Safety Culture

“We need a culture which not only fosters disciplined, professional and safe practices within the framework of the Rules, but which respects these attributes within the industry.”


The aspect of safety culture is present in all the problem areas identified at the 2001 aviation safety forum, “Towards 2005”. But how do we define “Safety Culture”?

The Director of Civil Aviation, John Jones, describes it as “the way we do things around here”. That is a very ‘kiwi’ definition. It has the best attributes of kiwi culture – it is clear, brief and ‘to the point’. Kiwi culture is our national culture, and it forms a part of safety culture. But our kiwi culture also has negative aspects, and John Jones spoke about those at the 2002 aviation safety forum (see page 13).

This textbook definition reinforces the Director’s version:

“Shared values (what is important) and beliefs (how things work) that interact with an organisation’s structures and control systems to produce behavioural norms (the way we do things around here).”

Uttal 1983

Research currently being carried out in New Zealand hopes to provide a tool for industry to measure safety culture. Dr Gurjeet Gill of Massey University is leading a project titled, “Assessment of Safety Culture in Aviation Organisations in New Zealand”.

The groundwork for Dr Gill’s research included a pilot study, focus groups, and a review of current writing on the topic. From this Dr Gill devised the following definition:

“Safety culture is defined as the outcome of an organisation’s ways of doing things that reflects demonstrated commitment to safety, and trade-offs between safety and financial and/or non-financial gains.”

Dr Gurjeet Gill

In the review of CAA conducted by the Ministry of Transport on behalf of the Minister of Transport in 2001, the safety performance of the General Aviation (GA) sector was criticised, with particular reference to the attitudes present in the sector.

“Poor operating techniques are evident in the industry, and the attitude of many in the aviation communities is contributing to a cavalier approach to safety. There appears to be a considerable problem with the safety culture, or attitude, of the small commercial and General Aviation sectors. The accident record is not good, yet the General Aviation community appears prepared to accept the status quo.”

Spruston/O’Day Report

John Lanham, CAA’s General Manager General Aviation, says that it is time to remember how our current regulatory system was founded.

“The basic concept in Swedavia, carried forward into the Act, is ‘the responsible industry’. That is to say, the CAA sets the minimum standard in the Rules that is acceptable to the community, and the responsible industry meets or exceeds those standards. This concept calls for a conscious acceptance that mere compliance with rules does not necessarily imply excellence for an operator, pilot, or engineer.

“arneley, and the concept of the Act and the ‘responsible industry’, as it is necessary to build layers...
of maturity and professionalism on top of Rule compliance and on top of conformance with company requirements. The commercial ‘can do’ attitude must be tempered with resistance to the short-cut or the ‘she’ll be right’ attitude.

“This will be the challenge for the ‘responsible industry’, and we are delighted to see the approach of some organisations to lifting their own game. Tourist Flight Operators, AIA’s Chief Pilot Seminars, and the ‘Aviation News ACES Days are just a few shining examples,” says John Lanham.

The large airlines in New Zealand have a good safety record, but CAA’s General Manager Airlines, John Bartlett, says that there is no room for complacency.

“The Airline Group has determined that safety culture within the airline sector, while considered by many to be industry leading, is not a settled issue. The economic pressures and volatile market realities in the sector are driving management innovation more than ever before.

“The emergence of ‘virtual’ airlines is an example that has presented new management challenges in respect of the establishment and maintenance of a safe culture that captures people and processes across any number of contracted services. This has brought a renewed focus on the management accountability for safe operation, and the Airline Group is putting a lot of effort into this.

“The Act requires the CAA to monitor the efficacy of the processes adopted by the industry to ensure that the safety boundary defined by the Rules remains intact. The days of purely inspectorial judgements by the CAA are over. They have given way to methodologies designed to gain a shared confidence between participants in the civil aviation system. The sharing of information databases that underpin the identification of risk factors within an organisation has increasingly become the norm – reducing reliance on purely external observation to gain confidence.

“A safety conscious culture enables an operating environment where a positive identification of risk, and the development of defences that will mitigate that risk, can occur in a transparent manner. Risks can only be identified by having the information about factors that might reveal the existence of a risk, or perhaps the potential for risk.

“A regulatory regime that first establishes a relationship and the divisions of responsibility within – and then forms a partnership with industry to produce rules of operation – is what we have now, and it’s a good model,” says John Bartlett.

Safety Culture is the focus of this year’s CAA Profile. We update the structure of CAA, look at the size and shape of the aviation industry in New Zealand, and review the safety analysis statistics. We also review the 2002 aviation safety forum, “Towards 2005 – Implementing Solutions.” We look at two examples of excellent safety culture in practice – the winners of this year’s Director’s Awards.
From the Chair

Aviation in New Zealand, like the rest of the world, is constantly changing, and the CAA, with its central role of managing the aviation safety environment in New Zealand, must have the leadership, management skills, structure, and resources to anticipate and react to these changes.

The CAA is a Crown Entity responsible to the Minister of Transport and the Government of New Zealand. It exists to help reduce the rate of aviation accidents and incidents for the benefit of the people of New Zealand by undertaking activities that promote safety in civil aviation at reasonable cost.

Despite the worldwide downturn in airline activities, passenger traffic in New Zealand picked up earlier than expected and, given a small increase in levy revenue resulting from the changes to the passenger levy from 1 May 2002, the annual levy revenue was only $185,000 under budget for the year ended 30 June 2002. At the same time, CAA management maintained a tight control on discretionary spending while ensuring that ‘safety’ was not compromised. These measures resulted in a year-end surplus of $49,000, which was considerably better than earlier anticipated.

As a result of the variable revenue from the passenger levy, CAA will fully review its funding systems during the coming year, and it will work with Government and industry to seek the means to address this issue.

With its experienced and professional staff, supported by good business systems, the CAA enjoys the respect of the New Zealand public and the international aviation community. However, the CAA continues to be vulnerable to external influences.

The events that affected the world and local aviation industry in 2001 and 2002 presented challenges to the CAA beyond anything previously experienced.

Apart from the major commercial and security events that have occurred in the international arena, including the terrorist events in the United States, the New Zealand aviation industry in recent years has been significantly affected by the receivership of Tangan Pacific Airlines of New Zealand (trading as Qantas New Zealand) and the Ansett Australia collapse nearly bringing down Air New Zealand.

This country has a small but very active aviation community, with the airline sector representing 95 percent of the seat-hours flown. While the aviation industry in New Zealand is heavily dependent on the world economy and tourism, New Zealand is currently seen as a ‘safe’ destination, and we have not experienced the heavy drop off in passenger traffic that has occurred elsewhere.

There is a high expectation from the New Zealand public for safety in aviation, and this expectation is met in the airline sector, where safety standards match the best in the world. The partnership approach between the CAA and airline operators is definitely working.

The Authority is concerned, however, with the unsatisfactory safety performance within the General Aviation sector. General Aviation operations are generally undercapitalised and at significant risk to economic downturn. There appears to be a willingness in General Aviation to cut safety corners to stay financially viable. Training and competence levels in the sector are diminishing, especially with regard to aircraft maintenance engineers. The CAA intends to focus more of its efforts on this sector of the industry.

Significant progress has been made in the way the CAA develops and implements its safety and business strategies. The second annual CAA safety forum, “Towards 2005”, which focused on safety culture, was held in Wellington in October 2002. The success of this forum mirrors the very good working relationships the CAA now has with the aviation industry.

New Zealand’s civil aviation regulatory system is world-leading, and the CAA continues to receive enquiries and visits from overseas regulators wanting to learn from our experience. Indeed, many smaller countries are simply replicating the New Zealand system.

While the quality and effectiveness of the system itself is widely recognised, the CAA is only as good as its people. Under the leadership of Captain John Jones, I am confident the capability and application of the organisation will continue to be consolidated and strengthened, to ensure the CAA can meet its safety risk management obligations in our rapidly changing aviation environment.

Rodger Fisher
Chair
The Authority

The CAA is governed by a five-member board, known as the ‘Authority’. Members are appointed by the Governor General on the recommendation of the Minister of Transport. They are chosen to represent the public interest in civil aviation. The same Authority governs the Aviation Security Service.

A key to the efficient running of the Civil Aviation Authority is that there is a clear division of the roles of the Authority, the Director of Civil Aviation, and management.

The Authority concentrates on setting high-level policy and strategy, and then monitors progress toward meeting the objectives. The Director has specific regulatory obligations, and the Authority stands apart from these. Management is concerned with implementing the high-level policy and strategy.

**Tom Ryan**

Tom Ryan is a former general manager of Macair Airlines in Queensland, Australia, and is a chartered accountant.

**John Gabriel**

John Gabriel began his career as an RNZAF pilot, and subsequently served with the National Airways Corporation, Air New Zealand and Thai Airways International. He was a flight simulator instructor with Air New Zealand until his retirement in 1999.

**Gordon Vette**

Gordon Vette commenced his flying career with the RNZAF and worked for a considerable time with Air New Zealand. He is well known for his work in the area of pilot training.

**Hazel Armstrong (Deputy Chair)**

Hazel Armstrong is a Wellington barrister. She was a director of ACC from 1986 to 1991, a Wellington City councillor from 1992 to 1995, and a Government appointee to the ACC regulations review panel in 1994.

**Rodger Fisher (Chair)**

Rodger Fisher is the principal of Rodger Fisher and Associates, and a former managing director of Owens Group Limited.

**Hazel Armstrong (right) listens to Carol Thompson of Flight Interiors Ltd explain her role as Chair of the Engineering division of the Aviation Industry Association (AIA). Authority members attended the AIA Annual Conference in Christchurch in August 2002.**

**Gordon Vette (right) is shown a manual for the Bantam microlight by manufacturer Max Clear of Micro Aviation (NZ) Ltd.**

**John Gabriel**

John Gabriel hears about the Air Force Museum’s replica Sopwith Camel from Sgt Shaun Meldrum at the AIA Conference.

**Rodger Fisher (left) hears about the operation of the Auckland Rescue Helicopter Trust from pilot Mark Kershaw. The Authority visited a number of Auckland aviation operations in July 2002.**

**Tom Ryan**

Tom Ryan is a former general manager of Macair Airlines in Queensland, Australia, and is a chartered accountant.
From the Director

It has been a busy and demanding year for the CAA, with the rapid changes confirming the need for a well-resourced, focused, and yet flexible CAA.

There have been unprecedented changes in the airline sector of the aviation industry, with the challenges facing our national carrier, and the establishment and rapid growth of two new carriers. Safety standards in the airline sector are very good and getting better. It is pleasing to see the growth of a close safety partnership between the larger airline operators and the CAA, and the development of a healthy safety culture in the airline sector of the industry.

Progress with the re-certification of small-aircraft air transport operators has been excellent, and the process will be completed by the 28 February 2003 target date.

While safety standards in some sectors of General Aviation are of concern to the CAA, there are some shining lights, as highlighted by the winners of the two Director’s Awards this year: Tourist Flight Operators New Zealand, and Simon Spencer-Bower.

The significant increase in both private and commercial ‘recreational’ aviation activity will require substantial CAA attention and resources, with a particular focus on adventure aviation activities that are not currently closely regulated.

Safety culture appears to be one of the major current topics for discussion in aviation in New Zealand. It was continually raised with the Authority members on their visits to the various aviation organisations in the past year, and it is constantly discussed in my many meetings across all sectors of the aviation community. Not surprisingly, safety culture also emerged as the central issue in both the 2001 and 2002 “Towards 2005” safety forums.

One of the best and simplest descriptions I have heard of the term ‘culture’ is “the way we do things around here”. I’m very pleased to see that a large majority have begun to realise that it’s time to change the way we do things in aviation in New Zealand. And I’m also encouraged that more and more people are beginning to realise that improving aviation safety is a shared responsibility – you can’t just leave it to the regulator or to others in the community. To ensure success, everyone has to buy into the partnership concept, to take personal responsibility for their own actions, and to persuade others to do the same.

The CAA is a professional, well motivated, and focused organisation that clearly understands its responsibility to the public of New Zealand, but to carry out its safety task, the CAA has to have adequate resources. Priority will be given to fully reviewing our funding systems during the coming year to ensure we maintain an ongoing capability.

There are some specific issues that the CAA will focus on in the coming year, particularly with General Aviation:

- Encouraging pilots to use valid weather information.
- Encouraging pilots to submit flight plans.
- Ensuring the accurate recording of flight times.
- Reminding aircraft owners and operators that they are responsible for maintenance control of their aircraft – the task can be delegated to engineers, but not the responsibility.

I accept that the CAA has a central role in managing the aviation safety risk environment in New Zealand. However, the CAA is only one party in the partnership, and the continual improvements in safety that the public demand can only be achieved through the CAA and all members of the aviation community working closely together to solve aviation safety issues.

John Jones
Director of Civil Aviation
The CAA

**Vision**

New Zealand aviation free from safety failure

**Mission**

To lead and foster an environment where New Zealand aviation operates safely

The Civil Aviation Act 1990 established the CAA and details how the Authority is constituted, what it must do, powers of the Authority and Director, and so on. The principal function of the CAA is “to undertake activities which promote safety in civil aviation at a reasonable cost.”

A reasonable cost is “where the value of the cost to the nation is exceeded by the value of the resulting benefit to the nation.”

In order to carry out its principal function, the functions of the Authority include:

- establishing safety and security standards relating to entry into the civil aviation system
- monitoring adherence to these standards
- ensuring regular reviews of the civil aviation system
- investigating and reviewing civil aviation accidents and incidents
- notifying the Transport Accident Investigation Commission of certain categories of accidents and incidents
- maintaining and preserving records and documents relating to activities within the civil aviation system
- ensuring the publication of charts and aeronautical information
- providing the Minister of Transport with information and advice
- providing safety and security information and advice, and fostering safety and security information education programmes
- establishing, maintaining, and operating a Rescue Coordination Centre, and
- carrying out such other civil aviation functions and duties as the Minister of Transport may from time to time prescribe by notice in the Gazette.

The CAA achieves these functions by setting minimum standards for all aviation operations. Entry into the civil aviation system is controlled by a process of certification for both individuals and organisations. The number of licences and certificated organisations are shown on page 11.

The standards are detailed in the Civil Aviation Rules. Once in the system, the CAA monitors operators to ensure that the standards are being met. Occurrences are investigated so that steps can be taken to prevent their recurrence. The CAA maintains an ongoing safety education programme to highlight safety issues to all participants.

If surveillance shows that standards are not being met, the CAA will work with an operator to assist them to meet their responsibilities. This approach is successful because the participants appreciate that their businesses benefit from good quality control of safety processes. Sometimes the Director must suspend an operating certificate while compliance with the Rules is achieved. In serious cases of non-compliance, especially those causing danger, the enforcement process is used in the public interest. There is more information about enforcement on page 29.

CAA 10th Anniversary

“"The legislation should provide for a civil aviation safety authority."”

Swedavia-McGregor Report 1988

On 10 August 1992, following recommendations in the Swedavia-McGregor Report, and continued lobbying from the aviation industry, the Civil Aviation Authority of New Zealand was established as a stand-alone crown entity.

The 10th anniversary of the beginning of the CAA was celebrated at Aviation House in Lower Hutt on 28 August 2002. Members of the Authority joined CAA staff and a number of guests, including the Associate Minister of Transport, Harry Duynhoven, for the celebration.

Authority Chair, Rodger Fisher, spoke about the good relationship the CAA has with industry, and paid tribute to the work of John Jones, Director of Civil Aviation. John Jones praised the CAA staff and said that he was proud of his team. John Funnell, President of the Aviation Industry Association (AIA), referred to the role the AIA played in campaigning for the establishment of a stand-alone safety authority.
The Structure of the CAA

The CAA structure was changed in 2000 to reflect the main client and stakeholder groups: Airlines, General Aviation (GA), Personnel Licensing, and Government Relations. In October 2002 the structure was fine-tuned to represent the support groups more appropriately. Three support groups are represented on the Senior Management Team: Safety Research, Education, and Publishing; Professional Standards; and Legal and Enforcement. Four more support groups report directly to the Director, but are not part of the Senior Management Team: Human Resources; Business Planning and Reporting; Management Information Systems; and Finance.
The CAA Service Charter

The Service Charter is a commitment to you by the CAA on the standards of service we aim to achieve in carrying out our functions.

The Service Charter

The CAA Service Charter sets out:

• The general standards of service which you can expect us to provide in carrying out our functions.
• The steps you can take if you consider that these standards have not been met.
• What we will do to ‘put it right’ where both agree that these standards have not been met.
• The options for resolving the matter if we cannot agree.

Our Standards of Service

We, the CAA management and staff, while carrying out our day-to-day functions, will use our best efforts to achieve the following standards of service:

• Treat everyone with courtesy and respect.
• Provide timely, accurate and useful responses to all inquiries.
• Act in a helpful, co-operative and professional manner.

In aiming to achieve these standards we, the CAA management and staff, will:

• Acknowledge all written inquiries within 10 working days.
• Provide progress reports where matters proceed over a period of time, that is, if a full response can not be completed within 10 working days.
• Identify ourselves by name when communicating by telephone.

The full Service Charter includes a complaints procedure and provision for remedies. There are also exceptions, such as where enforcement action is being taken. For a printed copy of the Service Charter, contact CAA (details on back cover).

Young Eagles

In 2001 the CAA became a principal sponsor of the Young Eagles programme, operated in New Zealand by the Royal New Zealand Aero Club (RNZAC). There can be no better time to create and foster a good safety culture than in young potential student pilots, and the Young Eagles scheme is ideal for this.

Through the scheme, young persons aged from 9 to 17 are introduced to flying in a positive and safe environment, with the aim of sparking their enthusiasm and encouraging them to learn more about aviation.

A flight with a designated pilot is a major milestone for every Young Eagle, and for many this is their first ever flight, or first flight in a light aircraft. They are also encouraged to achieve a number of other goals, such as visiting a control tower or a maintenance base, or constructing a model aircraft.

Max Stevens, Deputy Director of Civil Aviation, said that this is a safety partnership with the RNZAC and its member Aero Clubs.

“Giving young people their first flight creates a magical moment that they will always remember. This will be a positive experience, which will foster aviation and appreciation of flight. The pilots flying the Young Eagles are approved by the RNZAC to ensure that safety attitudes are instilled from the start,” said Max Stevens.

Young Eagles was started by the Experimental Aircraft Association (EAA) in the United States in 1992. They have a goal of one million Young Eagle flights conducted by their members, by the 100th anniversary of flight in 2003. So far, more than 800,000 flights have been accomplished – with every one recorded in “The World’s Largest Logbook”. The RNZAC began the programme in New Zealand in 1995, with Sir Tim Wallis as patron.

Alongside CAA, the other principal sponsor is Aviation Services Limited. Other sponsors are: Airways Corporation of New Zealand, Aviation Cooperating Underwriters Pacific, Air BP, Pacific Wings, and Aviation Publishing. You can find out more about Young Eagles through the RNZAC web site, www.rnzac.org.nz, or phone the RNZAC Freephone: 0800 I CAN FLY (0800–422 635).
International Agreements

Canada – Technical Arrangement on Maintenance
A one-way Technical Arrangement on Maintenance was signed by the CAA and Transport Canada in October 2002. The agreement recognises the New Zealand regulatory system for aviation maintenance and specifically provides for maintenance carried out by the Christchurch Engine Centre on Canadian engines. The agreement runs until October 2004, when it is planned to have the legislative and Rule amendments in place to allow for the Director to sign a full agreement.

United States – BASA Executive Agreement Signed
A Bilateral Aviation Safety Agreement (BASA) between New Zealand and the United States – and an expected boost for the aviation industry – is a step closer with the signing of the BASA Executive Agreement by Prime Minister Helen Clark during her visit to Washington in March 2002.

The BASA aims to “promote aviation safety and environmental quality and to enhance cooperation and increase efficiency in matters relating to civil aviation.”

There are two key elements: the Executive Agreement, and one or more Implementation Procedures (IPs). The Executive Agreement is a treaty between the New Zealand and United States Governments. Implementation Procedures are agreed between the safety authorities, FAA and CAA, giving effect to the BASA in particular areas. The procedures contain details on the various types of certification, processes for determining acceptability, the types of documents accepted, and procedures for obtaining technical assistance.

The first IP covers airworthiness and is still being discussed between the two authorities. By specifying such processes, the Airworthiness IP will offer new opportunities for New Zealand industry to explore markets in the US. The BASA will also allow the technical staff from both authorities to deal directly with each other on airworthiness matters, and for further expansion of the IPs.

The FAA conducted a full technical assessment of the CAA in August 2000, including a review of the New Zealand legislation and regulatory system, plus the CAA’s organisation and capabilities. A detailed review of technical activities was carried out, including case studies of current CAA certification projects. In 2001 the CAA carried out a similar assessment of the FAA.

In the future, additional IPs can be negotiated for other sectors of industry, and it is most likely that maintenance will follow airworthiness.

New Zealand to Host 2003 Meeting
The CAA has agreed to host the next Asia-Pacific Bilateral Partner Dialogue Meeting to be held in Wellington in April 2003. This is the annual meeting of authorities in the Asia Pacific region that have existing bilateral agreements with the US. Recent CAA attendance at these meetings has been pivotal in advancing the US/NZ BASA, and for expanding cooperation between the CAA and the aviation authorities in the Asia-Pacific region.

Europe – CAA/JAA Arrangement
The CAA has initiated contact with the European Joint Aviation Authorities (JAA) for the purpose of developing agreement on the certification of aircraft and parts. It is likely that the process will commence with a review of the CAA’s systems by a JAA team early in 2003.
The Aviation Industry in New Zealand

The following figures provide a snapshot of the size and shape of the aviation industry in New Zealand.

Certificated Operators

Operators are certificated under the Civil Aviation Rules. Transitional certificates were issued to allow time for change to the new system. The last deadline for operators to become certificated under the new Rules is 28 February 2003 for single-engine fixed-wing aircraft of nine passenger seats or less, and helicopters.

Aviation Organisation Certificates

<table>
<thead>
<tr>
<th>Rule</th>
<th>No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Part 19 Supply Organisation Certificate of Approval</td>
<td>47</td>
</tr>
<tr>
<td>Part 92 Dangerous Goods Packaging Approval</td>
<td>35</td>
</tr>
<tr>
<td>Part 119 Air Operator</td>
<td>111</td>
</tr>
<tr>
<td>Part 108 Security Programme</td>
<td>14</td>
</tr>
<tr>
<td>Part 121 Large Aeroplanes</td>
<td>9</td>
</tr>
<tr>
<td>Part 125 Medium Aeroplanes</td>
<td>12</td>
</tr>
<tr>
<td>Part 135 Helicopters and Small Aeroplanes</td>
<td>105</td>
</tr>
<tr>
<td>Part 119 Transitional Air Operator – ASC (Air Service Certificate)</td>
<td>42</td>
</tr>
<tr>
<td>Part 119 Transitional Air Operator – AWC (Aerial Work Certificate)</td>
<td>31</td>
</tr>
<tr>
<td>Part 129 Foreign Air Operator</td>
<td>25</td>
</tr>
<tr>
<td>Part 108 Security Programme</td>
<td>20</td>
</tr>
<tr>
<td>Part 137 Agricultural Aircraft Operator</td>
<td>104</td>
</tr>
<tr>
<td>Part 139 Aerodromes</td>
<td>22</td>
</tr>
<tr>
<td>Part 140 Aviation Security Service</td>
<td>1</td>
</tr>
<tr>
<td>Part 141 Aviation Training Organisation</td>
<td>35</td>
</tr>
<tr>
<td>Part 141 Restricted Training Organisation</td>
<td>0</td>
</tr>
<tr>
<td>Part 145 Aircraft Maintenance Organisation</td>
<td>45</td>
</tr>
<tr>
<td>Part 146 Aircraft Design Organisation</td>
<td>7</td>
</tr>
<tr>
<td>Part 148 Aircraft Manufacturing Organisation</td>
<td>20</td>
</tr>
<tr>
<td>Part 149 Aviation Recreation Organisation</td>
<td>5</td>
</tr>
<tr>
<td>Part 171 Aeronautical Telecommunication Service Organisation</td>
<td>3</td>
</tr>
<tr>
<td>Part 172 Air Traffic Service</td>
<td>20</td>
</tr>
<tr>
<td>Part 174 Meteorological Service Organisation</td>
<td>2</td>
</tr>
<tr>
<td>Part 175 Aeronautical Information Service Organisation</td>
<td>2</td>
</tr>
</tbody>
</table>

Note: The above table shows all individual aviation organisation certificates as at 30 June 2002. Some organisations hold more than one certificate.

Licences

The following table summarises the number of private pilot, commercial pilot, air transport pilot, air traffic controller, and aircraft maintenance engineer licence holders on the register.

Number of Licences

<table>
<thead>
<tr>
<th>Licence Type</th>
<th>30 Jun 02</th>
</tr>
</thead>
<tbody>
<tr>
<td>Private Pilot</td>
<td>3,579</td>
</tr>
<tr>
<td>Commercial Pilot</td>
<td>3,228</td>
</tr>
<tr>
<td>Airline Transport Pilot</td>
<td>1,503</td>
</tr>
<tr>
<td>Air Traffic Controller</td>
<td>263</td>
</tr>
<tr>
<td>Aircraft Maintenance Engineer</td>
<td>1,766</td>
</tr>
<tr>
<td>Total Licences</td>
<td>10,339</td>
</tr>
</tbody>
</table>

Note: The statistics above for pilot licences and air traffic controller licences count only those with active medical certificates. The statistics above do not show the number of licence holders, as any client may hold more than one licence.
Registered Aircraft

The Civil Aviation Act 1990 requires the Authority to maintain the New Zealand Register of Aircraft. The CAA controls the entry and exit of aircraft to and from the civil aviation system through certification and registration.

Number of Registered Aircraft

<table>
<thead>
<tr>
<th>Aircraft Group</th>
<th>30 Jun 98</th>
<th>30 Jun 99</th>
<th>30 Jun 00</th>
<th>30 Jun 01</th>
<th>30 Jun 02</th>
</tr>
</thead>
<tbody>
<tr>
<td>13,608 kg and above</td>
<td>67</td>
<td>73</td>
<td>75</td>
<td>77</td>
<td>77</td>
</tr>
<tr>
<td>5,670 to 13,608 kg</td>
<td>68</td>
<td>67</td>
<td>69</td>
<td>67</td>
<td>82</td>
</tr>
<tr>
<td>2,721 to 5,670 kg</td>
<td>113</td>
<td>104</td>
<td>109</td>
<td>107</td>
<td>108</td>
</tr>
<tr>
<td>Below 2,721 kg</td>
<td>1,559</td>
<td>1,539</td>
<td>1,522</td>
<td>1,507</td>
<td>1,492</td>
</tr>
<tr>
<td>Sport</td>
<td>1,163</td>
<td>1,124</td>
<td>1,127</td>
<td>1,128</td>
<td>1,169</td>
</tr>
<tr>
<td>Helicopters</td>
<td>435</td>
<td>420</td>
<td>411</td>
<td>420</td>
<td>450</td>
</tr>
<tr>
<td>Total</td>
<td>3,405</td>
<td>3,327</td>
<td>3,313</td>
<td>3,306</td>
<td>3,378</td>
</tr>
</tbody>
</table>

The “Sport” category includes amateur built aircraft (aeroplane, glider or helicopter), glider, powered glider, and microlight class 1 and 2 aircraft.

Flying Hours

The rate of change in the total number of hours flown by New Zealand registered aircraft between the year ended 31 March 1998 and the year ended 31 March 2002 is on average a 0.2% increase each year.

Air Transport Flights

The rate of change in the number of air transport flights made by New Zealand registered aircraft between the year ended 31 March 1998 and the year ended 31 March 2002 is on average a 2.1% decrease each year.
Director’s Awards 2002

Noteworthy examples of people and organisations who focus on the culture of safety can be found in the annual Director of Civil Aviation Awards. The CAA started the Awards in 1995 in order to recognise contributions to aviation safety. Each year, nominations are sought from the whole aviation community for the individual and organisation in which safety culture is overt. The awards reward an attitude of safety culture and actions, or series of actions, which result in a higher level of safety.

This year’s winners are well-deserved examples. The Organisation Award went to Tourist Flight Operators New Zealand, and the Individual Award to Simon Spencer-Bower.

Tourist Flight Operators New Zealand was formed a little over two years ago. Its goal is to raise safety standards above the minimum, by establishing the organisation’s own quality benchmarks. Formation of the organisation evolved from the idea of Air Safaris’ Chief Pilot, Geoff Ensor – assisted by Russell Baker, Paul Cooper and Tom Middleton – to establish a forum for aviation operators flying tourists over mountainous terrain.

John Jones, Director of Civil Aviation, said, “They are pursuing standards that will qualify members for the Tourism New Zealand Qualmark brand. The brand aims at increased quality of service and environmental issues, but safety is the key factor for the flight operators group. Through flight operator meetings at Omarama, Taupo, and a national seminar in Nelson, they have progressed toward achieving their goals – they have launched their own ‘above the minimum’ standards, and they are on track for achieving the Qualmark brand.”

Coordinator of the group, Geoff Ensor, responded by saying that they were delighted and proud to be the recipient of the organisation award. “Since the group’s formation in 2000, a large number of individuals and groups have contributed to its growth – this award is a fitting tribute to their efforts. Our primary objectives are to maximise safety and quality across the tourist flying sector. While the award acknowledges our history and motivation, we believe it also signals confidence in our present direction, and our future role within the tourism flight industry.

“A sound safety culture is the critical element within all aviation activities – the will to do it right. Tourist Flight Operators New Zealand want to strengthen this culture by nationally lifting standards and talking safety. Ultimately we want to be the very best that we can be, not just as individual operators, but as an industry,” said Geoff.

Winner of the Individual Award, Simon Spencer-Bower, has a flying career of over 30 years and has trained hundreds of fixed-wing and helicopter pilots.

John Jones said, “Simon Spencer-Bower has made a personal and conscious commitment to safety over a long time. He has a great reputation for his training skills, attitude to safety, and overall ability to impart good flying practice in all situations. He has a practical and friendly approach, and the safety ethic he instils through his mentoring approach goes forths with all his students.”
“His safety culture is often commented on by experienced pilots from both rotary-wing and fixed-wing backgrounds. These pilots, having similar or even greater experience, have no hesitation in going to him for advice at any time. This is a refreshing approach in GA, where we have a shortage of experienced pilots with such an overt safety culture who personally adhere to the high standards they preach.”

Simon says that many pilots who have completed their training are not equipped to go into the work force.

“My philosophy has always been to give new pilots as much experience as possible in addition to the required syllabus.

“Checking experienced pilots is rewarding, and often results in a sharing of knowledge. However, there can be a tendency to rely on experience and skill, while losing the basic discipline of maintaining safety standards, especially height and airspeed. Probably more than anything else, I emphasise the basic rules of maintaining good height and airspeed, to ensure they live to become old and grey!

“The awards show to me that CAA recognises the importance of training organisations in breeding a safety culture into pilots during the ab initio stages of training. It also shows that the importance of maintaining, and re-emphasising, safety culture in the ongoing checking role is recognised,” said Simon.

Members of Tourist Flight Operators New Zealand, who were awarded the organisation category Director of Civil Aviation Award for 2002:

| Air Milford | Air New Plymouth Charter | Air Safaris & Services |
| Aoraki Aero Company | Aviation Academy | Barnstormers 2000 |
| Canterbury Aviation | Christchurch Helicopters | Christian Aviation |
| Christchurch Helicopters | Flight Test New Zealand | Glacier Southern Lakes Helicopters |
| Glenorchy Air | Great Barrier Airlines | Helicopter Services |
| Helicopters NZ | HeliPro | Helijets |
| HeliVentures | Hokonui Helicopters | Lakeside Aviation |
| Milford Sound Scenic Flights | Mount Cook Ski-Planes | Mountain Air |
| Nelson Helicopters | Over the Top Helicopters | Pianor |
| Remote Adventures | Rotorua Aero Club | Salt Air |
| Skytrek Aviation | Sounds Air | Southern Air |
| Southern Alps Air | South-West Helicopters | Taranaki Bay Aviation |
| Tasman Air | Taupo Air Services | Te Anau Air Services |
| Te Anau’s Floatplane | The Helicopter Line | Volcanic Air Safaris |
| Waimana Helicopters | Wakatipu Aero Club | Wanaka Flightseeing |
| Wanaka Helicopters | Warbird Adventures | Winners Airways |
| West Coast Scenic Flights | Westland Air charter | Wilderness Wings |
| Wilderness Wings | Wings Over Whales |
Towards 2005

In 2001 the CAA hosted an aviation safety forum in order to involve the whole aviation community in the planning of safety strategies. The response was outstanding, with all sectors represented, and hundreds of problems identified. These were eventually grouped into 18 problem areas.

It was decided to hold another safety forum in 2002 with the specific objective of identifying solutions. The participants, including CAA, could then return to their various aviation activities and implement them.

The programme was based on the 18 problem areas identified in 2001, with one added in 2002 to cover General Aviation (GA) Airworthiness. There were specific addresses on the following topics: The Pros and Cons of Regulation, Industry Economics, Enforcement Tools, Safety Culture, CAA Aviation Community Relationship, Pilot Decision Making, Instructional Skills, Industry Skills, GA Airworthiness, Recognising Operational Risk, and Airways' Perspective.

The forum was opened by Associate Minister of Transport, Harry Duynhoven, who explained his responsibilities for Civil Aviation matters. He spoke about a number of current aviation topics, including: Safety Culture, Part 61, the Review of Participation in Rule Making, TAWS and ACAS, Runway End Safety Areas, Ex-Military Helicopters, Target Setting, and Accident Investigation. He concluded by saying that our safety record must improve.

“While the Government and the CAA can contribute significantly to the safety of aviation, it is the responsibility of everyone involved in aviation to do all you can to ensure that this happens,” Harry Duynhoven said.

The Director of Civil Aviation, John Jones, explained that the CAA's Business Plan incorporated three strategies to implement the outcomes of last year’s safety forum:

• Strategy 1: The improved and consistent delivery of statutory functions.

Implementing this strategy revolves around the CAA enforcing – in the wider sense of the word – compliance with the requirements of the Civil Aviation Act and the Civil Aviation Rules. This is the core business of the CAA.

• Strategy 2: The informed identification and implementation of solutions to significant aviation problems.

In the short term, CAA fulfilling its functional and legislative requirements (Strategy 1) is not going to be sufficient to ensure that the aviation community will meet the safety targets that have been set. The CAA, in partnership with the aviation community, will identify significant aviation problem areas that can be measured or quantified. Specific and targeted cost-effective solutions will be devised and implemented, with there effectiveness being measured and reviewed. The aviation safety forums will have a major influence on the implementation of this second strategy.

• Strategy 3: The introduction of specific culture change initiatives.

It is widely recognised that the current culture of the New Zealand aviation community (this includes the CAA) limits the effectiveness of Strategy 1. The CAA will work in partnership with the aviation community to effect beneficial culture change, with the long-term aim of ensuring that Strategy 1 systems and procedures on their own will achieve the CAA’s vision – “New Zealand aviation free from safety failure”.

John Jones expanded on Strategy 3, “One of the best and simplest descriptions I have heard of the term ‘culture’ is ‘the way we do things around here’. Well, it’s time to change the way we do things in aviation in New Zealand.

“The message from last year’s safety forum was loud and clear – we cannot continue to accept the current level of safety failings. If we closely analyse the causes of accidents and incidents, we find that the ‘kiwi way’ – of dodging responsibility and the Rules – is at their root. There are times when the kiwi ‘can do’ attitude is very positive – it’s often the way to get things done. But there are also times when ‘can do’ gets people killed. The attitudes that were prevalent yesterday, and the skills that are adequate today, will have to be altered and enhanced to meet tomorrow’s demands.”

John Jones reiterated his goal to “create an organisation with clearly defined and understood responsibilities, with an overarching culture of service to the public, and a firm, fair, capable and consistent manner with its aviation clients.

“But the CAA is only one party in the partnership. To ensure a strong and healthy relationship, the various individuals and organisations that comprise the aviation community have to show by their behaviour and consistent performance that they deserve respect and continued membership in a responsible aviation industry,” John Jones said.

In closing the forum, John Jones thanked the presenters, recapitulated on their contributions, and explained that this year’s “Towards 2005” was to devise solutions – implementation would follow. There was a call from the floor for the aviation safety forums to be held again next year, and this looks likely, with provisional dates in August 2003 for the next “Towards 2005”.

Civil Aviation Authority of New Zealand • Profile 2002 – Safety Culture
Safety Investigation

Safety investigation is the cornerstone of our safety culture. From investigation of occurrences we may be able to determine the cause of an accident, or a number of causal factors in the accident. We can then make recommendations for defences to be implemented to prevent a recurrence.

In order to manage risk, we need to look beyond accidents themselves to the everyday errors and mistakes that occur. Civil Aviation Rule Part 12 requires serious incidents that are an immediate hazard to the safety of aircraft operations to be notified to the CAA as soon as practicable. The CAA encourages operators to submit reports of incidents that are less serious as well, in order to build a complete picture of safety failure and assess risk. This requires an active reporting culture in aviation organisations. People are less inclined to report their mistakes and errors if they are liable for some punitive action as a result. Organisations need to have a blame free culture to encourage reporting. But there is an obvious limit to this in cases of blatant recklessness, or serious and deliberate risk-taking. Punitive action is usually required in these circumstances, and it is important that everyone involved knows where the boundary lies – how acceptable and unacceptable behaviours are defined.

We call this a ‘just culture’ – one where people can report incidents without fear of punishment, but where they know that deliberate intentional recklessness will be dealt with appropriately.

A safe culture is an informed culture. This depends on the existence of an effective reporting culture, and in order for that to happen there must be a just culture where there is understanding of acceptable and unacceptable behaviours.

The following definitions of Occurrences, Accidents and Incidents are from the Civil Aviation Act 1990:

Occurrence – means an accident or incident.

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

1. a person is fatally or seriously injured as a result of —
   (i) being in the aircraft; or
   (ii) direct contact with any part of the aircraft, including any part that has become detached from the aircraft; or
   (iii) direct exposure to jet blast except when the injuries are self-inflicted or inflicted by other persons, or when the injuries are to stowaways hiding outside the areas normally available to passengers and crew; or
   (2) the aircraft sustains damage or structural failure that —
   (i) adversely affects the structural strength, performance, or flight characteristics of the aircraft; and
   (ii) would normally require major repair or replacement of the affected component — except engine failure or damage that is limited to the engine, its cowlings, or accessories, or damage limited to propellers, wing tips, antennas, tyres, brakes, fairings, small dents, or puncture holes in the aircraft skin; or
   (3) the aircraft is missing or is completely inaccessible.

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.

The following definitions are from the Civil Aviation Rules, and are used in the reporting and safety investigation processes:

Critical – An occurrence or deficiency that did cause, or on its own had significant potential to cause, loss of life or limb.

Major – An occurrence or deficiency involving a major system that caused significant problems to the function or effectiveness of that system.

Minor – Isolated occurrences or deficiencies not indicative of significant system problems.
Safety Analysis

From occurrence reporting we have a better informed culture. This is improved by analysing the results of occurrence reporting and subsequent investigation. The CAA is particularly interested in trends, in order to determine where action may be required to reduce the incidence of safety failure.

Aircraft Incidents

The following table summarises the number of accidents by aircraft group.

<table>
<thead>
<tr>
<th>Aircraft Group</th>
<th>1 Jul 97 – 30 Jun 98</th>
<th>1 Jul 98 – 30 Jun 99</th>
<th>1 Jul 99 – 30 Jun 00</th>
<th>1 Jul 00 – 30 Jun 01</th>
<th>1 Jul 01 – 30 Jun 02</th>
</tr>
</thead>
<tbody>
<tr>
<td>13,608 kg and above</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>5,670 to 13,608 kg</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>2,721 to 5,670 kg</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>Below 2,721 kg</td>
<td>40</td>
<td>43</td>
<td>49</td>
<td>45</td>
<td>47</td>
</tr>
<tr>
<td>Helicopters</td>
<td>35</td>
<td>23</td>
<td>27</td>
<td>24</td>
<td>19</td>
</tr>
<tr>
<td>Sport</td>
<td>31</td>
<td>34</td>
<td>24</td>
<td>25</td>
<td>26</td>
</tr>
<tr>
<td>Hang Gliders</td>
<td>6</td>
<td>6</td>
<td>10</td>
<td>15</td>
<td>16</td>
</tr>
<tr>
<td>Parachutes</td>
<td>0</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Unknown</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>115</td>
<td>111</td>
<td>119</td>
<td>115</td>
<td>117</td>
</tr>
</tbody>
</table>
Number of Fatal Accidents and Number of Fatalities

The following table summarises the number of fatal accidents and number of fatalities (shown in brackets) by aircraft group.

<table>
<thead>
<tr>
<th>Aircraft Group</th>
<th>1 Jul 97 – 30 Jun 98</th>
<th>1 Jul 98 – 30 Jun 99</th>
<th>1 Jul 99 – 30 Jun 00</th>
<th>1 Jul 00 – 30 Jun 01</th>
<th>1 Jul 01 – 30 Jun 02</th>
</tr>
</thead>
<tbody>
<tr>
<td>13,608 kg and above</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>5,670 to 13,608 kg</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>2,721 to 5,670 kg</td>
<td>0</td>
<td>1 (5)</td>
<td>0</td>
<td>1 (1)</td>
<td>0</td>
</tr>
<tr>
<td>Below 2,721 kg</td>
<td>4 (7)</td>
<td>7 (18)</td>
<td>4 (11)</td>
<td>2 (5)</td>
<td>5 (11)</td>
</tr>
<tr>
<td>Helicopters</td>
<td>2 (3)</td>
<td>2 (6)</td>
<td>6 (15)</td>
<td>4 (6)</td>
<td>2 (4)</td>
</tr>
<tr>
<td>Sport</td>
<td>3 (6)</td>
<td>6 (9)</td>
<td>2 (2)</td>
<td>2 (3)</td>
<td>2 (2)</td>
</tr>
<tr>
<td>Hang Gliders</td>
<td>1 (1)</td>
<td>0</td>
<td>1 (1)</td>
<td>2 (2)</td>
<td>0</td>
</tr>
<tr>
<td>Parachutes</td>
<td>0</td>
<td>1 (1)</td>
<td>0</td>
<td>0</td>
<td>1 (1)</td>
</tr>
<tr>
<td>Unknown</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>10 (17)</td>
<td>17 (39)</td>
<td>13 (29)</td>
<td>11 (17)</td>
<td>10 (18)</td>
</tr>
</tbody>
</table>

Includes Sport, Hang Gliders and Parachutes

Excludes Sport, Hang Gliders and Parachutes

Fatal & Serious Injury Rate

Civil Aviation Authority of New Zealand • Profile 2002 – Safety Culture
Safety Targets

The Safety Targets are set for a reduction in aviation accident rates over a five year period in agreement with the Minister of Transport. The current targets are set for a reduction in accident rates by 2005 as shown on the graphs to follow.

Groups meeting or exceeding their Safety Target (for the period ended 30 June 2002):
- 13,608 kg and above revenue pax & freight,
- 5,670 to 13,608 kg revenue pax & freight,
- 2,721 to 5,670 kg revenue pax & freight,
- below 2,721 kg non-revenue,
- helicopter revenue other, and
- helicopter non-revenue operations.

Groups failing to meet their Safety Targets (for the period ended 30 June 2002):
- below 2,721 kg revenue pax & freight,
- below 2,721 kg revenue other, and
- helicopter revenue pax & freight operations.

Explanation of the Safety Target graphs

- The “Target” lines begin at the accident rates that existed at the start of the 5-year target period.
- The graphs use calendar years – the first quarter is 1 January to 31 March.
- The graphs show the number of accidents as a rate per flying hours.
- The graphs show the number of accidents per 100,000 flying hours because the number of accidents in some groups is small. Using this measure for all the aircraft activity groups ensures consistency.
- The accident rate varies widely between each group – the “Accidents per 100,000 Flying Hours” scale is based on the accident rate for each aircraft activity group that will make the graph visible. For example, 0 to 1 for large airliners, and 0 to 100 for non-revenue helicopters.
- In order to show a 10-year moving average, the number of accidents and flying hours for the previous ten years up to, and including, the quarter shown on the graph is used, for each quarter. The next quarter will use the ten years prior to that quarter, and so on. This method is used because the number of accidents is small, and it would be impossible to see any trends from a graph of the actual figures for each quarter as there would be large variations.
- The period used for each graph’s moving average is determined by the number of accidents. For example, a 10-year moving average is used for the largest airline group, because the number of accidents is so small (less than 1 per year). A 12-month moving average is used for light aircraft because the numbers are higher, but using a 12-month moving average removes any seasonal variations.
This group has shown consistent improvement in safety performance over the last five years, until the last quarter in 2001, and has maintained the same performance since then. The accident rate for this group is below the 2005 target of 0.4 accidents per 100,000 flying hours.

Aeroplanes 13,608 kg and Above
This group includes international and domestic airliners, such as the Boeing 737, 747, 767, and the ATR-72.
**Aeroplanes 5,670 kg to 13,608 kg**

Aircraft used on regional routes, such as the Saab SF340, Beech 1900, and BA Jetstream.

This group has shown substantial improvement in safety performance since 1997, but over the last two years this has levelled out. It is only just below the 2005 target of 0.5 accidents per 100,000 flying hours.
Aeroplanes and Balloons 2,721 kg to 5,670 kg

Light twin and heavy single-engine aircraft, used to transport passengers and freight, such as the Cessna Caravan, Nomad, Britten-Norman Islander, and Piper Chieftain.

2,721 to 5,670 kg – Revenue, Passengers and Freight

Note: Accident rate is 5-year moving average and scale is from 0 to 12

This group has shown some improvement in safety performance over the last five years, and is just above the 2005 target of 5 accidents per 100,000 flying hours.
Aeroplanes and Balloons below 2,721 kg

Single-engine and some twin-engine aircraft that are used to carry passengers and freight, to carry out agricultural work, and are used by flying schools and private owners. This group includes aircraft such as the Cessna 150, 152, 172, and Agwagon, and Piper Tomahawk, Cherokee, Warrior, and Pawnee.

This group consists of light aircraft operated privately, including those used by flying schools and aero clubs when hired for private use. It has shown improvement over the last two years, and has a downward trend, but is currently above the target of 21 accidents per 100,000 flying hours.

This group covers single-engine and some twin-engine aircraft used to carry up to seven passengers on scheduled and scenic flights. It shows an overall trend of improving safety performance, but is above the target of 7 accidents per 100,000 flying hours.

This group includes agricultural and training aircraft and is above the target of 7 accidents per 100,000 flying hours. It has an upward trend and will need some improvement if the safety target for 2005 is to be met.
Helicopters carry out a wide variety of work, such as transport of passengers and freight, scenic flights, rescue operations and agricultural work.

Helicopters used primarily for agricultural spraying, rescue flights, log hauling, and training. This group shows a downward trend since 1998, and if the current trend continues will meet the 2005 safety target of 11 accidents per 100,000 flying hours.

This group consists of helicopters flown privately. Last year this group showed a significant increase, but safety performance has improved this year with a current level just below the target for 2005 of 25 accidents per 100,000 flying hours. The trend shows that this achievement is fragile, and care will be needed to achieve the safety target.

The figures for the non-revenue group are possibly increased by the inclusion of events that occurred to helicopters normally on commercial operations, but at the time of the accident engaged in a non-revenue operation (such as ferry or positioning flights).
Search and Rescue

The Civil Aviation Act 1990 requires the Authority to provide a National Rescue Coordination Centre (NRCC) for such aviation search and rescue (SAR) operations and other SAR operations that the Minister requires. The Minister has specified that those SAR operations conducted by the NRCC shall be Class III.

Class I search and rescue operations are carried out by the Police alone. Class II are those carried out by the Police but with assistance from other organisations.

Class III search and rescue operations specifically include all those associated with an activated distress beacon, or an operation requiring coordination with the military, or with other countries.

An operation that began as a Class I or II can become Class III if responsibility and control is transferred to the NRCC by agreement with the Police.

The NRCC is located in Aviation House in Lower Hutt, and provides SAR services whenever they are required within the New Zealand Search and Rescue Region (SRR) as part of New Zealand’s compliance with international SAR and other conventions.

On 8 August 2002 the boundary of the Auckland Flight Information Region changed in accord with an ICAO (International Civil Aviation Organisation) agreement. The New Zealand Search and Rescue Region changed to reflect this, giving the NRCC responsibility for all open-ocean sea searches in the Niue, Tonga, Samoa, Tokelau, and American Samoa areas. Within the expanded area, 21 people were rescued in the first three months.

Distress beacons used by individuals, such as trampers, marine craft, and aircraft, operate on frequencies of 121.5 MHz, 243 MHz, and 406 MHz. Distress signals from these beacons are mostly detected...
by satellites, but they can also be received by other vessels or aircraft as the first indication of an emergency.

It has been agreed internationally to discontinue the satellite processing of 121.5 MHz and 234 MHz signals after January 2009. The 406 MHz frequency will be the sole system used, because it has several advantages, such as being able to identify the beacon user and, when connected to a GPS (Global Positioning System) receiver, transmit a very accurate position.

In order for the change to be accepted by users, the cost of the 406 MHz devices needs to decrease. Manager of the NRCC, Rodney Bracefield says that this is starting to happen.

“Personal Locator Beacons using 406 MHz are now available at around $600, but there has been no significant change in the costs of aircraft or marine beacons so far.”

Rodney is keen to reiterate the basics, “Increasing technology doesn’t mean much if we don’t know where to start looking – it is crucial that pilots file flight plans. Mariners should advise someone where they are going, and when they expect to return.”

**Enforcement**

In the financial year 1 July 2001 to 30 June 2002 there were 248 alleged offences reported, and 115 detailed investigations were undertaken. These resulted in 37 enforcement actions being taken (“enforcement actions” include prosecutions and formal warnings).

One of 18 problem areas identified by the aviation community at the 2001 aviation safety forum, “Towards 2005”, was that the CAA was unable to address minor infringements of the Rules because existing enforcement processes were too lengthy and expensive, and sometimes inappropriate for the offence.

Complaints of alleged or suspected breaches of the Civil Aviation Act 1990, and of Rules made under the Act, are investigated in full, and then a determination is made as to the most appropriate action. The current options are a written warning or a summary prosecution.

The Act, however, provides for infringement offences. The CAA recognises that the issue of an infringement notice should serve as an appropriate intermediate course of action for certain offences. In view of the problems identified at the safety forum, the CAA will introduce the Infringement Notice system early in 2003.

The procedure for infringement notices is prescribed by the Summary Proceedings Act 1957. It provides a number of rights for the alleged offender, such as requesting a hearing.

Infringement Notices will be issued only after an investigation has been carried out and a determination of the most appropriate action has been made. There will be no ticket books or instant fines.

It has been decided to implement the Infringement Notice System following the update of the Civil Aviation (Offences) Regulations, and it is hoped this will be completed early in 2003.

“IT is also vital that pilots remember to cancel their SAR TIME after arriving at their destination. Time and money can be squandered by following up on people who do not do this. For example, the cost of two significant searches in the middle of 2002 almost exceeded the annual SAR budget,” said Rodney.

In the last financial year the NRCC was responsible for managing 553 Class III Search and Rescue incidents. These resulted in the rescue of 79 people; unfortunately there were 15 fatalities.
Aviation Security

Aviation security is concerned with ensuring the safety of passengers, crew, ground personnel, and the general public from unlawful interference with aircraft. Protection of airports and air navigation facilities is equally important.

The CAA’s Aviation Security Unit is responsible for regulatory oversight of all civil aviation security. The CAA certifies the organisations that carry out security, and monitors them to ensure compliance with the standards. The unit also investigates security breaches and incidents.

In addition to the standards in the Civil Aviation Rules, ICAO Annex 17 sets the standards for aviation security on an international basis, and New Zealand complies with these standards. The CAA maintains close links with neighbouring nations to ensure regional consistency in the application of aviation security measures.

At security-designated airports (mostly the international airports), the Aviation Security Service (known as AvSec) carries out the basic security requirements. This is a separate organisation from the CAA, but is established by the same Act, and shares the same board of governors (the Authority), which reports to the Minister of Transport. AvSec is a certificated provider of security services under Civil Aviation Rules Part 140, and it is audited by the CAA just like any other certificated operator. Contact details for AvSec are included in the contact information on the back cover.

Following the terrorist actions on 11 September 2001, the Government, together with all the relevant agencies, reviewed security requirements and introduced a number of additional security measures. Such measures now include screening passengers for aircraft with more than 90 passenger seats, the removal of metal knives and other sharp items, and the withdrawal of any discretion relating to the carriage of baggage of passengers who fail to board the aircraft.

Since then, there have been a number of international meetings to discuss, and reach agreement on, various security issues.

An ICAO Ministerial Conference in February 2002 issued a declaration to inform the travelling public that appropriate security measures are in place. Trevor Joy, CAA Manager Security and International Relations, said that this Conference endorsed the establishment of a comprehensive ICAO Security Plan of Action for strengthening aviation security worldwide.

"The conference sought to restore the confidence of consumers in air travel, while strengthening aviation security. There's a great deal of international cooperation to share information and ensure that our procedures are consistent. The Civil Aviation Authority is working closely with aviation operators and the Aviation Security Service to ensure that we contribute to this worldwide effort," said Trevor Joy.

The declaration includes a commitment to restore public confidence in air travel and continue the revitalisation of the air transport industry. It recognises that a universal approach is required, and that some developing countries may find increased security measures a difficult financial burden. Worldwide independent auditing of aviation security is included in the provisions. Global harmonisation has the objective to ensure consistency in all Contracting States.

There are many issues still under discussion, such as security requirements for doors of aircraft flight decks. One major issue is the screening of all hold-stowed baggage. That process will require substantial changes to operations at airports, and it will have considerable cost impact on airports and the Aviation Security Service.

“The travelling public can be assured that New Zealand is communicating with its world partners in the aviation sector. We already have good compliance with international security standards, and we are working to participate in the implementation of the ICAO Plan of Action,” said Trevor Joy.
Funding

The CAA is funded from a number of sources. Domestic airlines pay a levy based on the number of passengers they carry. There is also an international departing passenger levy. The CAA charges fees for a number of services, such as certification and licensing. The Government pays for policy advice. Levies totalled over 70 percent of revenue for the CAA in the financial year 1 July 2001 to 30 June 2002.

From these sources of revenue, the CAA carries out its various safety functions. It assesses organisations for certification and individuals for licensing; audits organisations; investigates accidents and incidents; carries out safety education through publications and seminars; and provides advice to the Government.

The way the CAA is funded was put in place in 1993 following extensive consultation with the aviation industry.

In the financial year 1 July 2001 to 30 June 2002, the CAA received $20.086 million, and spent $20.037 million, resulting in a surplus of $0.049 million for the period.

Domestic Passenger Levy

The domestic passenger levy, introduced in 1993, is a levy on air passenger operators, based on the number of passengers they carry. Up until the end of April 2002 it was $1.91 excl GST per domestic passenger.

From 1 May 2002 the Civil Aviation (Safety) Levies Order 2002 changed the levy to $1.78 excl GST per passenger per sector. Previously the levy was per trip, which could include several sectors.

Revenue by Source

<table>
<thead>
<tr>
<th>Source</th>
<th>30 Jun 01</th>
<th>30 Jun 02</th>
<th>30 Jun 02</th>
</tr>
</thead>
<tbody>
<tr>
<td>Levies</td>
<td>13,457</td>
<td>14,576</td>
<td>14,391</td>
</tr>
<tr>
<td>Crown</td>
<td>1,327</td>
<td>1,320</td>
<td>1,320</td>
</tr>
<tr>
<td>Fees and Charges</td>
<td>3,866</td>
<td>4,156</td>
<td>4,239</td>
</tr>
<tr>
<td>Interest and Other</td>
<td>274</td>
<td>191</td>
<td>1.6</td>
</tr>
<tr>
<td>Total Revenue</td>
<td>18,924</td>
<td>20,243</td>
<td>20,086</td>
</tr>
</tbody>
</table>

Expenditure by Output

<table>
<thead>
<tr>
<th>Output</th>
<th>30 Jun 02</th>
</tr>
</thead>
<tbody>
<tr>
<td>Safety Assessment and Certification</td>
<td>44%</td>
</tr>
<tr>
<td>Safety Analysis and Information</td>
<td>18%</td>
</tr>
<tr>
<td>Enforcement</td>
<td>4%</td>
</tr>
<tr>
<td>Policy Advice and Rules Development</td>
<td>12%</td>
</tr>
</tbody>
</table>
Contact Information

Civil Aviation Authority of New Zealand
Location:
Aviation House
1 Market Grove
Lower Hutt
New Zealand
Communication:
Web: www.ca.govt.nz
Email: info@ca.govt.nz
Tel: +64–4–560 9400
Fax: +64–4–569 2024

Postal:
P O Box 31 441
Lower Hutt
New Zealand

Other New Zealand Aviation Organisations:

Airways New Zealand
P O Box 294
Wellington
Tel: +64–4–471 1888
Web: www.airways.co.nz

MetService
P O Box 722
Wellington
Tel: +64–4–472 9379
Web: www.metservice.co.nz

Aviation Services Ltd
P O Box 30 343
Lower Hutt
Tel: +64–4–570 2812
Web: www.aviation.co.nz

Ministry of Transport
P O Box 3175
Wellington
Tel: +64–4–472 1253
Web: www.transport.govt.nz

Aviation Security Service
P O Box 2165
Wellington
Tel: +64–4–495 2430
Web: www.avsec.govt.nz

Aviation Publishing
P O Box 294
Wellington
Tel: 0800–500 045
Web: www.airways.co.nz

Transport Accident Investigation Commission
P O Box 10 323
Wellington
Tel: +64–4–473 3112
Web: www.taic.org.nz

Other New Zealand Aviation Organisations:

Aviation Safety Concerns
0508–4 SAFETY
(0508–472 338)

Accident Notification
0508–ACCIDENT
(0508–222 433)