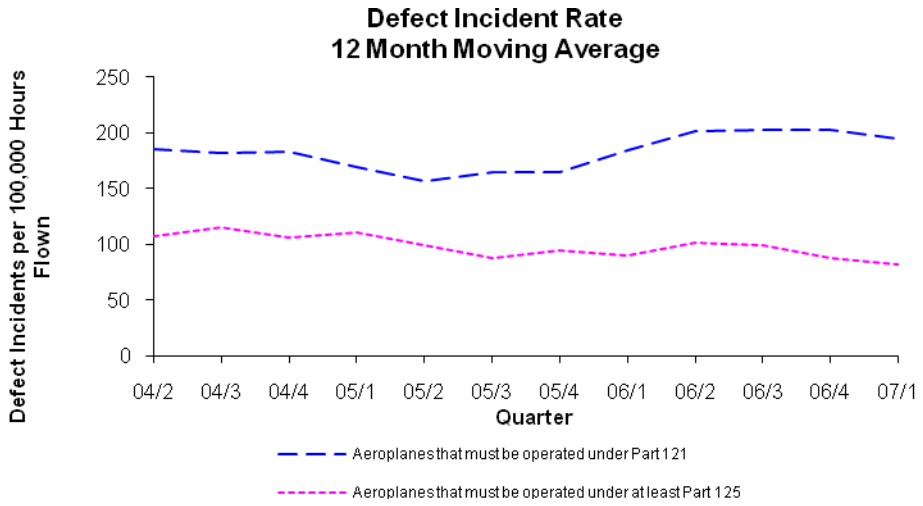
The following table shows the 26 causal factors for pilot attributable airspace incidents in the 1 July to 31 December 2006 period associated with aircraft operators and people (pilots-in-command, co-pilots, instructor/check pilots, pilots of other aircraft, and dual students/pilots under check).

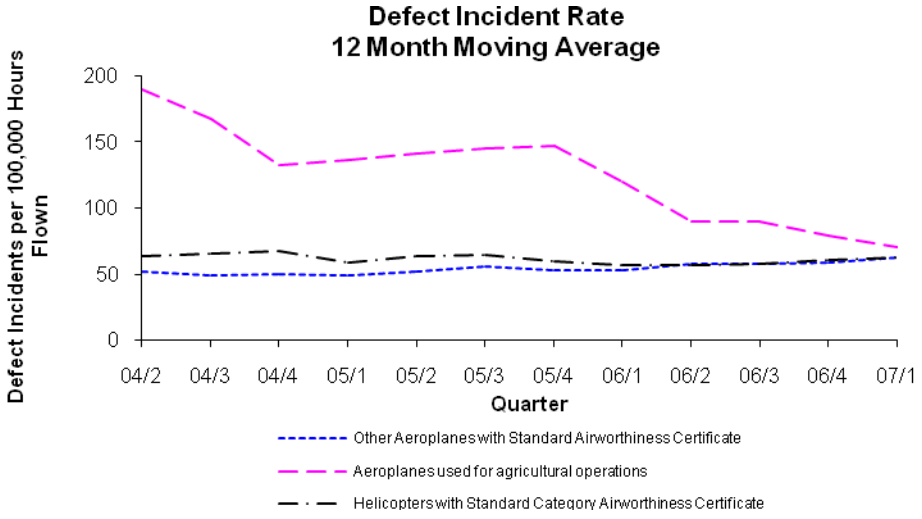
| Descriptor | 1 Jul to 31 Dec 2005 | 1 Jul to 31 Dec 2006 | Change |
|---|---|---|---|
| Active Failure Factor: State Change Not Detected "Information" | 52 | 13 | - 39 |
| Local Error Factor: Inadequate Checking | 16 | 8 | - 8 |
| Active Failure Factor: Inappropriate “Strategy” | 12 | 5 | - 7 |
| Active Failure Factor: Poor Procedure “Action” | 16 | 5 | - 11 |
| Active Failure Factor: Inappropriate “Procedures” | 1 | 4 | + 3 |
| Local Violation Factor: Perceived Licence to Bend Rules | 4 | 4 | 0 |
| Active Failure Factor: Inaccurate System "Diagnosis" | 16 | 3 | - 13 |
| Active Failure Factor: Actions Inconsistent With Procedures | 5 | 2 | - 3 |
| Local Error Factor: Other Environmental Factor (Eg Weather) | 1 | 2 | + 1 |
| Local Error Factor: Poor Instructions/Procedures | 3 | 2 | - 1 |
| Local Violation Factor: Hazard Misperception | 2 | 2 | 0 |
| Active Failure Factor: Inappropriate “Goal” | 6 | 1 | - 5 |
| Local Error Factor: Lack Of Knowledge | 3 | 1 | - 2 |
| Local Error Factor: Negative Task Transfer (Habits) | 2 | 1 | - 1 |
| Local Error Factor: Poor Human-System Interface | 0 | 1 | + 1 |
| Local Error Factor: Task Overload | 2 | 1 | - 1 |
| Local Error Factor: Task Unfamiliarity | 3 | 1 | - 2 |
| Local Violation Factor: Poor Supervision & Checking | 1 | 1 | 0 |
| Organisation Factor: Unsuitable Equipment | 0 | 1 | + 1 |
| Local Error Factor: Hostile Environment | 3 | 0 | - 3 |
| Local Error Factor: Inexperience (Not Lack Of Training) | 2 | 0 | - 2 |
| Local Error Factor: Interpretation Difficulties | 4 | 0 | - 4 |
| Local Error Factor: Other Error Enforcing Condition | 3 | 0 | - 3 |
| Local Error Factor: Poor Attention Span | 2 | 0 | - 2 |
| Local Error Factor: Poor Signal: Noise | 1 | 0 | - 1 |
| Local Error Factor: Risk Misperception | 2 | 0 | - 2 |
| Organisation Factor: Inadequate Procedures | 3 | 0 | - 3 |
| Local Error Factor: Physiological Other | 1 | 0 | - 1 |
| **Total** | **166** | **58** | **- 108** |

## Defect Incidents

### Occurrence Trend

The following graphs show the aircraft defect incident rates (incidents per 100,000 hours flown) twelve month moving average for the three-year period 1 April 2004 to 31 March 2007 (excluding Sport).



| Aircraft Group | Straight line trend of 12 month moving average |
|---|---|
| Aeroplanes that must be operated under Part 121 | Trending up |
| Aeroplanes that must be operated under at least Part 125 | Trending down |
| Other Aeroplanes with Standard Cs of A | Constant |
| Helicopters with Standard Category Cs of A | Trending down |
| Aeroplanes used for agricultural operations | Trending down |

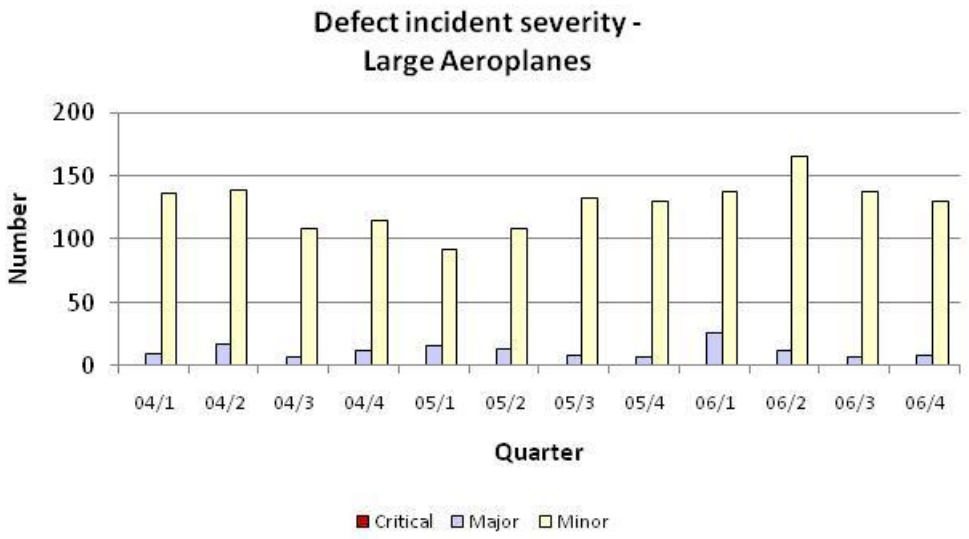
## Six-Monthly Comparison

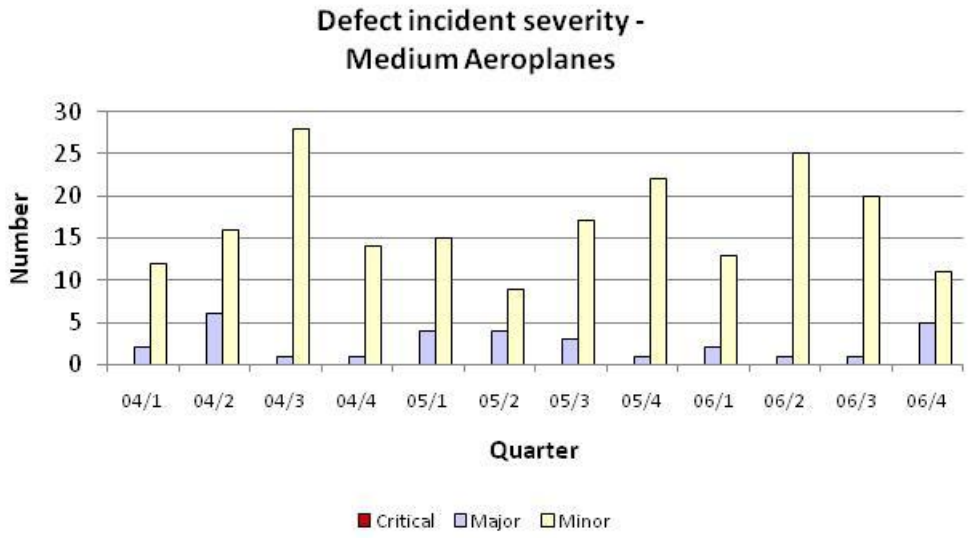
### *Number of Defect Incidents*

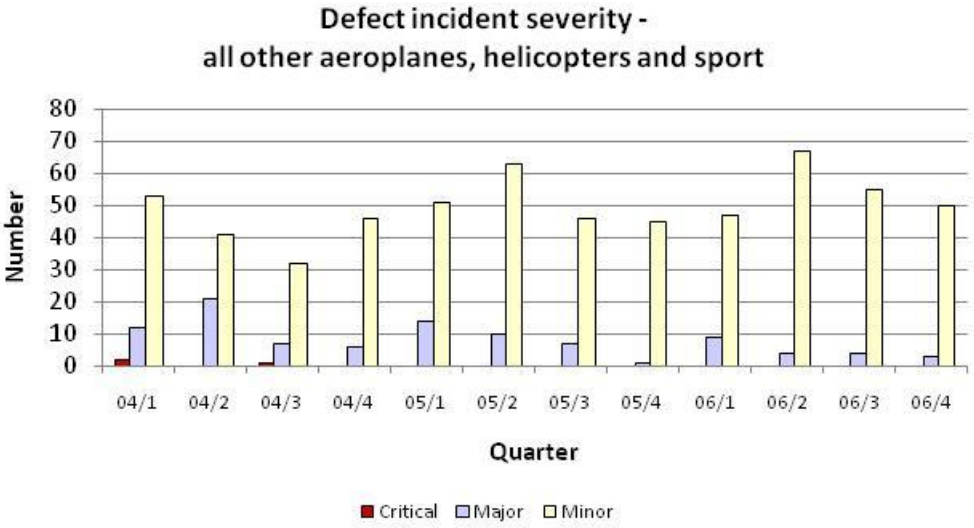
| Aircraft group | 1 Jul to 31 Dec 2005 | 1Jun to 31 Dec 2006 | Change | |
|---|---|---|---|---|
| | | | Number | Percent |
| Aeroplanes that must be operated under Part 121 | 278 | 283 | 5 | 1.8% |
| Aeroplanes that must be operated under at least Part 125 | 43 | 37 | -6 | -14.0% |
| Other Aeroplanes with Standard Airworthiness Certificate | 65 | 62 | -3 | -4.6% |
| Helicopters with Standard C's of A | 51 | 57 | 6 | 11.8% |
| Sport Aircraft | 7 | 15 | 8 | 114.3% |
| Aeroplanes used for agricultural operations | 19 | 20 | 1 | 5.3% |
| Unknown | 8 | 15 | 7 | 87.5% |
| **Total** | **471** | **489** | **18** | **3.8%** |

### Severity

The following graphs show the severity of defect incidents recorded over the period 1 January 2004 to 31 December 2006.




Defect incident severity -
all other aeroplanes, helicopters and sport
Number
80
70
60
50
40
30
20
10
0
04/1
04/2
04/3
04/4
05/1
05/2
05/3
05/4
06/1
06/2
06/3
06/4
Quarter
Critical
Major
Minor

## *Six-Monthly Comparison*

| Activity | Severity | 1 Jul to 31 Dec 2005 | 1 Jul to 31 Dec 2006 | Change |
|---|---|---|---|---|
| Aeroplanes that must be operated under Part 121 | Critical | 0 | 0 | 0 |
| | Major | 15 | 15 | 0 |
| | Minor | 263 | 268 | 5 |
| Aeroplanes that must be operated under at least Part 125 | Critical | 0 | 0 | 0 |
| | Major | 4 | 6 | 2 |
| | Minor | 39 | 31 | -8 |
| Other Aeroplanes with Standard Cs of A | Critical | 0 | 0 | 0 |
| | Major | 6 | 6 | 0 |
| | Minor | 59 | 56 | -3 |
| Helicopters with Standard Category Cs of A | Critical | 0 | 0 | 0 |
| | Major | 7 | 5 | -2 |
| | Minor | 44 | 52 | 8 |
| Sport Aircraft | Critical | 0 | 0 | 0 |
| | Major | 0 | 0 | 0 |
| | Minor | 7 | 15 | 8 |
| Aircraft used for Agricultural operations | Critical | 0 | 0 | 0 |
| | Major | 2 | 0 | -2 |
| | Minor | 17 | 20 | 3 |
| Unknown | Critical | 0 | 0 | 0 |
| | Major | 0 | 1 | 1 |
| | Minor | 8 | 14 | 6 |
| **Total** | **Critical** | **0** | **0** | **0** |
| | **Major** | **34** | **33** | **-1** |
| | **Minor** | **437** | **456** | **19** |

## Defect Incident Rates

### *Summary of Defect Rate Standard*

Three levels have been defined for categorising quarterly defect rates. The current levels are:

Normal – less than 4.25 defect incidents per 1,000 hours flown.

Alert – between 4.25 and 6 defect incidents per 1,000 hours flown.

High – above 6 defect incidents per 1,000 hours flown.

The current levels were set in July 2002. They are based on data from the three years to 30 June 2002, excluding B747-200 aircraft since that type was removed from service during the quarter 1 July to 30 September 1999.

### *CAA Actions*

The following table shows how current values and short-term trends in defect rates will be used to determine CAA action.

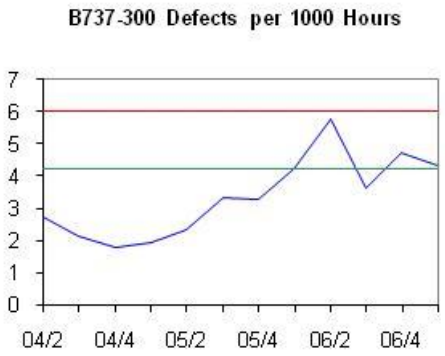
| Defect Rate | Trending Down | Neutral Trend | Trending Up |
|---|---|---|---|
| Normal | Monitor | Monitor | Monitor |
| Alert | Notify appropriate General Manager | Notify appropriate General Manager | Safety Analysis Unit analysis of data<br>Notify appropriate General Manager of results |
| High | Notify appropriate General Manager | Safety Analysis Unit analysis of data<br>Notify appropriate General Manager of results | Safety Analysis Unit analysis of data<br>Notify appropriate General Manager of results |

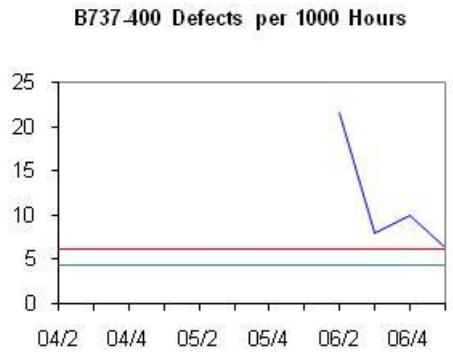
### *Analysis*

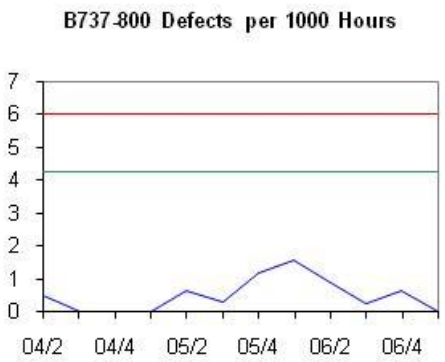
The top line on each graph shows the High defect rate. The next line shows the Alert defect rate.

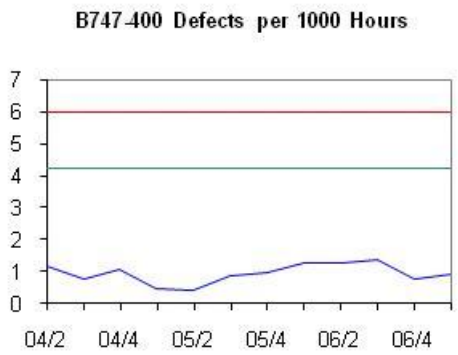
### *Aeroplanes that must be operated under Part 121*

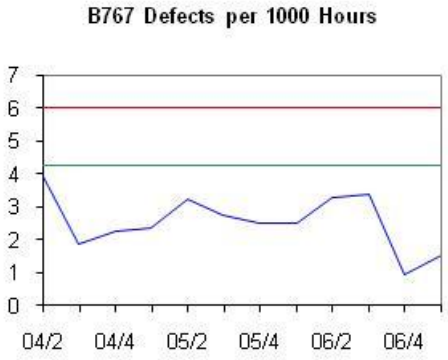
Manager Airline Maintenance was notified of the high rate for B737-300 and -400 aircraft.

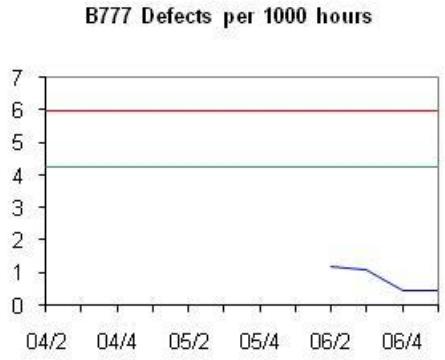


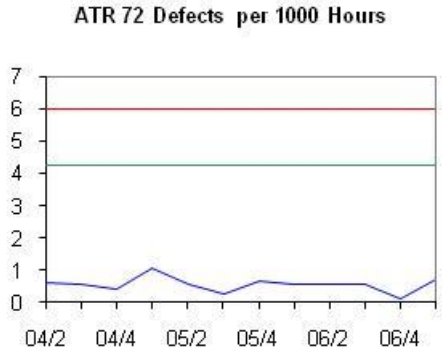



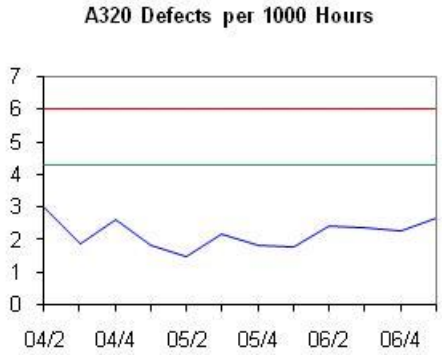



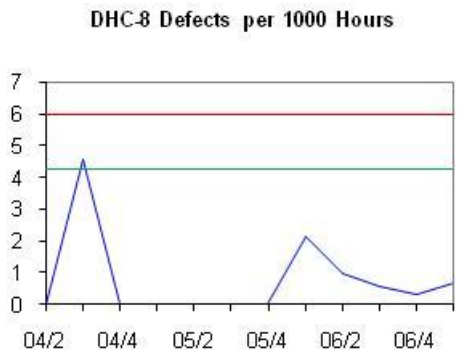



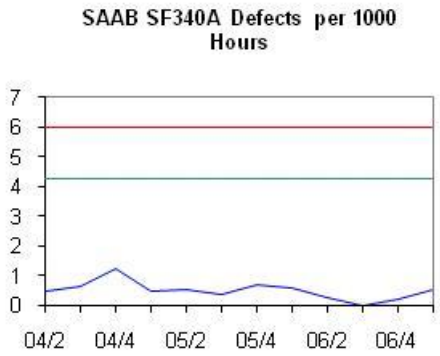





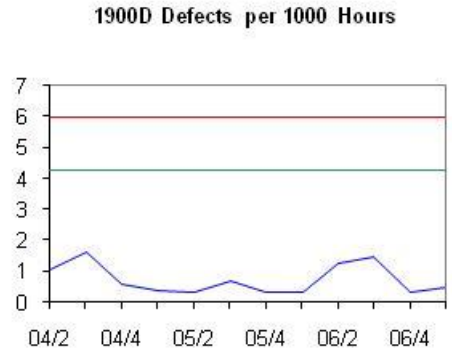



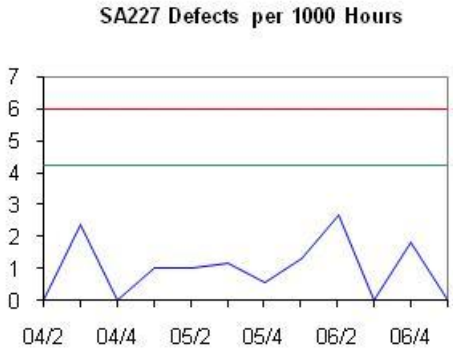




***Aeroplanes that must be operated under Part 125***

The analysis found no cause for further action.




J31, 32 and 41 aircraft are no longer in service.

# Bird Incident Rates

### 12-Month Moving Average Strike Rate per 10,000 Aircraft Movements

The following table shows the 12-month moving average strike rates for identified aerodromes for the three years ending December 2006.

| Aerodrome | 04/1 | 04/2 | 04/3 | 04/4 | 05/1 | 05/2 | 05/3 | 05/4 | 06/1 | 06/2 | 06/3 | 06/4 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Auckland | 2.7 | 4.2 | 3.3 | 3.2 | 4.5 | 2.9 | 2.3 | 2.4 | 3.4 | 2.8 | 1.5 | 6.0 |
| Christchurch | 3.3 | 3.6 | 2.3 | 2.8 | 2.4 | 3.3 | 5.1 | 4.2 | 3.7 | 5.4 | 1.2 | 11.2 |
| Dunedin | 1.4 | 6.1 | 7.1 | 3.7 | 9.5 | 8.4 | 1.7 | 10.2 | 1.4 | 5.9 | 2.1 | 16.8 |
| Gisborne | 9.7 | 6.4 | 0.0 | 9.5 | 5.1 | 11.3 | 19.4 | 3.3 | 5.2 | 17.3 | 9.7 | 23.8 |
| Hamilton | 3.5 | 1.5 | 2.8 | 2.8 | 2.7 | 2.8 | 1.8 | 4.9 | 5.6 | 5.7 | 4.3 | 6.3 |
| Invercargill | 2.4 | 5.3 | 2.3 | 7.5 | 6.9 | 7.9 | 7.8 | 15.4 | 11.3 | 11.4 | 8.5 | 0.0 |
| Napier | 3.2 | 4.8 | 10.3 | 8.4 | 7.5 | 10.4 | 3.1 | 8.3 | 5.4 | 13.1 | 1.7 | 33.0 |
| Nelson | 2.0 | 6.0 | 1.8 | 1.9 | 1.2 | 0.6 | 0.0 | 1.3 | 2.5 | 4.0 | 2.3 | 13.9 |
| New Plymouth | 6.5 | 7.7 | 8.9 | 8.1 | 11.2 | 5.9 | 6.4 | 6.8 | 4.8 | 5.0 | 10.4 | 9.2 |
| Ohakea | 5.6 | 5.4 | 6.6 | 2.3 | 5.0 | 7.1 | 3.1 | 2.2 | 0.0 | 3.4 | 3.7 | 0.0 |
| Palmerston North | 3.9 | 3.6 | 3.1 | 0.9 | 7.9 | 0.7 | 3.4 | 3.8 | 6.3 | 2.6 | 5.6 | 12.2 |
| Queenstown | 1.2 | 1.8 | 4.1 | 5.7 | 3.2 | 3.6 | 1.6 | 5.7 | 3.0 | 0.0 | 2.8 | 10.0 |
| Rotorua | 5.7 | 7.4 | 7.2 | 10.1 | 6.7 | 14.2 | 5.7 | 11.7 | 9.9 | 11.9 | 1.8 | 24.7 |
| Taupo | 0.8 | 2.2 | 0.0 | 0.0 | 1.8 | 1.2 | 1.1 | 1.9 | 2.7 | 1.2 | 0.0 | 1.3 |
| Tauranga | 6.1 | 0.6 | 0.0 | 1.7 | 3.1 | 2.5 | 1.4 | 4.9 | 4.0 | 3.0 | 1.3 | 7.9 |
| Wellington | 2.2 | 1.3 | 1.7 | 3.7 | 1.7 | 3.4 | 1.0 | 2.3 | 2.0 | 1.3 | 0.7 | 9.8 |
| Whenuapai | 16.9 | 24.4 | 5.2 | 10.4 | 2.1 | 2.9 | 2.8 | 6.6 | 6.8 | 7.8 | 0.0 | 17.2 |
| Woodbourne | 4.9 | 2.1 | 1.9 | 7.5 | 11.6 | 5.4 | 5.0 | 3.3 | 5.8 | 6.7 | 5.5 | 10.6 |

*Bird occurrence rates are measured monthly, quarterly or annually by aerodrome. This is achieved by querying the database for the number of strikes at aerodromes over a period of time summarising by month, quarter or year. The results of this query are then divided by the aircraft movements at each aerodrome and multiplied by 10,000 to achieve strikes per 10,000 aircraft movements. Aircraft movements at aerodromes are obtained from the ACNZ, and where available, from individual airport companies.*

### CAA Actions

The CAA uses the following criteria for assessing actions to be taken with regard to identified trends in bird strike rates.

| Bird strikes per 10,000 aircraft movements | Risk Category | Trending Down | Constant | Trending Up |
|---|---|---|---|---|
| ≥ 0.0 and < 5.0 | Low | Monitor | Monitor | Advise Aerodrome Operator |
| ≥ 5.0 and < 10.0 | Medium | Monitor | Advise Aerodrome Operator | Advise Aerodrome Operator, Request Rectification Action |
| ≥ 10.0 | High | Advise Aerodrome Operator | Advise Aerodrome Operator, Request Rectification Action | Advise Aerodrome Operator, Request Rectification Action |

### Analysis

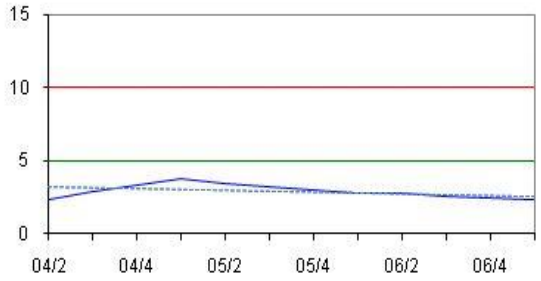
Analysis shows that 8 of the 18 monitored aerodromes have bird strike rates above the "trigger level" for CAA Action. Details were forwarded to Manager Aeronautical Services.

Two aerodromes exhibited strike rates 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 all of these aerodromes displayed a long-term upward or constant trend. Ten aerodromes exhibited a strike rate in the low risk category (below 5.0 per 10,000 movements) and two of these aerodromes displayed a long-term upward trend.

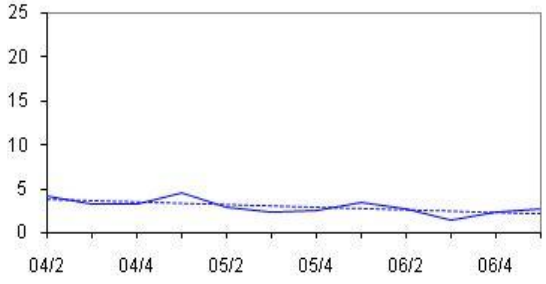
The top line on the strike rate graph shows the High risk category. The next line shows the Medium risk category.

| Aerodrome | Risk Category | Trend | CAA Action |
|---|---|---|---|
| Auckland | Low | Trending up | Advise Aerodrome Operator |
| Christchurch | Low | Trending up | Advise Aerodrome Operator |
| Dunedin | Low | Trending down | Monitor |
| Gisborne | High | Trending up | Advise aerodrome operator, request rectification action |
| Hamilton | Medium | Trending up | Advise aerodrome operator, request rectification action |
| Invercargill | Medium | Trending up | Advise aerodrome operator, request rectification action |
| Napier | Medium | Trending up | Advise aerodrome operator, request rectification action |
| Nelson | Low | Constant | Monitor |
| New Plymouth | Medium | Trending down | Monitor |
| Ohakea | Low | Trending down | Monitor |
| Palmerston North | Medium | Trending up | Advise aerodrome operator, request rectification action |
| Queenstown | Low | Constant | Monitor |
| Rotorua | Medium | Trending up | Advise aerodrome operator, request rectification action |
| Taupo | Low | Constant | Monitor |
| Tauranga | Low | Constant | Monitor |
| Wellington | Medium | Trending down | Monitor |
| Whenuapai | Medium | Trending down | Monitor |
| Woodbourne | Medium | Trending up | Advise Aerodrome Operator, Request Rectification Action |

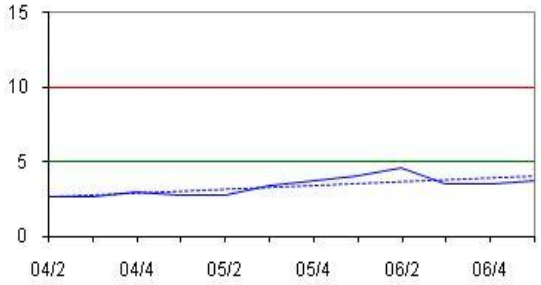
**Auckland - 12 Month Moving Average Bird Strike Rate per 10,000 Aircraft Movements**



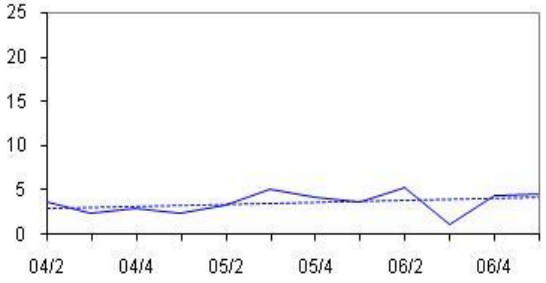

**Auckland - Quarterly Bird Strike Rate per 10,000 Aircraft Movements**



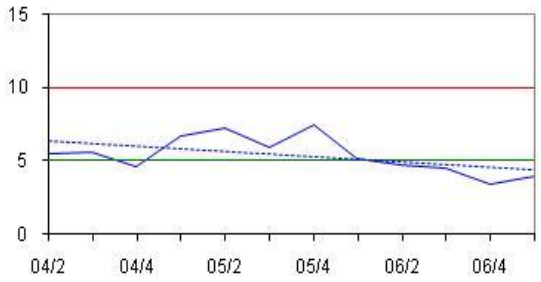

**Christchurch - 12 Month Moving Average Bird Strike Rate per 10,000 Aircraft Movements**



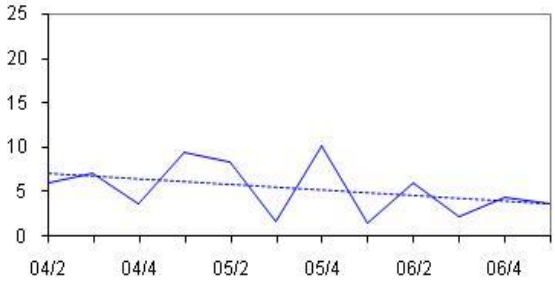

**Christchurch - Quarterly Bird Strike Rate per 10,000 Aircraft Movements**



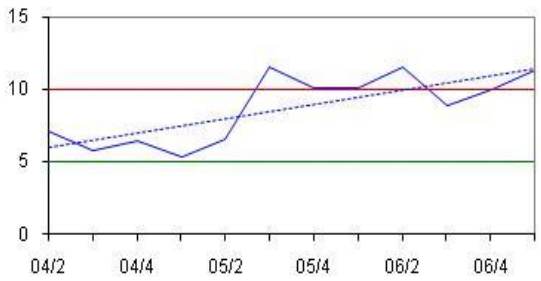

**Dunedin - 12 Month Moving Average Bird Strike Rate per 10,000 Aircraft Movements**



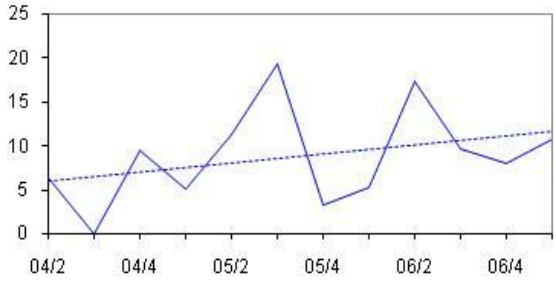

**Dunedin - Quarterly Bird Strike Rate per 10,000 Aircraft Movements**



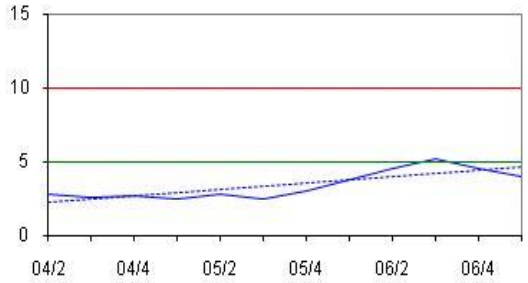

**Gisborne - 12 Month Moving Average Bird Strike Rate per 10,000 Aircraft Movements**



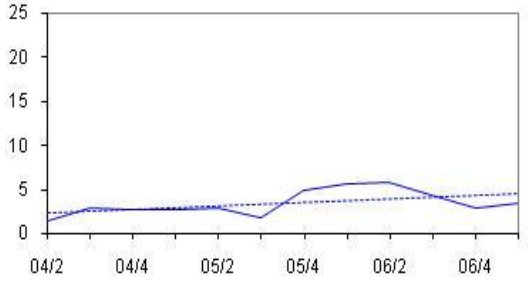

**Gisborne - Quarterly Bird Strike Rate per 10,000 Aircraft Movements**



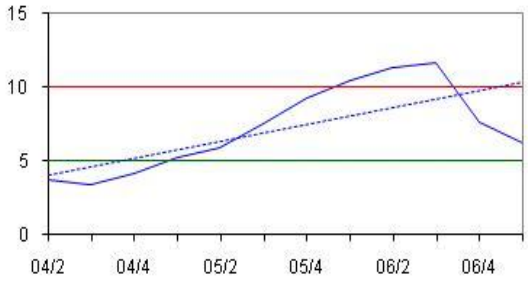
Hamilton - 12 Month Moving Average Bird Strike Rate per 10,000 Aircraft Movements



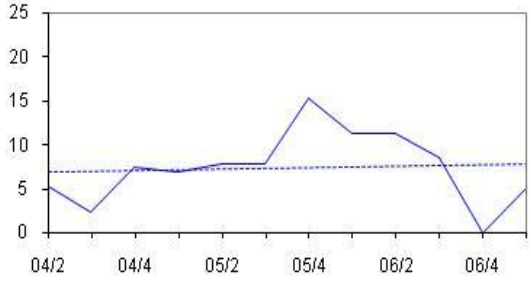

Hamilton - Quarterly Bird Strike Rate per 10,000 Aircraft Movements



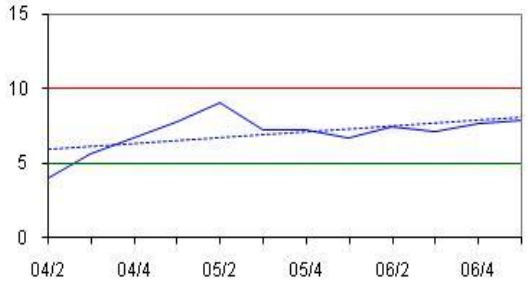

Invercargill - 12 Month Moving Average Bird Strike Rate per 10,000 Aircraft Movements



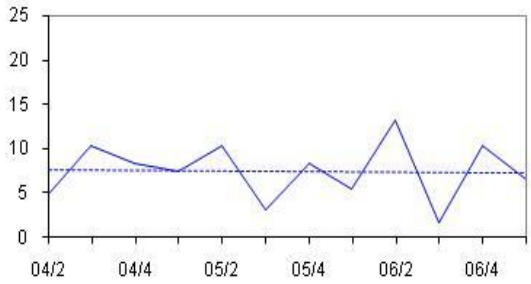

Invercargill - Quarterly Bird Strike Rate per 10,000 Aircraft Movements



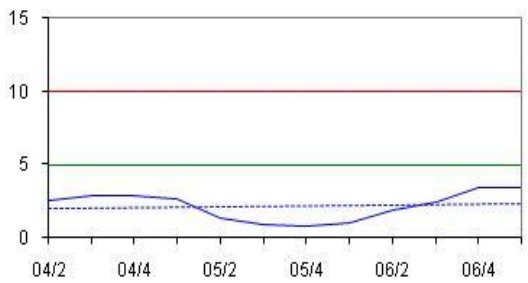

Napier - 12 Month Moving Average Bird Strike Rate per 10,000 Aircraft Movements



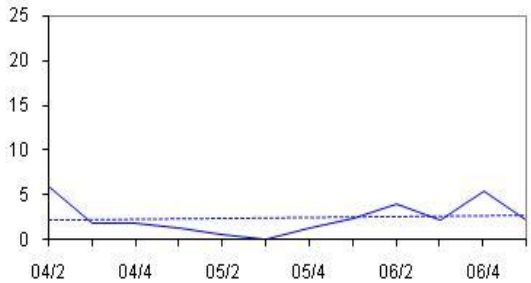

Napier - Quarterly Bird Strike Rate per 10,000 Aircraft Movements



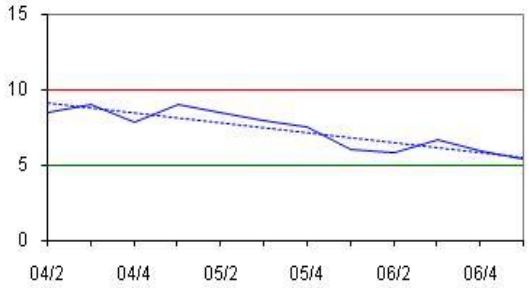

Nelson - 12 Month Moving Average Bird Strike Rate per 10,000 Aircraft Movements



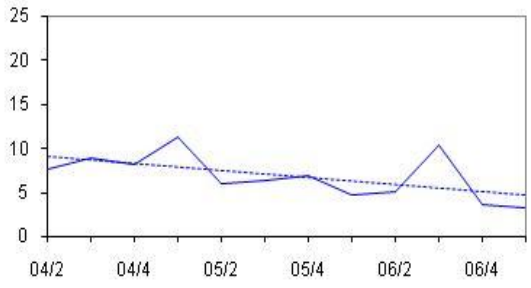

Nelson - Quarterly Bird Strike Rate per 10,000 Aircraft Movements



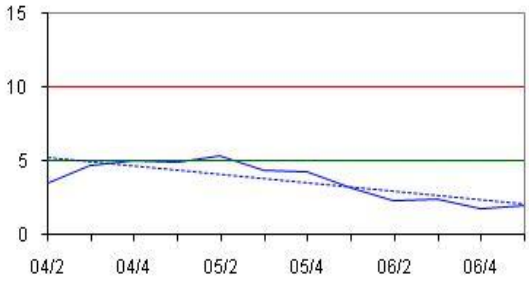
New Plymouth - 12 Month Moving Average Bird Strike Rate per 10,000 Aircraft Movements



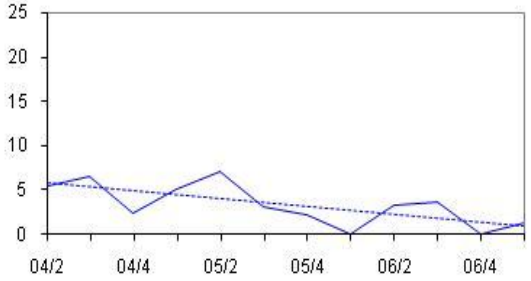

New Plymouth - Quarterly Bird Strike Rate per 10,000 Aircraft Movements



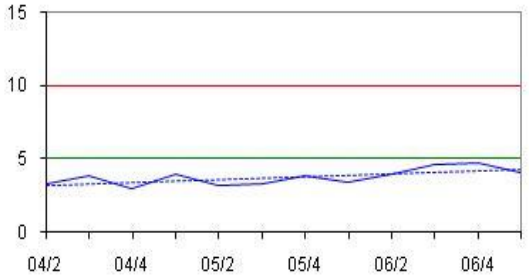

Ohakea - 12 Month Moving Average Bird Strike Rate per 10,000 Aircraft Movements



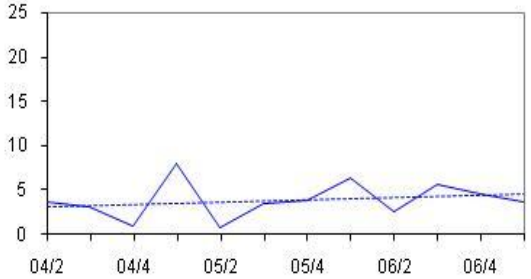

Ohakea - Quarterly Bird Strike Rate per 10,000 Aircraft Movements



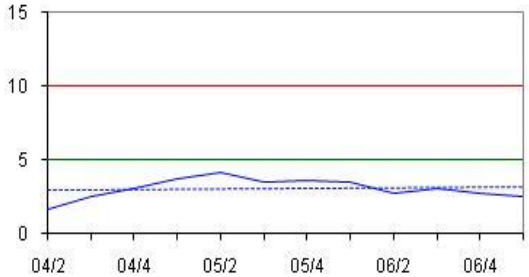

Palmerston North - 12 Month Moving Average Bird Strike Rate per 10,000 Aircraft Movements



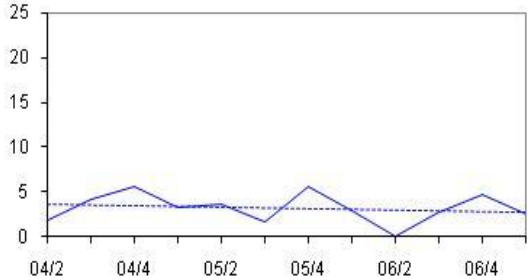

Palmerston North - Quarterly Bird Strike Rate per 10,000 Aircraft Movements



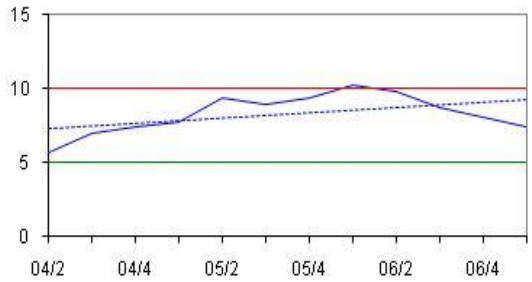

Queenstown - 12 Month Moving Average Bird Strike Rate per 10,000 Aircraft Movements



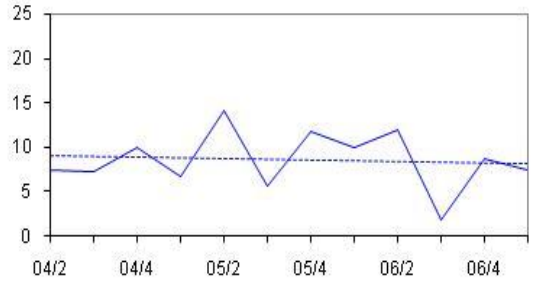

Queenstown - Quarterly Bird Strike Rate per 10,000 Aircraft Movements



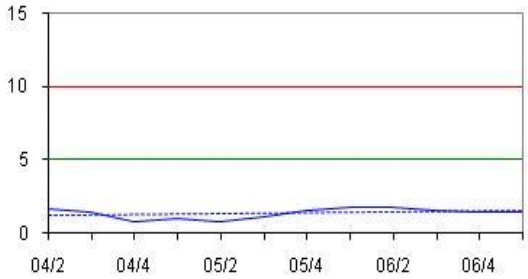
Rotorua - 12 Month Moving Average Bird Strike Rate per 10,000 Aircraft Movements



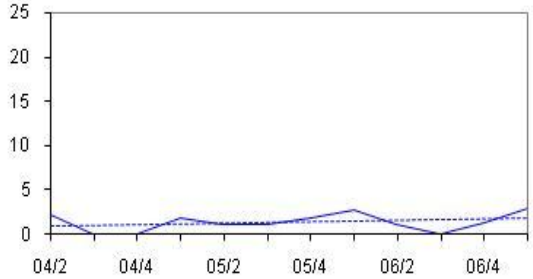

Rotorua - Quarterly Bird Strike Rate per 10,000 Aircraft Movements



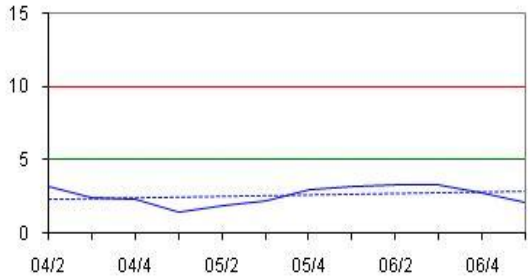

Taupo - 12 Month Moving Average Bird Strike Rate per 10,000 Aircraft Movements



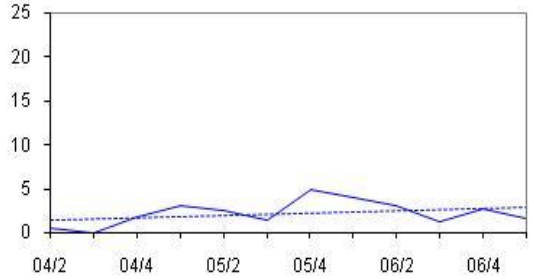

Taupo - Quarterly Bird Strike Rate per 10,000 Aircraft Movements



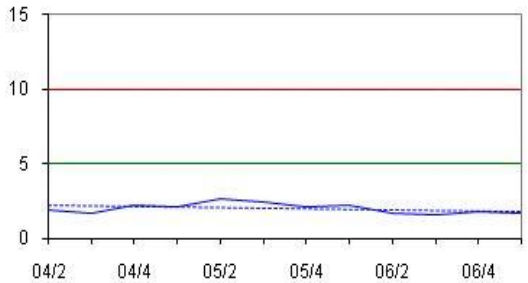

Tauranga - 12 Month Moving Average Bird Strike Rate per 10,000 Aircraft Movements



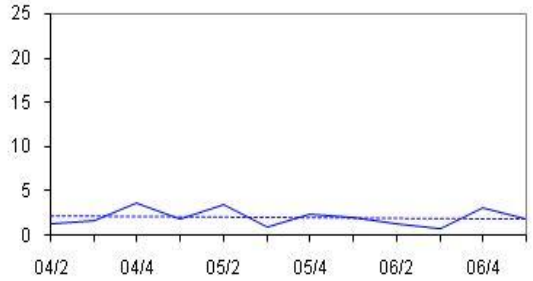

Tauranga - Quarterly Bird Strike Rate per 10,000 Aircraft Movements



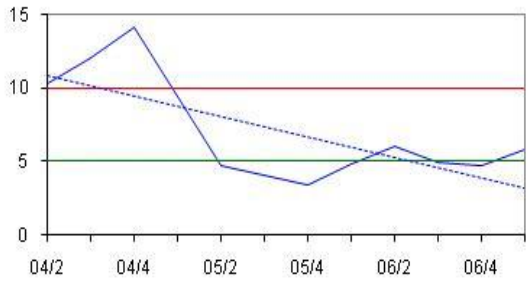

Wellington - 12 Month Moving Average Bird Strike Rate per 10,000 Aircraft Movements



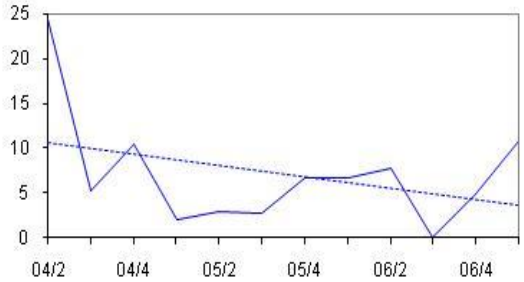

Wellington - Quarterly Bird Strike Rate per 10,000 Aircraft Movements



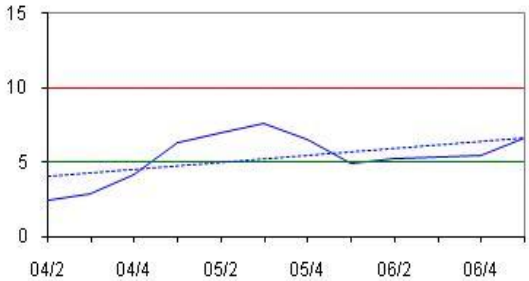
Whenuapai - 12 Month Moving Average Bird Strike Rate per 10,000 Aircraft Movements



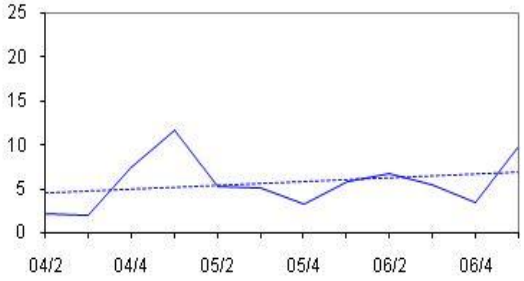

Whenuapai - Quarterly Bird Strike Rate per 10,000 Aircraft Movements



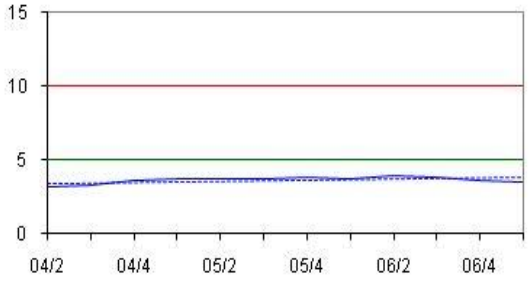

Woodbourne - 12 Month Moving Average Bird Strike Rate per 10,000 Aircraft Movements



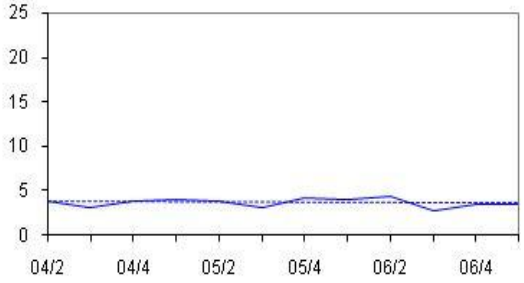

Woodbourne - Quarterly Bird Strike Rate per 10,000 Aircraft Movements




Overall - 12 Month Moving Average Bird Strike Rate per 10,000 Aircraft Movements




Overall - Quarterly Bird Strike Rate per 10,000 Aircraft Movements



# Security Incidents

## Six-Monthly Comparison

### *Number of Security Incidents*

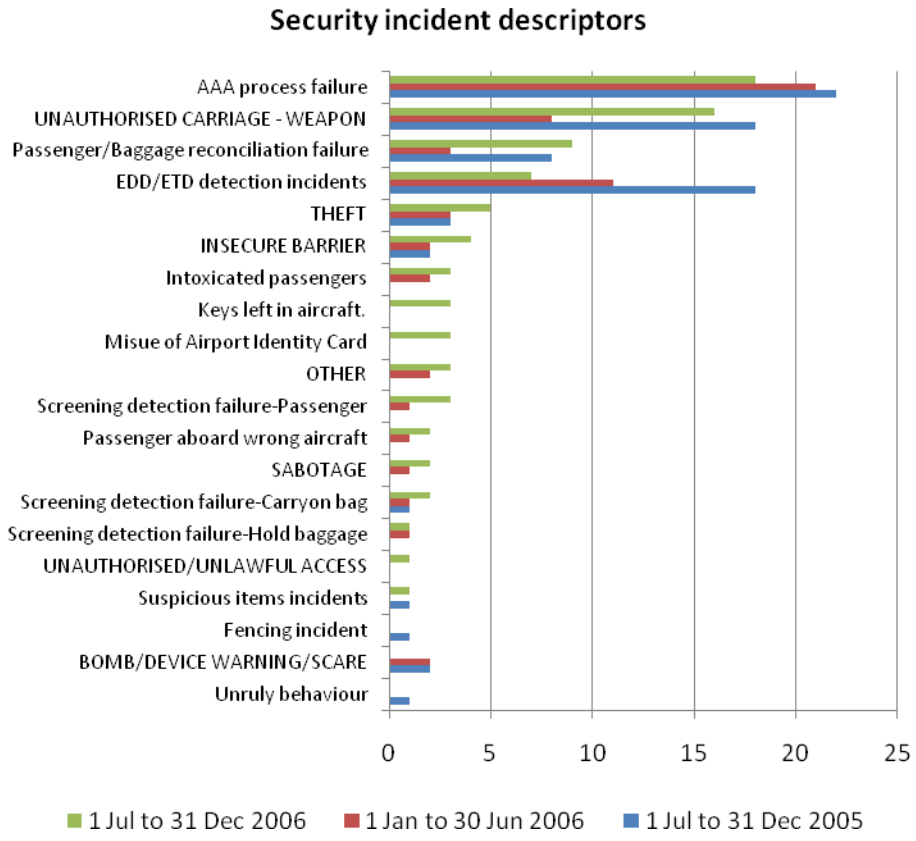
| Aircraft group | 1 Jul to 31 Dec 2005 | 1Jun to 31 Dec 2006 | Change | |
|---|---|---|---|---|
| | | | Number | Percent |
| Aeroplanes that must be operated under Part 121 | 28 | 33 | 5 | 17.9% |
| Aeroplanes that must be operated under at least Part 125 | 1 | 1 | 0 | 0.0% |
| Other Aeroplanes with Standard Airworthiness Certificate | 0 | 0 | 0 | 0.0% |
| Helicopters with Standard C's of A | 0 | 0 | 0 | 0.0% |
| Sport Aircraft | 0 | 0 | 0 | 0.0% |
| Aeroplanes used for agricultural operations | 0 | 0 | 0 | 0.0% |
| Unknown | 54 | 55 | 1 | 1.9% |
| **Total** | **83** | **89** | **6** | **7.2%** |

## Severity

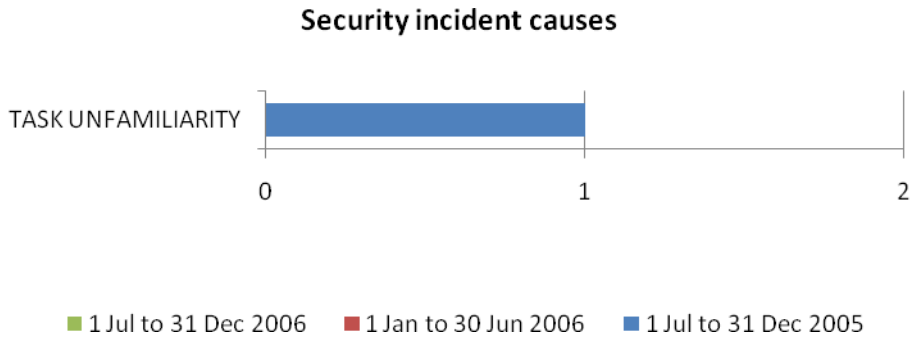
| Severity | 1 Jul to 31 Dec 2005 | 1Jun to 31 Dec 2006 | Change | |
|---|---|---|---|---|
| | | | Number | Percent |
| Critical | 1 | 0 | -1 | -100.0% |
| Major | 2 | 3 | 1 | 50.0% |
| Minor | 80 | 86 | 6 | 0.0% |
| **Total** | **83** | **89** | **6** | **7.2%** |

## Descriptors and Causal Factors

The following graph shows the number of occurrence descriptors recorded for security incidents that occurred during the period 1 July to 31 December 2006 and the two previous six-month periods.




The following graph shows the number of causal factors recorded for security incidents that occurred during the period 1 July to 31 December 2006 and the two previous six-month periods. There were no causal factors for the six month period ending 31 December 2006.



## Occurrences — General

The following table shows the number of occurrences (excluding Non Reportable Occurrences) that were registered on the CAA database during each of the six months of the reporting period.

| Month | ACC | ADI | ARC | ASP | BRD | DEF | DGD | HGA | INC | NIO | NRO | PAA | PIO | SEC | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **07** | 3 | 10 | 34 | 73 | 68 | 77 | 2 | 1 | 73 | 1 | 22 | | 1 | 10 | **375** |
| **08** | 4 | 6 | 46 | 57 | 106 | 89 | 1 | | 56 | 4 | 17 | 1 | 2 | 12 | **401** |
| **09** | 3 | 3 | 29 | 58 | 102 | 86 | 4 | 2 | 68 | 3 | 7 | | | 14 | **379** |
| **10** | 3 | 6 | 18 | 72 | 102 | 76 | 3 | 1 | 84 | 3 | 23 | | | 14 | **405** |
| **11** | 8 | 6 | 44 | 80 | 86 | 74 | 1 | 1 | 77 | 1 | 20 | | 1 | 18 | **417** |
| **12** | 8 | 10 | 20 | 94 | 108 | 85 | 3 | 2 | 63 | 2 | 17 | 1 | | 21 | **434** |
| **Total:** | **29** | **41** | **191** | **434** | **572** | **487** | **14** | **7** | **421** | **14** | **106** | **2** | **4** | **89** | **2411** |

| | | | |
|---|---|---|---|
| **ACC** | Accident | **HGA** | Hang Glider Accident |
| **ADI** | Aerodrome Incident | **INC** | Aircraft Incident |
| **ARC** | Aviation Related Concern | **NIO** | Facility Malfunction Incident |
| **ASP** | Airspace Incident | **PAA** | Parachute Accident |
| **BRD** | Bird Incident | **PIO** | Promulgated Information Incident |
| **DEF** | Defect Incident | **SEC** | Security Incident |
| **DGD** | Dangerous Goods Incident | | |

# Appendix — Definitions

## General

***Accident [ACC]*** — 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.

***Aerodrome incident [ADI]*** **—** means an incident involving an aircraft operation and–

(1) an obstruction either on the aerodrome operational area or protruding into the aerodrome obstacle limitation surfaces; or

(2) a defective visual aid; or

(3) a defective surface of a manoeuvring area; or

(4) any other defective aerodrome facility.

***Aircraft incident [INC]*** — means any incident, not otherwise classified, associated with the operation of an aircraft.

***Airspace incident [ASP]*** — means an incident involving deviation from, or shortcomings of, the procedures or rules for–

(1) avoiding collisions between aircraft; or

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

***Bird incident [BRD]*** — 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.

***Dangerous goods incident [DGD]*** — means an incident associated with and related to the carriage of dangerous goods by air after acceptance by the operator, that–

(1) results in injury to a person, property damage, fire, breakage, spillage, leakage of fluid or radiation, or other evidence that the integrity of the packaging has not been maintained; or

(2) involves dangerous goods incorrectly declared, packaged, labelled, marked, or documented.

***Defect incident [DEF]*** — means an incident that involves failure or malfunction of an aircraft or aircraft component, whether found in flight or on the ground.

***Facility malfunction incident [NIO]*** — means an incident that involves an aeronautical telecommunications facility.

***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.
Note: Incident has many sub-categories.

***Occurrence*** — means an accident or incident.

***Promulgated information incident [PIO]*** — means an incident that involves significantly incorrect, inadequate, or misleading information promulgated in any aeronautical information publication, map, or chart.

***Security incident [SEC]*** — means an incident that involves unlawful interference.

***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 seven 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 occurrences and to findings as the result of investigation of occurrences.

| Severity Factor | | Definition |
|---|---|---|
| CR | Critical | An occurrence or deficiency that caused, or on its own had the potential to cause, loss of life or limb; |
| MA | 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; |
| MI | Minor | An isolated occurrence or deficiency not indicative of a significant system problem. |

## Safety Target Groups

| Target group name | General description | Includes | Excludes |
|---|---|---|---|
| Airline Operation - Large Aeroplanes | All operations using large passenger and freight aeroplanes that are operated under part 121 | Ferry, test, training, passenger and freight, domestic and international, Part 91 operations, and commercial operations other than Part 137 agricultural operations. Includes all aeroplanes that have a passenger seating configuration of 30 seats or more, or a payload capacity of more than 3410kg. | Part 137 agricultural operations |
| Airline Operation - Medium aeroplanes | All operations using medium passenger and freight aeroplanes that are operated under part 125. | Ferry, test, training, passenger and freight, domestic and international, Part 91 operations, and commercial operations other than Part 137 agricultural operations. Aeroplanes that have a seating configuration of 10 to 30 seats, excluding any required crew member seats, or a payload capacity of 3410 kg or less and a MCTOW of greater than 5700 kg, and any aeroplanes conducting SEIFR passenger operations. | Part 137 agricultural operations |
| Airline Operation - Small aeroplanes | All operations by 119 certificate holders using other aeroplanes. | Ferry, test, passenger and freight, domestic and international, training in support of Part 135 operations, Ambulance/EMS | Part 137 agricultural operations, Part 91 operations, and commercial operations.SEIFR under Part 125 |
| Airline Operation - Helicopters | All operations by 119 certificate holders using helicopters | Ferry, test, passenger and freight, domestic and international, training in support of Part 135 operations, Ambulance/EMS | Part 137 agricultural operations, Part 91 operations, and commercial operations.SEIFR under Part 125 |
| Commercial Operations - Aeroplane | Other commercial operations Aeroplane (all non-public transport ops for hire or reward or as part of any commercial activity) | Positioning, ferrying flights, training (dual and solo), "Commercial non-certified", Business and Executive | Public transport ops, Ag ops & training for Ag ops, non-commercial ops |
| Commercial Operations - Helicopter | Other commercial operations Helicopter (all non-public transport ops for hire or reward or as part of any commercial activity) | Positioning, ferrying flights, training (dual and solo), "Commercial non-certified", Business and Executive | Ag ops & trg for ag ops, public transport, non-commercial ops. |
| Agricultural Operations - Aeroplane | Agricultural operations using aeroplanes | Agricultural ops, ferry & training for Ag ops. | Everything else. |
| Agricultural Operations - Helicopters | Agricultural operations using helicopters | Agricultural ops, ferry & training for Ag ops. | Everything else |
| Agricultural Operations - Sport Aircraft | Agricultural operations using sport aircraft | Agricultural ops, ferry & training for Ag ops. | Everything else |
| Private Aeroplane | Private operations in aeroplanes | Cost sharing, aircraft hired from schools and clubs for private or cost sharing use, glider towing | Airline, commercial, agricultural operations, sport aircraft, balloons, training (dual and solo) |
| Private Helicopter | Private operations in helicopters | Cost sharing, aircraft hired from schools and clubs for private or cost sharing use | Airline, commercial, agricultural operations, sport aircraft, balloons, training, ferry/positioning flights by commercial operators |
| Sport Transport | All public transport ops by sport aircraft | Ferry, test, passenger and freight, domestic and international, training for such ops. And balloons | Agricultural operations. |
| Sport Private | Private operations using sport aircraft | Cost sharing, aircraft hired from schools and clubs for private or cost sharing use, training, gliders, power gliders, hang gliders, parachutes and all forms of inflatable wing. Balloons | Airline, commercial, agricultural operations, and training for these activities |