Review of the
Civil Aviation Authority

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1 Civil Aviation Authority independent review

1.1 The Civil Aviation Authority

New Zealand has one of the highest densities of aircraft and licensed personnel to population in the world. In most of New Zealand's aviation sectors today there is an enviable safety record. It did not just happen. The way aviation in New Zealand was run prior to 1990 was cumbersome and costly and the accident rate was very poor. There was a need to build a new way to manage aviation safety.

The Civil Aviation Authority (CAA) is the Crown Entity established under the Civil Aviation Act 1990 (the Act) to act as the safety regulator for aviation in New Zealand. In the interests of the public, the CAA today undertakes safety, security and other functions in a way that contributes to the aim of achieving an integrated, safe, responsive, and sustainable transport system.

In 1996, the CAA had a budget of $13.4 million and a staff of less than 120. As the aviation community grew, so too did the CAA. Today, the CAA has a total budget of $27.2 million, which is expected to rise to about $28.4 million by 2008. The CAA is funded through a levy on domestic and international passengers (76%), fees and charges levied on industry for services (11%), with Government funding (11.8%) for policy and rules development and other services on behalf of the Crown. Interest (1.2%) rounds off the revenue. It has a staff of 172 and an establishment of 183.

The Director of Civil Aviation has a safety regulatory function. The Director does not have an economic regulatory role. Through the Director, the CAA provides an entry process by which intending participants in aviation show they meet the safety standards, monitors to ensure the participants continue to meet those standards, and exits those who consistently fail to meet them. The CAA contributes to international safety agreements and also provides policy advice to the Government, safety investigation of accident and incidents including fatal accidents, safety analysis, information and education, and undertakes statutory enforcement of safety regulation including prosecution.

The CAA’s brief history has been one of change, much of it world leading. The Government introduced a new basis of user-pays funding; and the CAA developed an entirely new safety regulatory regime whereby the regulator would have oversight of the aviation safety system but would not participate in it, and where there was clear division of responsibilities for safety with the primary onus for

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1 Kevin Ward, Safety Management during regulatory change, Canadian Aviation Safety Seminar, St John's Newfoundland, 10 May 2000.

2 Unless otherwise noted, all legislative notations refer to the Civil Aviation Act 1990, as amended.

The focus was on management systems for ensuring safety, and a life-cycle model of aviation risk management. The CAA has a number of regulatory interventions, or safety tools, with which to achieve significant performance and safety culture shifts.

Internationally, the CAA is well regarded. We understand from the Director that a recent International Civil Aviation Organisation (ICAO) audit stated that its auditors were: "... clearly impressed with the high level of responsibility and competence shown by the New Zealand airline industry. They have no safety concerns with the industry. ... They stated that their overall impression of the CAA is that [the CAA] is an efficient organisation with a highly professional staff [have] and a good open relationship with industry."

The introduction, development, and acceptance of these systems and processes, amid a backdrop of rapid and sustained industry growth, were the greatest changes to aviation in New Zealand in fifty years and were not without considerable controversy. If the first ten years of the CAA were those of change and debate, the past three have been of regulatory certainty and growing acceptance that the “new” is now the contemporary.

The CAA bases its strategies and operations around 13 Safety Target groups with the intention of reducing the social costs of accidents typically by 90 percent over the next five years. The safety performance of these sectors is distinctly variable. In most, the reduction in accidents is generally satisfactory and in many areas is equal to the world’s best. This is particularly so for the airlines. However, the performance in parts of the general aviation sector remain unsatisfactory. Achieving improved safety performance is a key goal for both the CAA and aviation community.

1.2 The aviation community

New Zealand has a very dynamic and diverse aviation community marked by ongoing change including sustained growth, the fervent adoption of new technologies, and the conversion of traditional capabilities.

There are about 8,900 pilots, 2,000 engineers and 3,800 registered aircraft, making for one of the greatest densities in the world of aviation activity to total population.

Some 146 New Zealand registered airliners carry 6.9 million passengers on domestic services and 3.3 million on international routes each year. These densities are also among the very highest in the world. These airliners account for 96 percent of seat hours flown in New Zealand.

The general aviation sector has about 1600 aeroplanes, and 600 helicopters on both commercial and private operations. Commercial activities include airline, tourist, tourist, tourist.

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4 Civil Aviation Authority Annual Report 2004-2005


6 Throughout this report, the term aeroplanes and fixed wing are interchangeable. Likewise, helicopters and rotary wing, and private and non-revenue or non-commercial.
and agricultural operations. Recreational activities include private aeroplane flying, gliders, microlights, amateur-built aircraft, parachuting, hang gliding, and so on.

Aviation participants enjoy representation from the Aviation Industry Association, Royal New Zealand Aero Club, Gliding New Zealand, Sport Aircraft Association, New Zealand Aviation Federation, New Zealand Air Line Pilots Association, Royal New Zealand Aeronautical Society, Agricultural Aircraft Association, and so on. Such an array of professional and enthusiast groups indicates not only the breadth of the community, but also its passion for all things aviation.

The accident rate in aviation is improving. Some of the drivers for this are regulatory and some are industry led: tourism operations are increasingly seeking higher levels of credentialising. The CAA notes that the three-year moving average accident rate for General Aviation has improved from 69 to 50 per year over a four year period, whilst annual average hours have increased from 465,000 to 493,000.

1.3 The Director’s decision to review the CAA

The aviation regulator has been subject to a plethora of routine and specific inquiries and reviews over the past twenty years. The CAA is reviewed routinely by the Ministry of Transport, Auditor General and Audit New Zealand and monitored by fellow regulatory and related agencies including the International Civil Aviation Organisation. It is subject to minute scrutiny by the aviation community, the media, Transport Accident Investigation Commission, Coroners, and Parliament.

Specific reviews include the 1988 Swedavia-McGregor report that defined the safety relationship between the regulator and the participants. Its most direct outcome was the Civil Aviation Act of 1990. This Act established the CAA as a stand-alone Crown Entity in 1992. The Act enshrined the safety responsibilities and the safety management process and brought about the most wide-reaching change in New Zealand aviation since World War Two. Radical changes were wrought in a very short time and the impacts are ongoing.

The Ministerial Inquiry of 1998 conducted by John Upton QC and Donald Spruston had as one if its primary findings that serious safety concerns needed to be raised to executive level, and commented on the CAA’s functional structure.

Subsequently, in 2000, there was a substantial restructure of the CAA, its relationship mechanisms with the aviation community, and its surveillance and monitoring processes.

Three similar accidents happened in a short period of time. The June 6, 2003, crash of the Air Adventures Piper Navajo at Christchurch led to a Coroner’s inquest in late 2004 during which the performance of the CAA was closely examined, in particular its General Aviation monitoring and surveillance processes. The Coroner’s report has now been released, however, we did not review that document. Since that crash, there have been two fatal crashes on similar commercial operations - a Seneca on Mount Taranaki on 30 November 2004, and another Seneca at Taupo on 2 February 2005.
Concurrently, the Auditor-General 2004 review, released in June 2005, pointed to a lack of rigour in the CAA’s General Aviation Group certification and monitoring processes. The CAA executive has generally agreed with these findings. The Authority did not have the opportunity to review drafts of the Auditor General’s report and received it in final form only in June 2005.

The Director observed that the findings of Auditor-General’s report were not dissimilar from the Auditor-General Office’s audits of 2000 and 1997, nor the Ministry’s triennial reviews. Nor were they dissimilar from the findings of the Ministerial Inquiry. Each had led to recommendations that we understand have been implemented, which raised with the Director the question of what more could be done. This suggested issues that previous examinations had failed to surface, and called into question the efficacy of the 2000 restructure, and in particular, but not exclusively, the operations of the General Aviation Group. The Director was also faced with amendments to the Civil Aviation Act involving additional non-traditional responsibilities, and other legislative, internal, and sector developments.

Of these reports, the Auditor-General 2004 review is the timeliest and the most relevant and therefore the one that has most informed the review team.

These combined events, and the passage of time since the restructure, prompted the Director to question aspects of the CAA’s performance and efficiency with a view to further improving organisation performance in a proactive manner. It suggested to the Director that there may be a need for significant changes in the way the CAA works.

After consulting with the Authority, the Director initiated a review in April 2005 (initially titled an Independent Internal Inquiry) into the CAA although we understand from the Authority that it did not endorse the terms of reference.

### 1.4 Independence of the review team

The Director said that while it would report to him, the review team would have independence in the conduct and scope of its investigations within its Terms of Reference.

### 1.5 Review team

The review team chosen by the Director was led by LECG. LECG is an international consultancy experienced in the design and implementation of regulatory processes and public policy.

The LECG Director in charge was David Moore, an expert in public management and in industry development. He has held a number of senior positions in the state sector and has worked for the New Zealand Treasury. He heads LECG’s Asia-Pacific strategy practice group and is Chief Executive of LECG’s New Zealand operations.

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7 s72I (3) (d) of the Civil Aviation Act 1990 (footnote references are to the Civil Aviation Act, unless otherwise stated).
Other members of the LECG team included Simon Orme, Senior Managing Consultant, a regulatory economist; and Kieren Bosenberg, an economist and a practitioner in law.

Martyn Gosling of Martyn Gosling Associates, acting as an affiliate of LECG, a practitioner in strategic management and strategic communications. He was employed by the CAA from 1994 to 2001 and has an in-depth understanding of the CAA, the aviation community, and the aviation regulatory environment. Martyn was included in the team at the request of the Director with the view that his previous association would provide institutional experience to the review.

CAA was to second a team member with the aim of capturing learning from the project but this did not eventuate. The team member would have reported directly to the Project Director.

1.6 Terms of Reference

The review was provided with the following terms of reference.

1. To determine the effectiveness and appropriateness of the CAA’s policies and operations including its current organisation and systems both theoretical and in practice, and future development and approaches for carrying out its assigned safety and regulatory processes under the Civil Aviation Act 1990 and subsequent amendments;

2. To determine a shape for the CAA taking into account the above, the recent Act amendment, the retirement of the Deputy Director, and the Rule Part 115 certification (provided as a second document);8

3. To determine an action plan for implementation of any changes and for the long-term maintenance of any determined improvements, systems, or structures.

The review team has produced a range of documents to meet these terms of reference. This document is the primary outcome from the first terms of reference and provides an indicative implementation plan for the third. The second terms of reference has been addressed in a separate document.

8 All references to “Parts” are to parts of the Civil Aviation Rules.
2 Executive summary on Terms of Reference One

Our review of the Civil Aviation Authority suggests that the organisation is technically highly proficient, is well regarded internationally, and we note that the safety record is significantly improving.

We find that the underlying model and legislation is appropriate. The organisational form; i.e. a Crown Agency, separate from the Ministry of Transport, with a specialist focus on aviation, and with independent governance, is a comparatively strong form of organising the competencies and complexities needed for regulation of the aviation industry. In our view, neither organisation form nor legislation need to change. The focus of the review is on improvement of the existing model and activity.

The open role for the CAA puts considerable pressure on both the governance and management to describe the direction, emphasis, and strategy, and then both implement it and evaluate progress. Governance, management and the supporting accountability regimes, combined with a “soft” funding model, means that the CAA does not always get the signals that it needs to be fully responsive.

Many of our concerns are, after full consultation and reflection, focussed on the area of General Aviation, where the CAA has been particularly active in making improvements in management and systems. However, the causes of the issues facing the CAA are more generic.

At the heart of this lies perceptions of the balance of the public good and the industry interest. There is always a trade-off in regulatory decision-making, and the balance must be made more clear to avoid inconsistency. The CAA’s regulatory toolkit is sufficient but could be used more rigorously. There is evidence that at times the CAA has been reluctant to use regulatory interventions.

There is a continuing need for development and implementation of an articulated strategic purpose and vision. A lack of clear direction in management and a disconnect between the articulated goals, mission and vision, and strategies of the CAA, with operations, means they are not driven through the organisation.

That the CAA appears to perform well is largely due to the high level of technical competence and personal beliefs of its staff. The CAA’s experience level and technical level is significant. Much of this experience was gained within the aviation industry but not in regulatory or policy settings. This may necessarily be the case for significant technical issues, but it also means that the CAA either does not have the depth of policy experience that could assist it in its next evolutionary steps or, that its experience may not be appropriately recognised and integrated into decision making. These two areas of public management and stronger regulatory practice are primary capabilities that the CAA needs to develop further.

Levy funding provides a soft option where the CAA can decide on its outputs and allocations with less accountability than the usual - activities are taken on without funding streams while operational groups attract funding without linking through to the organisation objectives.
The next evolutionary step for the CAA is to provide greater clarity over strategic direction and how this translates to action, clarity over the balance of industry need and public good, better use of tools such as cost benefit analysis, to use explicit decision criteria in taking regulatory decisions, and to strengthen the use of the regulatory toolkit. We see the need for better consideration and evaluation of the effects of actions, and better consideration of funding sources.

We make a series of recommendations that, we believe, address the core regulatory, governance and organisational issues that we have identified.
3 The CAA’s regulatory, governance, funding and management

We describe in this section the regulatory and governance framework, and the funding and management that the CAA acts under. We also describe the CAA’s approach to regulation. Appendix 1 sets out the regulatory toolkit in more detail.

3.1 Regulatory framework

Civil Aviation Act

The Act establishes the regulatory framework for civil aviation in New Zealand. The long title of the Act provides that it “establish rules of operation and divisions of responsibility within the New Zealand civil aviation system in order to promote aviation safety at reasonable cost”. The Act also provides to “ensure that New Zealand’s obligations under international aviation agreements are implemented” and to “consolidate and amend the law relating to Civil Aviation in New Zealand”.

The Act outlines the functions, powers and duties of participants in the civil aviation system, establishes the Civil Aviation Authority (the Authority), and outlines the various powers of the Minister and the Director of Civil Aviation. In December 2004 the Act was amended to provide the Authority with the objective to undertake its safety, security and other functions in a way that contributes to the aim of achieving an integrated, safe, responsive, and sustainable transport system.9

The Civil Aviation Authority

The Act establishes the five-person Authority10 as the civil aviation regulator with the responsibilities mentioned above.11 The Authority is a Crown Entity for the purposes of s 7 of the Crown Entities Act 2004.12

The functions of the Authority include:13

- Promote civil aviation safety and security in New Zealand;
- Promote civil aviation safety and security beyond New Zealand in accordance with New Zealand’s international obligations;

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9 s 72AA.
10 Throughout this report, the board of the Civil Aviation Authority is referred to as the Authority. The organisation is referred to as the CAA.
11 s 72A (1)
12 s 72A(1A)
13 s 72B of the Civil Aviation Act 1990.
Civil Aviation Authority

CAA independent review

- Establish and continue a service called the Aviation Security Service;

- Investigate and review civil aviation accidents and incidents in its capacity as the responsible safety and security authority;

- Notify the Transport Accident Investigation Commission of accidents and incidents notified to the authority;

- Maintain and preserve records and documents relating to activities within the civil aviation system, and in particular to maintain the New Zealand Register of Aircraft and the Civil Aviation Registry;

- Ensure the collection, publication, and provision of charts and aeronautical information, and to enter into arrangements with any other person or organisation to collect, publish, and distribute such charts and information;

- Provide to the Minister such information and advice as the Minister may from time to time require;

- Cooperate with, or provide advice and assistance to, any government agency or local government agency when requested to do so by the Minister, but only if the Minister and the Authority are satisfied that the performance of the functions and duties of the Authority will not be compromised;

- Provide information and advice with respect to civil aviation, and to foster appropriate information education programmes with respect to civil aviation, that promote its objective.

Operational requirements are set out in Schedule 3 of the Civil Aviation Act 1990 as well as the Crown Entities Act 2004.

The Director

The Director of Civil Aviation (Director) takes a particular role and certain powers under the Act. The Director is appointed by the Authority under s 72I. The Director is required by the Act to:

- Exercise control over entry into the civil aviation system through the granting of aviation documents under the Act;\(^{14}\)

- Take action to enforce the provisions of the Act, its associated regulations and rules, including the carrying out of inspections and monitoring in the public interest;\(^{15}\)

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\(^{14}\) s 72I (3)(a)

\(^{15}\) s 72I (3)(b)
• Monitor adherence within the civil aviation system to any regulatory requirements specifically including safety and security, access and mobility, public health, and environmental sustainability;\textsuperscript{16}

• Ensure regular reviews of civil aviation system to promote better safety and security.\textsuperscript{17}

The Director has the following statutory powers:

• Assess applications for aviation documents;\textsuperscript{18}

• Impose conditions on aviation documents;\textsuperscript{19}

• Require or carry out safety and security inspections and monitoring;\textsuperscript{20}

• Issue an airworthiness directive in respect of aircraft or airworthiness products which he/she believes on reasonable grounds is in an unsafe condition or that such condition is likely to exist or develop in aircraft or products of the same design;\textsuperscript{21}

• Carry out investigations of holders of aviation documents;\textsuperscript{22}

• Suspend\textsuperscript{23} or revoke\textsuperscript{24} aviation documents or to impose conditions on aviation documents;

• Detain aircraft, seize aeronautical products, and impose prohibitions and conditions;\textsuperscript{25}

• Issue medical certificates\textsuperscript{26}, undertake medical investigations\textsuperscript{27} and revoke, suspend, amend or request surrender of medical certificates;\textsuperscript{28}

\begin{footnotesize}
\begin{enumerate}
\item [\textsuperscript{16}] s 72I (3)(c)
\item [\textsuperscript{17}] s 72I(3)(d)
\item [\textsuperscript{18}] s 9
\item [\textsuperscript{19}] s 7(3)
\item [\textsuperscript{20}] s 15
\item [\textsuperscript{21}] s 72 I (3A)
\item [\textsuperscript{22}] s 15 A
\item [\textsuperscript{23}] s 17 and s 20. The criteria for s 17 are outlined in s 19.
\item [\textsuperscript{24}] s 18 and s 20. The criteria for s 18 are outlined in s 19.
\item [\textsuperscript{25}] s 21
\item [\textsuperscript{26}] s 27 B
\end{enumerate}
\end{footnotesize}
• Make emergency rules;\textsuperscript{29}

• Make exemptions to rules (made by himself or the Minister under ss 28, 29 or 30).\textsuperscript{30}

3.2 The Civil Aviation Authority

3.2.1 Governance structure

The Minister

The Minister’s objectives under the Act are:\textsuperscript{31}

(a) “to undertake the Minister’s functions in a way that contributes to the aim of achieving an integrated, safe, responsive, and sustainable transport system; and

(b) to ensure that New Zealand’s obligations under civil aviation agreements are implemented.”

New Zealand is responsible for developing national legislation to comply with commitments under the Convention on International Civil Aviation (Chicago 1944).

The functions of the Minister under the Act are:\textsuperscript{32}

(a) “to promote safety in civil aviation;

(b) to administer New Zealand’s participation in the convention and any other international aviation convention, agreement, or understanding to which the Government of New Zealand is a party;

(c) to administer the Crown’s interest in the aerodromes;

(d) to make rules under this Act.

The Authority

The Authority consists of five members appointed by the Minister in accordance with s 28(1)(a) of the Crown Entities Act 2004,\textsuperscript{33} being persons who the Minister

\textsuperscript{27} s 27 H

\textsuperscript{28} s 27 I

\textsuperscript{29} s 31

\textsuperscript{30} s 37

\textsuperscript{31} s 14

\textsuperscript{32} s 14A

\textsuperscript{33} s 72A(2).
considers will represent the public interest in civil aviation. The Minister must also meet the following requirement:

"Before appointing 2 of the members, the Minister shall request, from such organisation or organisations as the Minister considers represent those who have a substantial interest in the civil aviation industry in New Zealand, the names of persons such organisation or organisations consider proper candidates for appointment to the authority."

Appointments may not be longer than three years, although members may be reappointed.

The current Authority members are Ron Tannock (chair), Hazel Armstrong (deputy chair), Darryll Park, Susan Hughes and Robyn Reid.

The Authority has established three standing committees to focus on particular issues: the Audit Committee, the Aviation Security Service Sub-Board and the Remuneration Committee.

The Authority is also responsible for the functions of the Aviation Security Service (and for the Search and Rescue Service prior to 2004).

The Ministry of Transport

The Ministry of Transport is the government's chief transport policy adviser. It is responsible for managing the Minister of Transport's interface with crown entities, including the Authority. The Ministry has been responsible for negotiating the annual performance agreement with the Authority on behalf of the Minister of Transport.

The Ministry negotiates bilateral and multilateral air services agreements and is the licensing authority for foreign international airlines operating services to and from New Zealand.

3.2.2 Funding model

We set out the funds and levies issued under the Act as Appendix 2.

34 s 72A(4).
35 s 72A (5)
38 Civil Aviation Authority of New Zealand Annual Report for the year ended 30 June 2004.
Funding Principles

The Ministry of Transport developed a set of funding principles in 1998 to apply to the Crown’s transport safety agencies. The principles were:

1. Costs are attributed to specific services;
2. Service costs are based on full cost allocation;
3. Users are charged the full costs of services;
4. General levies are to be applied where specific individual users cannot be identified, or where group (groups) of users all benefit;
5. Costs (and thus fees and charges) are kept to a minimum consistent with the government’s policy of “safe sustainable transport at reasonable cost”;
6. Benefits of additional services must clearly outweigh costs;
7. Compliance costs for industry are minimised; and
8. Changes to fees and charges that are set by regulation require prior consultation with industry.

Levies

Under the Act, the Governor General may impose levies, for the purposes of enabling the Authority to carry out its functions under the Civil Aviation Act or any other Act, on any holder of aviation documents, after consulting with the Authority. Levies imposed may vary across different classes and categories of holders of aviation documents. Levies may be calculated with reference to fuel usage, number of passengers and freight (capacity or actual), distance flown, size of aircraft and the purpose of usage of aircraft.

In reality, the current structure of levies is relatively simple and is restricted to three types of levies. The levies and charges are contained in the Civil Aviation (Safety) Levies Order 2002, made pursuant to s 42A of the Civil Aviation Act 1990.

Firstly, domestic and international passenger levies are calculated on the basis of the actual number of passengers carried. These levies were first introduced in 1993. The domestic passenger levy is $2 (including GST) per passenger per sector. The international passenger levy is $1 (including GST) per passenger leaving New Zealand. In 2004-2005 there were 8.624 million domestic passengers and 4.149...
million international departures.\textsuperscript{43} This provides revenues of $15.353 million and $3.692 million respectively.\textsuperscript{44} The growth in air travel means these figures will grow in 2005-2006 and onwards.

The Aeronautical Information Service (AIS) Levy is charged to generators of aeronautical information including Airways ($281,300 per annum), MetService ($3,300 per annum) and aerodromes (Appendix 2.1). These AIS levy amounts are exclusive of GST. In the year to 30 June 2005 this is expected to yield approximately $0.498 million in revenue.\textsuperscript{45}

An annual participation levy is payable by aviation operators who do not pay the passenger levy. This includes freight, non-commercial, agricultural and sporting operators of aircraft as well as other areas of general aviation. The level of participation levy is determined by the weight (and category) of the aircraft (Appendix 2.2). In the year to 30 June 2005, participation levies are expected to yield $0.348 million.

In the year to 30 June 2005 total revenue raised from levies was $19.891 million\textsuperscript{46} (75\% of total revenue). This is an increase of 3.9 percent from the previous year. In particular the increase reflected an increase in domestic (2.5\%) and international passenger numbers (9.9\%).\textsuperscript{47} In 2005-2006 levy revenues are expected to further increase to $20.5 million, rising to $22.1 million by 2008-2009.\textsuperscript{48}

Fees and Charges

All fees and charges are established under the Civil Aviation Charges Regulations (No.2) 1991. Under those regulations the Authority charges a fee of $133 per person per hour including GST to aviation participants for audits, and the issuing of licences and certificates and approvals (Appendix 2.3). The CAA absorbs travel, travel time, and associated costs. In the year to 30 June 2005 total revenue raised from fees and charges was $3.510 million (13.2\%). For the 2005-2006 year fees and charges are expected to raise $4.269 million (11\%). This revenue stream is unlikely to change over the next three years.\textsuperscript{49}

\textsuperscript{43} Civil Aviation Authority, Commentary on financial results for period June 2005.
\textsuperscript{44} Ibid
\textsuperscript{45} Civil Aviation (Aeronautical information Service) Levies Order 2001, Schedule
\textsuperscript{46} Civil Aviation Authority, Commentary on financial results for period June 2005.
\textsuperscript{47} Ibid
\textsuperscript{49} Ibid
Crown Funding

Government funding provides for specific services including policy advice on health and safety in aviation. It also extends to contracts, for example for rule development. In the year to 30 June 2005 total crown funding revenue was $3.180 million (11.9%). This revenue stream will remain unchanged in the years to 2009.

Interest and other charges

The Authority also receives revenue from managing cash flow. Total revenue raised from interest and other charges was $0.2 million (1%). While variable from year to year the sums and ratio of total revenue is not expected to significantly change.

3.2.3 Management framework

The current senior management framework is shown below. There is no incumbent Deputy Director and the General Manager responsibilities of that position have been temporarily reallocated.

The CAA underwent restructuring in May 2000. The restructuring was intended “to improve the CAA’s integrated knowledge of safety performance and safety issues in particular sectors and in respect of individual operators”. To achieve this, the new structure sought to reflect operational rather than functional responsibilities.


51 Ibid, p 33.
3.3 The Authority’s approach to regulation

3.3.1 Safety under international obligations and the Act

International Obligations

New Zealand is a signatory to the Convention on International Civil Aviation (the Chicago convention). The purpose of the Chicago convention is to promote uniformity in the regulation of international civil aviation. The standards and recommended practices outlined in the convention’s Annexes provide a basis for the regulation of civil aviation.

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52 The organisation structure was current at initiation of the review and during the review period. Subsequently, the CAA modified the structure slightly (the structure was adopted in the 2005/06 Statement of Intent. The main change to the structure was to remove the position of Deputy Director from the structure. Further, an Office of the Director was introduced to assist the Director in his role.
They are not strictly binding unless specifically legislated under New Zealand law (including incorporation into the Civil Aviation Rules).\(^{53}\)

**Safety under the Act**

Safety aspects relevant to entry into the civil aviation system are stipulated in Part 1 of the Act.

The Act provides that Civil Aviation Rules may require various participants in aviation to hold an aviation document in relation to any or all of aircraft, pilots, flight crew members, air traffic personnel, aviation security service personnel, aviation maintenance personnel, air services, air traffic services, aerodromes and aerodrome operators, navigation installation providers, aviation training organisations, aircraft design, manufacture, and maintenance organisations, aeronautical procedures, aviation security services, aviation meteorological services, aviation communications services as well as any aviation examiner or medical examiner or any other specific categories as outlined in the rules of the Act.\(^{54}\)

The Act provides that all people who have right to an aircraft for more than 28 days and which is used to fly to, from, within or over New Zealand territory are required to register the aircraft with the Director or in accordance with the requirements of another territory.\(^{55}\)

The Act also stipulates a non-exhaustive list of criteria the Director is required to give weight to when undertaking a Fit and Proper Person test for any reason under the Act. Specifically the Director must have regard to the nature and degree of the proposed person’s participation in the civil aviation system and give appropriate weight to the person’s compliance with transport safety regulatory requirements, their relevant experience in the transport sector, any knowledge of civil aviation safety regulatory requirements, any history of physical or mental health or serious behavioural problems, any convictions for transport safety offences, any evidence that the person has committed a safety transport offence or contravened or failed to comply with any rule made under the Act.\(^{56}\)

### 3.3.2 The Rules

**Substantive rules**

The Act provides powers for the Minister to make Rules in relation to various matters of safety and security in the aviation system.\(^{57}\) The Minister may not delegate the power to make Rules.\(^{58}\) In practice, the Minister usually contracts the CAA through the Ministry of

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\(^{53}\) Statement of Intent p 65

\(^{54}\) s 7

\(^{55}\) s 6

\(^{56}\) s 10

\(^{57}\) See generally ss 28 (ce) and 29

\(^{58}\) s 28(9)
Transport to develop the Civil Aviation Rules and undertake consultation with interested parties.\textsuperscript{59}

The Minister may make Rules in relation to any matter related or reasonably incidental to the objectives of the Minister or Authority,\textsuperscript{60} the functions of the Minister,\textsuperscript{61} the Authority\textsuperscript{62} or the Director,\textsuperscript{63} as well as the powers of the Director.\textsuperscript{64} Specific types of Rules mentioned in the Act may relate to the use of aerodromes,\textsuperscript{65} general operations or air traffic.\textsuperscript{66} The rules include substantive provisions in relation to the certification of operators, organisations and agencies, the licensing of personnel, general operating rules as well as rules relating to aircraft, airspace and aerodromes.

Rules in relation to certification and licensing essentially govern entry to the aviation system. These rules are intended to ensure the ongoing safety of the public.

Certification

The requirement for certification for air operators for all sizes of aircraft is provided for in Civil Aviation Rule Part 119. There are separate rules outlining the details of certification and operation applicable to large (thirty or more passenger seats)\textsuperscript{67} and medium sized aeroplanes (ten to twenty nine passenger seats).\textsuperscript{68} In relation to General Aviation, Part 135 outlines the details of certification standards applicable to air transport operations in aeroplanes with less than ten passenger seats and all helicopters.

The Director may, with the written consent of the Minister, delegate his functions and powers to persons who are not employees of the Authority (other than those for revoking aviation documents under s 18 of the Act, revoking or suspending aviation documents under s 41 of the Act, or issuing infringement notices under s 58 of the Act).\textsuperscript{69} The Director has delegated functions and powers to persons of the following organisations in accordance with Part 149 of the Civil Aviation Rules: the New Zealand Gliding

\textsuperscript{59}CAA, 'The Rule Development Process' (a booklet describing the four-phase rule development process that came into effect in August 2005).

\textsuperscript{60}s 28 (ce) (i) and (ii)

\textsuperscript{61}s 28 (ce) (ii)

\textsuperscript{62}s 28 (ce) (iv)

\textsuperscript{63}s 28 (ce) (v)

\textsuperscript{64}s 28 (ce) (v)

\textsuperscript{65}s 29 (b)

\textsuperscript{66}s 29(c)

\textsuperscript{67}Part 121

\textsuperscript{68}Part 125

\textsuperscript{69}s 23B.
Association, the New Zealand Hang Gliding and Paragliding Association, the New Zealand Parachute Industry Association, the New Zealand Warbirds Association, the Recreational Aircraft Association of New Zealand, and the Sport Aviation Corp.  

As part of the aircraft certification process, all aircraft except hang gliders are required to comply with aircraft registration and marking requirements.  

Products and parts are required to be certified. There are significant airworthiness requirements. Medical standards are also outlined. Aircraft maintenance, training, design and manufacturing organisations must also be certified depending on the activity undertaken by the organisation in the civil aviation system. Separate rules apply to certificated aerodromes. Licences are required for pilots, flight engineers, air traffic services personnel, and aircraft maintenance engineers.

The Director is required by the Act to grant a licence or other aviation document where:

(a) “All things in respect of which the document is sought meet the relevant prescribed requirements; and

(b) The applicant and any person who is to have or is likely to have control over the exercise of the privileges under the document—

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70 Part 103 contains certification rules to support existing Part 103 certificates held by supporting organisations in relation to microlight aircraft based on a prior regulatory requirement now covered by Part 149.

71 Part 47. This supports and implements section 6 of the Act

72 Part 21

73 Part 26

74 Part 67

75 Part 145

76 Part 141

77 Part 146

78 Part 148

79 Part 139

80 Part 61

81 Part 63

82 Part 65

83 Part 66
(ii) Either holds the relevant prescribed qualifications and experience or holds such foreign qualifications as are acceptable to the [Director] under subsection (2) of this section; and

(iii) Is a fit and proper person to have such control or hold the document; and

(iv) Meets all other prescribed requirements; and

(c) It is not contrary to the interests of aviation safety for the document to be granted or renewed."

The criteria which the Director must consider and give weight to when undertaking a Fit and Proper Person test applying to aviation professionals are outlined separately.84

There are general maintenance rules85 applicable for engineers and Airworthiness Directives as made by the Director.86

There are general operating and flight rules applicable to all aircraft operations.87 There are also additional rules specific to microlight aircraft;88 gliders;89 parachuting,90 hang gliders91, agricultural aircraft,92 and aerodromes,93 and so on.

Rule making procedure

The Rules also prescribe procedures governing proposals to create, amend or revoke ordinary rules (rules made by the Minister rather than under the Director’s emergency powers), and the procedures governing the making of exemptions to ordinary rules.94 The Scholtens review aimed to ensure that all stakeholders were involved in the rule making process. A dedicated project began in 2004 to implement recommendations of that review.

84 section 10
85 Part 43
86 s 27G
87 Part 91
88 Part 103
89 Part 104
90 Part 105
91 Part 106
92 Part 137
93 Part 139
94 Part 11
3.3.3 The general approach to safety regulation (safety model)

The CAA’s current approach to regulatory enforcement is outlined by various principles enunciated in Appendix 4 of the current Statement of Intent. This states:

“The legal framework is underpinned by a set of principles that can be regarded as together constituting a safety and security “philosophy”. That philosophy has its origins in the Swedavia-McGregor report of 1988, tempered by experience since and modified by the introduction of the New Zealand Transport Strategy in 2004.”

The principal goal is to ensure that participants are complying with regulatory requirements and acting responsibly. When this is not the case, the Director is expected to actively intervene to restore compliance and encourage responsible behaviour. This may involve a wide range of regulatory tools, including increased monitoring to ensure operators are within or exceed minimum legal boundaries and have effective management control, the imposition of conditions on their documents, use of enforcement tools, and in extreme conditions, the revocation of documents and removal from the aviation system. If a safety concern is more general, then actions may include increased education or changes to the regulatory standards.

In brief these principles are founded upon:

- The relationship between the CAA and the aviation community and the public as central to the achievement of safety (and security) objectives.
- Clear division of responsibility for aviation safety with the Minister responsible for the safety regulatory framework (including the Rules); the Authority is appointed by Ministers and acts in a governance and oversight role; with the Director exercising control over entry, monitoring performance and enforcing compliance; and with aviation document holders responsible for the actual safety of their operations. This approach assumes participants are largely responsible and manage their operations without the need for excessive regulatory intervention.
- The Director performing his/her duties with consistency and fairness.
- Ongoing safety information gathering and analysis is required to ensure informed and effective intervention by the regulator.
- A need to foster a safety and security “culture”.
- Clear and communicated Rules, with information and explanatory material such that aviation participants and CAA readily understand them.

The CAA’s specific approaches to certification, monitoring and enforcement functions are found in Appendix 1.

3.3.4 Safety outcomes - targets and measures

Safety Targets are fundamental to the aviation safety process. The Director has considerable discretion in the use of regulatory tools. Achieving the Safety Targets is expected to focus CAA planning, allocation of resources, and safety interventions, and the extent to which the regulatory tools are deployed to effect a specific change in a defined
part of the aviation community. Tools include the Rules, entry control, surveillance and
monitoring, education, enforcement and exit mechanisms.

Previously, the Safety Targets were based on the accident rates in nine sectors but
experience suggested this was an elusive or clumsy comparative tool (although this
measure is applied internationally). Nor did these measures effectively enmesh with the
Transport Strategy and sustainable transport objectives.

In 2005, the CAA developed more universal measures to enable safety trends to be
accurately and consistently monitored over time and to enable comparison between
aviation categories in New Zealand and internationally, and with other transport modes.
It also indicates where effort is required to effect positive change. The new process is
based on the social cost of accidents per seat per hour; an economic measure assigning a
value of statistical life to any fatalities, rehabilitation costs from injuries, and the cost of
property lost or damaged. These costs are spread over the volume of aviation activity for
each of 13 aviation sectors over three key divisions - public air transport, other
commercial, and non-commercial flying. The intention is to take such steps as to achieve a
reduction in the costs to society of aviation accidents without adversely affecting other
transport objectives. The measure will also enable the total social cost of New Zealand
aviation to be determined.

Between 1995 to 2005, there were 233 fatalities and 182 serious injuries, with 103 aircraft
destroyed in fatal and serious injury accidents. The social cost was $755 million, or $75.5
million per annum, with about 95 percent from accidents and incidents involving light
aircraft - those below 5,670 kg, helicopters and the sport group - of general aviation.95

The following table summarises the average social cost for the five-year periods 1 January
1994 to 31 December 1998 and 1 January 1999 to 31 December 2003 for the nine defined
safety target groups used at the time.96

<table>
<thead>
<tr>
<th>Safety Target Group</th>
<th>Annual Average 1994 to 1998</th>
<th>Annual Average 1999 to 2003</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>13,608 kg and above revenue pax &amp; freight</td>
<td>4.9</td>
<td>1.8</td>
<td>- 3.1</td>
</tr>
<tr>
<td>5,670 to 13,608 kg revenue pax &amp; freight</td>
<td>0.1</td>
<td>-</td>
<td>- 0.1</td>
</tr>
<tr>
<td>2,721 to 5,670 kg revenue pax &amp; freight</td>
<td>9.2</td>
<td>4.5</td>
<td>- 4.7</td>
</tr>
<tr>
<td>Below 2,721 kg revenue pax &amp; freight</td>
<td>6.1</td>
<td>7.0</td>
<td>+ 0.9</td>
</tr>
<tr>
<td>Below 2,721 kg revenue (other)</td>
<td>6.1</td>
<td>6.0</td>
<td>- 0.1</td>
</tr>
<tr>
<td>Below 2,721 kg non-revenue</td>
<td>9.1</td>
<td>15.4</td>
<td>+ 6.3</td>
</tr>
<tr>
<td>Helicopter revenue pax &amp; freight</td>
<td>5.9</td>
<td>8.8</td>
<td>+ 2.9</td>
</tr>
<tr>
<td>Helicopter revenue (other)</td>
<td>9.4</td>
<td>6.2</td>
<td>- 3.2</td>
</tr>
<tr>
<td>Helicopter non-revenue</td>
<td>2.1</td>
<td>4.6</td>
<td>+ 2.5</td>
</tr>
<tr>
<td>Total</td>
<td>52.9</td>
<td>54.3</td>
<td>+ 1.4</td>
</tr>
</tbody>
</table>


96 2004 CAA Annual Report p 44
The following table identifies the annual average social cost per annum of the Sport Group for the same period.97

<table>
<thead>
<tr>
<th>Aircraft Group</th>
<th>Annual Average 1994 to 1998 $m</th>
<th>Annual Average 1999 to 2003 $m</th>
<th>Change $m</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sport</td>
<td>10.2</td>
<td>13.9</td>
<td>+ 3.7</td>
</tr>
</tbody>
</table>

After consultation with stakeholders, including the aviation community, the CAA was able to establish the current social cost for each of the thirteen newly defined sectors, and to set targets for each to be achieved by 2010.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Airline – large aeroplanes</td>
<td>$0.13</td>
<td>$0.10</td>
</tr>
<tr>
<td>2 Airline – medium aeroplanes</td>
<td>$0.00</td>
<td></td>
</tr>
<tr>
<td>3 Airline – small aeroplanes</td>
<td>$65.18</td>
<td></td>
</tr>
<tr>
<td>4 Airline – Helicopters</td>
<td>$55.46</td>
<td></td>
</tr>
<tr>
<td>5 Other commercial operations – aeroplane</td>
<td>$6.44</td>
<td>$6.50</td>
</tr>
<tr>
<td>6 Other commercial operations - helicopter</td>
<td>$36.76</td>
<td></td>
</tr>
<tr>
<td>7 Agricultural operations – aeroplane</td>
<td>$141.90</td>
<td>$14.00</td>
</tr>
<tr>
<td>8 Agricultural operations – helicopters</td>
<td>$85.44</td>
<td></td>
</tr>
<tr>
<td>9 Agricultural operations – sport aviation</td>
<td>n/a</td>
<td>$28.00</td>
</tr>
<tr>
<td>10 Private – aeroplane</td>
<td>$115.51</td>
<td></td>
</tr>
<tr>
<td>11 Private – helicopter</td>
<td>$98.31</td>
<td>$10.00</td>
</tr>
<tr>
<td>12 Sport aviation transport operations</td>
<td>$113.21</td>
<td>$13.00</td>
</tr>
<tr>
<td>13 Private operations – sport aviation</td>
<td>$174.06</td>
<td>$20.00</td>
</tr>
</tbody>
</table>

### 3.4 Accountability as a Crown Entity

Crown Entities Act 2004

The Authority has been required under s 72F of the Civil Aviation Act to give to the Minister a performance agreement, including:98

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97 Ibid p 46

98 Civil Aviation Authority, `Brief for Minister of Transport’, October 2005.
(a) “A statement of objectives in terms of section 41(2)(d) of the Public Finance Act 1989;

(b) the methods by which performance against those objectives will be measured;

(c) reporting arrangements;

(d) liabilities intended to be incurred during the year; and

(e) financial forecasts for the subsequent two years.”

From 1 July 2006, the requirement for a performance agreement, however, will be replaced by the option for the Minister to require an “output agreement”. The purpose of an output agreement is “to assist a Minister and a Crown Entity to clarify, align, and manage their respective positions and responsibilities in relation to the funding and production of certain outputs, including the particular standards, terms, and conditions under which the crown entity will deliver and be paid for the specified outputs.”

The Authority’s outcome targets are currently defined with reference to the Government’s broader New Zealand Transport Strategy. Under this strategy, the desired outcome is that “by 2010 New Zealand will have an affordable, integrated, safe, responsive, and sustainable transport system”. This includes assisting economic development, ensuring safety and personnel security, improving access and mobility, protecting and promoting public health, and ensuring environmental sustainability.

The CAA’s outputs for 2005-2006/2007-2008 are summarised in the following table.

<table>
<thead>
<tr>
<th>Output Class</th>
<th>Output</th>
<th>Source of Funding</th>
</tr>
</thead>
<tbody>
<tr>
<td>POLICY ADVICE</td>
<td>Advice to Government, Legislation Development, and</td>
<td>Crown funded</td>
</tr>
<tr>
<td></td>
<td>Maintenance of International Aviation Safety Related Agreements</td>
<td></td>
</tr>
<tr>
<td>Rules Development</td>
<td>Crown funded</td>
<td></td>
</tr>
<tr>
<td>SAFETY ASSESSMENT &amp;</td>
<td>Airlines sector safety risk management</td>
<td>Direct fees and charges and</td>
</tr>
<tr>
<td>CERTIFICATION</td>
<td>General Aviation sector safety risk management</td>
<td>levy funding</td>
</tr>
<tr>
<td></td>
<td>Personnel Licensing and Aviation Services sector safety risk management</td>
<td>Direct fees and charges and</td>
</tr>
<tr>
<td></td>
<td>Health &amp; Safety in Aviation</td>
<td>levy funding</td>
</tr>
<tr>
<td>SAFETY ANALYSIS AND</td>
<td>Safety Investigation</td>
<td>Levy funded</td>
</tr>
<tr>
<td>INFORMATION</td>
<td>Safety Analysis</td>
<td>Levy funded</td>
</tr>
<tr>
<td></td>
<td>Safety Information and Education</td>
<td>Levy funded</td>
</tr>
<tr>
<td>ENFORCEMENT</td>
<td>Responses to Regulatory Breaches</td>
<td>Levy funded</td>
</tr>
</tbody>
</table>


100 s 170(2) of the Crown Entities Act 2004.

101 Annual Report p. 24

102 whilst the Table is extracted from the 2004 Annual Report p. 24, it has been updated to reflect the Draft Statement of Intent 2005-2006 to 2007-2008, 31 May, 2005, pages 37-44.
The CAA must also prepare annual financial statements.\textsuperscript{103} It is also a requirement that all expenditure of public money is authorised by an appropriation by Act of Parliament.\textsuperscript{104} Separate appropriations are to be made for each output class and funds cannot be readily transferred between specified output classes unless approved by Order of Council.\textsuperscript{105}

Performance Reporting

The CAA is required to provide the Minister with Quarterly Reports plus an Annual Report that must include a comparison of actual performance of outputs against those in the Statement of Intent.\textsuperscript{106} The annual report is tabled before the House of Representatives and scrutinised by a Select Committee. From 1 July 2005, Audit NZ will be responsible for auditing the CAA’s reporting of outputs and outcomes.

Reviews by the Auditor General

The Office of the Auditor General generally conducts reviews of the CAA every three years. The last review was undertaken in 2004 and was reported in June 2005.

3.5 Current funding

The following table summarise the sources of revenue for CAA’s core regulatory activities for the year ending 30 June 2005.

<table>
<thead>
<tr>
<th>Revenue Source</th>
<th>Revenue ($000)</th>
<th>Percentage of Total</th>
<th>Percentage of Total Non Crown Revenue</th>
</tr>
</thead>
<tbody>
<tr>
<td>Domestic Passenger Levy</td>
<td>15,353</td>
<td>57.8</td>
<td>61.8</td>
</tr>
<tr>
<td>International Passenger Levy</td>
<td>3,692</td>
<td>13.9</td>
<td>14.9</td>
</tr>
<tr>
<td>AIS</td>
<td>498</td>
<td>1.9</td>
<td>2</td>
</tr>
<tr>
<td>Participation Levy</td>
<td>348</td>
<td>1.3</td>
<td>1.4</td>
</tr>
<tr>
<td>Crown</td>
<td>1,761</td>
<td>6.6</td>
<td></td>
</tr>
<tr>
<td>Fees and Charges (Non Audit)</td>
<td>3,960</td>
<td>14.9</td>
<td>16</td>
</tr>
<tr>
<td>Fees and Charges (Audit)</td>
<td>968</td>
<td>3.6</td>
<td>3.9</td>
</tr>
<tr>
<td>Other</td>
<td>5</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>26,585</strong></td>
<td><strong>100</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

\textsuperscript{103} Public Finance Act s41

\textsuperscript{104} Section 4(1) and (2)

\textsuperscript{105} Public Finance Act s 5

\textsuperscript{106} s 41 l
The three Crown funded activities (policy advice, rule development and health and safety) are discrete outputs (and functions) of the CAA. As such these activities can be isolated for analytical purposes. The benefit of doing this is that the core regulatory functions of entry, monitoring and enforcement are all funded by the levies and fees and charges, completely independent of any reliance on crown funding.\(^1\) This is why the final column reports total non-crown revenue.

The table below sets out the resource allocation across the output classes, defined in the performance agreement, for the year ending June 30, 2005.

**Statement of Financial Performance, Year to Date, 30 June 2005 (Provisional Accounts)**

<table>
<thead>
<tr>
<th>Output Class</th>
<th>#</th>
<th>Output</th>
<th>Revenue ($000)</th>
<th>Expenditure ($000)</th>
<th>Surplus (Deficit)</th>
</tr>
</thead>
<tbody>
<tr>
<td>POLICY ADVICE</td>
<td>1.1</td>
<td>Advice to Government, Legislation Development, and Maintenance of International Aviation Safety Related Agreements</td>
<td>1,321</td>
<td>6</td>
<td>1,419 (92)</td>
</tr>
<tr>
<td></td>
<td>1.2</td>
<td>Rules Development</td>
<td></td>
<td></td>
<td>1,423</td>
</tr>
<tr>
<td>SAFETY ASSESSMENT &amp; CERTIFICATION</td>
<td>2.1</td>
<td>Airlines sector safety risk management</td>
<td>3,441</td>
<td>1,976</td>
<td>5,343 75</td>
</tr>
<tr>
<td></td>
<td>2.2</td>
<td>General Aviation sector safety risk management</td>
<td>4,840</td>
<td>584</td>
<td>4,841 582</td>
</tr>
<tr>
<td></td>
<td>2.3</td>
<td>Personnel Licensing and Aviation Services sector safety risk management</td>
<td>6,517</td>
<td>540</td>
<td>6,818 238</td>
</tr>
<tr>
<td></td>
<td>2.4</td>
<td>Health &amp; Safety in Aviation</td>
<td>440</td>
<td>270</td>
<td>295 145</td>
</tr>
<tr>
<td>SAFETY ANALYSIS AND INFORMATION</td>
<td>3.1</td>
<td>Safety Investigation</td>
<td>2,298</td>
<td>1,935</td>
<td>2,097 201</td>
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<tr>
<td></td>
<td>3.2</td>
<td>Safety Analysis</td>
<td>908</td>
<td>609</td>
<td>657 253</td>
</tr>
<tr>
<td></td>
<td>3.3</td>
<td>Safety Information and Education</td>
<td>1,177</td>
<td>8</td>
<td>1,519 1674 (489)</td>
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<tr>
<td>ENFORCEMENT</td>
<td>4.1</td>
<td>Responses to Regulatory Breaches</td>
<td>709</td>
<td>2</td>
<td>762 823 (112)</td>
</tr>
<tr>
<td>TOTAL</td>
<td></td>
<td></td>
<td>1,761</td>
<td>19,891</td>
<td>25,379 1,205</td>
</tr>
</tbody>
</table>

The table indicates that the three Crown funded outputs (1.1, 1.2 and 2.4) delivered a cumulative surplus of sixty three thousand dollars in 2004-2005 and as such were more than self-funding.\(^1\) The levy funded outputs in output classes 3 and 4 delivered a combined deficit of $147,000.

From a resource allocation perspective the actual level of levy funding required to fund these outputs 3 and 4 (including the incidental fees and charges received) amounted to approximately $2.097 million (3.1), $0.657 million (3.2), $1.666 million (3.3) and $0.821 million (4.1) for the respective outputs. Cumulatively this amounts to $5.241 million.
4 Establishing a framework for measurement

We established an analysis framework for the evaluation of the CAA. We have taken a number of perspectives, which, together, form a “prior” – the expectation of how a good regulator such as the CAA ought to act, against which its current observed behaviour could be measured.

We establish the prior with reference to three perspectives, each of which adds to the other:

- Public management – the incentives in the systems of accountabilities are fully aligned with the objective of the organisation, and the consequent activities of the CAA are aligned with that objective.

- Good regulatory practice – the CAA acts in a way that is consistent with the attributes of good practice for regulators.

- Good civil aviation practice – the CAA acts in accordance with the safety model that it espouses, and which is set out in the Act and CAA planning documents.

4.1 Public sector financial management

We looked at two foundations for this analysis; namely a comparative institutional framework and a review of the intervention logic of the CAA.

4.1.1 A comparative institutional framework

In assessing any institution, it is important to ensure that a comparison is made of the actual institution as it currently exists to a precisely defined alternative situation. This analysis ensures that there is acknowledgement that all institutions are to some extent flawed and that the underlying purpose is to find the best possible, and most pragmatic, institutional structure, incorporating its underlying incentive structure.

In assessing the CAA as an institution we examined the general characteristics of the CAA as a regulator in terms of its key competencies, the governance structure, funding model, organisational structure, the approach to key regulatory policies of entry, monitoring and enforcement as well as various operational issues by which we could assess the effectiveness of implementation of policies by CAA personnel.

4.1.2 Review of intervention logic

We also reviewed the activities of the CAA against its expressed goals and objectives. This is most clearly articulated in a principal/agency framework, and raises questions around information asymmetry, such as whether the Minister, the Authority or the Director, are able to fully monitor the activity of the CAA’s technical specialists. In other words, the role that the CAA undertakes means that specific CAA experts will undertake activities from audit through to enforcement; each of these decisions will require a high degree of technical expertise and most of the decisions are likely to be opaque to those who attempt to monitor them.
A key part of the review is assessing the defined outputs of the CAA and their impact on the outcome targets. The key concepts/ issues for examination are the inputs, outputs and outcomes approaches for crown entities and their application to the CAA.

4.2 Regulatory and institutional analysis

4.2.1 Characteristics of a effective regulator

The core qualities of a regulator are competence, independence and legitimacy.107

- Competence is the range of skills to administer and enforce regulations, including industry knowledge, understanding of the regulations and their application, and understanding of technology. Lack of competence can lead, for example, to poor decisions, or to too much information being requested, thus increasing compliance costs.

- Independence refers to the maintenance of an “arm’s length” relationship with interested parties, such as government, businesses and other private interests. Capture by interested parties can lead regulators to diverge from the objectives of regulation and result in detrimental outcomes.

- Legitimacy refers to the legislative mandate to regulate as well as the acceptance of interested parties of this mandate. If a regulatory organisation does not have this mandate, it risks being ignored. Alternatively, if the mandate is dependent on one of the interested parties, the regulator may lack independence.

There are likely to be tradeoffs between these qualities for any regulator. For example, greater competence may be achieved through reliance on the industry, but this may also compromise independence.

This framework is sufficiently general to be broadly applicable to various types of regulators including safety regulators.

4.2.2 Regulatory policies

An assessment of the regulatory policies of the CAA would involve the effectiveness of the current range of regulatory tools, or levers, as well as their application. A microeconomic approach makes an assessment of the safety regulator’s ability to influence the incentives of participants’ behaviour in relation to safety conduct. We used this general model to assist with evaluation of the communications function, fees and penalties and other regulatory interventions later in the paper.

If expected value of non-compliance were positive, then it would be rational for an aviation participant to not comply with a specific safety rule.

While this statement is very general, and obviously may miss some specifics in relation to different classes of document holders, particular individuals, or organisations for different

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types of safety relevant behaviour, it remains a useful tool for assessing the appropriate role for an air safety regulator. The key observations that can be drawn from a microeconomic perspective are threefold:

1. The regulatory function does not operate independently of commercial incentives. Where commercial incentives are significantly strong for safety compliance, the role of the regulator is largely reduced to one of monitoring compliance, without the need to frequently enforce compliance. In practice this is observed in relation to the different regulatory approaches required for airlines and general aviation.

2. The regulator’s role in influencing incentives for safety compliance is largely reflected by three variables. These variables are:
   
i) Probability of detection of non-compliance in undertaking the monitoring/ surveillance function;
   
ii) Probability of enforcement of penalties once detected. In part this depends on both regulatory and court decisions;
   
iii) Cost to the market participant of any penalties imposed, including both monetary and non-monetary costs.108

In assessing the efficiency and effectiveness of the regulator in its monitoring and enforcement role it is imperative to address these three issues.

3. It is also worth noting that the safety regulator may also be able to influence in the medium to long-term the other forms of utility of non-compliance. That is, by engaging in education programmes that attempt to change the “culture” of those in the system, the safety regulator may be able to ensure that operators take on a higher degree of moral responsibility for their behaviour relevant to safety risk. From an economic perspective, however, given participation and acceptance of the principles in education programs is voluntary, it may also be a relatively blunt regulatory approach, as the extent to which this is successful at alleviating safety risk depends on its impact on the highest risk individuals. This type of approach and its impact is often difficult to observe and measure due to its indirect and medium to long-term causal effects.

108 This covers the circumstance where participants are unaware or do not correctly understand the nature of the rules. If the regulator has a credible reputation for imposing penalties this should influence the behaviour or participants in taking the time to understand the rules. This ignores the question of which is the most efficient approach to ensuring understanding of the rules, that is whether it is more efficient for the regulator to undertake safety education programmes or leave it up to market participants to undertake the cost of education. We do not intend to address this issue directly in the review.
4.3 CAA application of the safety model

The CAA's Strategic Plan 2005-2009\textsuperscript{109} says “A key provision in the Act\textsuperscript{110} is the requirement that holders of ‘aviation documents’ are responsible for the safety of their operation. If required by the Civil Aviation Rules, they must establish and follow a safety management system that sets out how they intend to discharge that responsibility. The safety management system becomes the basis for entry into, and operation within, the aviation system. Document holders must also provide training and supervision for their employees and sufficient resources to ensure compliance with relevant safety standards. Individuals exercising privileges in terms of an aviation document must be ‘fit and proper’ to exercise those privileges. These provisions remain the cornerstone of the safety regulatory approached followed in New Zealand.”

The CAA’s 2004-2005 Business Plan noted inter alia:

“\textquote{The CAA acknowledges that there are various stakeholders who have an interest in a safe aviation environment:}

\textquote{Flying Public – who want safe aviation}

\textquote{Public at large – who want a safe living environment.}

\textquote{and}

\textquote{….the CAA will continue with the following perspectives:}

\textquote{Safety} is a key driver for the CAA given its responsibility for setting, maintaining and monitoring standards for all individuals and organisations in the aviation system.”

(emphasis provided in the Strategic Plan)

It then gives the following:

\textquote{Directions}

The Director will continue to establish the CAA as a sound organisation delivering optimal services to its stakeholders. In doing so the CAA will continue to accept that it has a central role in managing the aviation safety risk environment in New Zealand. This is complemented by the CAA and the aviation community continuing to work closely together to solve aviation safety issues.

Included in this process are to understand the current safety culture in the aviation community and to seek ways of progressively modifying any deficiencies.”

It provides the CAA’s Vision

\textquote{New Zealand aviation free from safety failure.”}

And its Mission

\textquote{109 Appendix 1 – CAA business philosophy}

\textquote{110 Civil Aviation Act 1990}
“To lead and foster an environment where New Zealand aviation operates safely.”

And it also provides Values, including

“Focus

The CAA focus is on the safety of civil aviation in the public interest and achieving safety results that meet the test of public scrutiny. The safety of people will be paramount in any consideration.” (emphasis provided)

and

“Practice

Client focus - Creating an environment where client requirements are dealt with in a courteous and thorough manner while recognising the CAA’s primary role of regulation on behalf of the public.” (emphasis added)

These changed in the current Strategic Plan for 2005-2009 to reflect amendments to the Civil Aviation Act. The “Vision” became:

“New Zealand aviation free from safety and security failure and contributing to an integrated, responsive and sustainable transport system.”

And the “Mission”:

“To take action that ensures people and property and not harmed or threatened by New Zealand civil aviation operations”

This Strategic Plan provides:

“Our strategic objectives;

CAA focus is on the safety and security of civil aviation in the public interest and achieving results that meet the test of public scrutiny. Public and international confidence in New Zealand air transport is imperative.

In particular, the CAA seeks to ensure that:

The number and impact of adverse aviation related events on people and property are minimised.”

and

“The safety and security of people will be paramount to any consideration and the Director of Civil Aviation will exercise his full powers as an independent regulator when necessary.” (emphasis added)

“The CAA will at all times maintain a regulatory independence from the operations and management decisions of the aviation and related communities.” (emphasis added)
4.4 A summary prior expectation

It is worth setting out what we would expect to see in the CAA prior to evaluation of the evidence of its current operation. We would expect to see:

- Consistent and transparent decision making on regulatory issues that include an appropriate balancing of the public interest with the regulatory costs of the decision;

- Up-to-date risk management systems including a full application of the CAA’s adopted safety systems approach;

- Appropriate incentives on the industry including appropriate penalties and rewards for enforcement;

- An appropriate funding model which incentivises the CAA to act in an efficient and appropriate manner;

- Alignment of resource with the organisation mission of the organisation;

- An effective organisation structure.
5  Approach to Terms of Reference

For the first of the Terms of Reference, we have examined the effectiveness and appropriateness of the ways the CAA undertakes its regulatory business. This uncovered the secondary findings that were presented to the Authority and executives in separate presentations and in working papers. Analysis of those findings has resulted in the primary findings provided in this report.

5.1 Review proceedings

The stages of the review were as follows:

1. An initial document review and scoping interviews to identify broad issues.
2. Presentation of those initial findings to the Executive Management Team and the Authority. The further stages of the review were presented at that time.
3. Exploration and validation of those findings by more detailed case studies and interviews.
4. The identification of clearer “issues clusters” and further interviews at a number of levels with the CAA and amongst its stakeholders to clarify the issues.
5. Presentation to the Authority and to the Executive Management Team. The presentation was by way of PowerPoint and a question and answer session.
6. There were further meetings and the draft findings were explored in “challenge” interviews prior to release of the first report draft.
7. A draft report was prepared to set out the information captured and to draw preliminary conclusions. There was an independent review of the interview notes as they were represented in the draft report in August 2005. The draft report was released to a limited number of persons for comment. The persons that this report was released to were agreed with the Director and with the Chairman of the Authority. There was general acceptance from a number of those persons, no comment from one person, and extensive comment from the General Manager General Aviation.
8. An independent legal review was sought and concluded that the work of the review team was “particularly thorough and comprehensive”\footnote{Civil Aviation Authority Internal Independent Review – Process Review, dated 22 December 2005, prepared by Paul Radich of Izard Weston.}. The legal review made a number of suggestions that were subsequently implemented around consultation in particular and which were in accord with the progression of the review. The legal review supported the separation of the different outputs from the review.
9. A further draft was prepared and was released to the Executive Management Team and to the Authority. There was considerable delay in the release of this report - which was not released until March 2006.

10. The consultation timeframe was extended to allow full comment from the executive and the Authority, and meetings were held with the Director and his legal counsels. The report was finalised in June 2006.

5.2 Methodology

Much of the information was from desk research and an extensive document review. The document review encompassed policies and procedures, accountability documents, internal risk reports, Board reports and management meetings. There was also a review of the legislative and regulatory framework. In addition, we used two standard organisation review primary research methods – structured interviews and case studies.

More than 50 interviews were undertaken and a number of written and other submissions were received.

5.2.1 Structured interviews

We collated data from structured interviews and overlaid a public management framework review of the core accountability documents, including legislation, statements of performance, and annual plans. Our comments are based on the expectations we would have of a regulator.

The interviews were initially used to scope the areas of concern. Further interviews more precisely identified the root causes. Interviews were undertaken with almost all of senior management as well as with operational personnel and middle management, particularly in the General Aviation Group. Interviews included those in the planning and policy functions as well as in operations. These interviews were collated, and issues identified and coded.

Wherever possible, interviews were conducted by the two review team members. Interviews followed a structured template although a number of interviewees addressed the review team on specific issues.

The identified issues and concerns were then compared with the review’s analysis of key accountability documents.

In summary, the stages for development were:

- Initial scoping interviews to broadly identify issues;
- Presentation of the initial findings;
- Validation of those findings by circulation and by further interviews;
- Further interviews at a number of levels of the CAA around the targeted preliminary issues;
- Comment on issues.
The interview findings were summarised and organised into themes. These themes were then tested with the other analytical work before presentation as preliminary findings. Those findings were tested in a number of settings and additional information gathered before being integrated into the report. Subsequently, the de-identified interviews were released although we note that these interviews lose power as names, position and other identifying information is suppressed.

5.2.2 Case studies for analysis of decision making

Case studies reveal the underlying regulatory decision-making process taken by the Director, either directly or vicariously, in the public good. It is not a means of revisiting the issues of substance within these decisions, and therefore not a vehicle for further comment on or by industry participants. For this reason, identities are withheld, however the unique nature of the Taupo airspace case makes de-identification impossible.

We purposely selected case studies that identified both decision-making at different points of the safety cycle, and about which there was some indication of internal conflict or stress. From the files reviewed we selected the following:

- Company X: an “entry” debate of technical-strategic views, and potential conflict of interest;
- Taupo airspace: a technical-strategic question of airspace management, and public versus industry advocacy;
- Mr A: CAA’s knowledge, regard for, and use of, regulatory tools during “exit”;
- Mr B: the CAA’s knowledge, regard for, and use of, regulatory tools during “monitoring and surveillance”;
- Mr C: the CAA’s knowledge, regard for, and use of, regulatory tools at “entry”.

These cases were identified by the review team from a number investigated. In general, they follow the same “life-cycle” approach as envisaged in the aviation safety system. The cases of Mr C and Company X are concerned with entry into the system whereas Mr A and Mr B concern possible exit from the system. The Taupo Airspace case examines decisions embracing change while operating within the system. Within these examples were possible issues of conflict of interest.

5.3 Further sources of information

These primary sources were matched by document review including but not limited to; 12 months of reporting to the Authority, review of Authority minutes, review of senior management meeting minutes, reviews of core accountability documents, review of risk manuals and internal risk audit reports, and so on.
6 Observations on accountability, governance and management

We identified the following issues in our review of the CAA.

6.1 Public management reporting

There are issues in the Statement of Intent that indicate a more substantial problem in the linking of activity with desired outcomes and outputs. The internal accounting and organisational activities are structured in close alignment to the defined output classes. The major issue is that neither internal nor external reporting focuses on the inputs (resource allocation) for the outputs (the actions taken by which progress to the Safety Targets can be measured) in terms of the key regulatory functions of entry or monitoring and enforcement. The Statement of Intent has been in significant transition through the period of the review and the Authority has asked management to take the first step of matching activities to outcome areas (i.e. to safety targets).

Additionally, the Civil Aviation Act 1990 appears to require quite specific reporting of outputs to be provided and for these outputs to be linked to the CAA’s objectives. Section 72F(1)(b) requires the CAA to include in its Statement of Intent,

(i) “both the various impacts the outputs described in the statement of intent will have for, and the consequences of those safety outputs for, a safe civil aviation system in New Zealand during the year to which the statement of intent relates; and

(ii) the impacts of those outputs on, and consequences of those outputs for, a safe civil aviation system in New Zealand for later years.”

This requirement imposes a discipline that may be useful for improving clarity of the CAA’s role. Outputs and objectives should be carefully defined for the purposes of the Act, and organisational progress measured in terms of the attainment of these objectives. The Statement of Intent has clearly stated safety goals. But the regulatory interventions and other organisational activity happens regardless of those safety goals. Thus, the core surveillance programmes that we observed in General Aviation rely on annual visits rather than following a risk-adjusted programme based on judgments of effectiveness in changing the risk profile of the sector.

Not all organisations are able to achieve alignment between the activities they undertake and the stated corporate goals – particularly in the public sector, where there are complex and multiple objectives. However, in most organisations, there are some self-correcting mechanisms, such as the strength of the management team, or a stronger command and control structure, or other strong accountability processes, which reflect in compensating planning or other organisation responses.

There was some reaction against this comment by management. We note that the CAA reports number of audits completed, number of investigations completed, number of accident investigations, number of enforcement actions, etc, but it does not relate these to regulatory function or to desired outcome.
6.2 Application of accepted practice in strategy, evaluation and policy development

Policy development does not appear to be sufficiently integrated, understood, or respected, and therefore initiatives such as Rules development are not easily weighed against the outcomes that are sought.

Spending proposals are similarly operational in approach. Those that we observed both in discussions and in the review of Authority papers suggested that there was good stakeholder review. However, there was little in the way of cost benefit analysis, impact analysis on safety targets, options for sharing of cost, and very little post-implementation review. In other words, a considerable amount of effort and resource might be expended in areas where there is a poorer return compared with others.

What is worrying in the CAA is the lack of common agreement across management of what would be regarded as key strategy statements and the lack of buy-in to developing a common strategic view. A number of managers challenged this statement.

However, every manager that we interviewed appeared to have a different view that in turn suggests that the strategy and policy processes are either fragmented or isolated.

Further, the interviews at lower levels of management in General Aviation clearly indicate that there is considerable focus on implementation of operational plans and less awareness than was expected of the CAA’s approach to regulation. Further, our review of statements by the CAA to industry provided good descriptions of the past, but said little about the future. We note, however, that while we did not examine the relationship with airlines closely, we understand that there is a highly proactive and strategic exchange in the airlines group in part due to the pressures of the introduction of new aircraft technologies.

6.3 Performance metrics

We believe that the introduction of the performance targets is possibly transformational if the CAA and the Authority continue to implement in the manner that they assert that they have started.

However, at the time of the review, there was no cohesive view of the metrics that the CAA should be working to. Nor is there accord on what they mean or what the appropriate reaction should be. New metrics have been signed off by the Authority and are included in the new Statement of Intent. At the time of the interviews, it was clear that there was not overall organisation buy-in to the targets. Nor was there a clear link between the targets and the actions of the managers and staff. In particular, there was clear lack of buy-in from the General Aviation group. Other managers were, however, highly supportive.

Our consultation material highlights one important aspect of the debate, as follows where a senior executive responded to a draft of the review report:
"The 1st paragraph in this section [sic. Section 3.3.4 Safety Targets and Outcomes] states that "Safety targets are fundamental to the aviation safety process." They are not. To my mind, such a statement made by the Review Team demonstrates a fundamental flaw in their understanding of the CAA regulatory role. Safety targets serve two purposes. The first is to provide a gauge on how effective the regulatory regime being applied by the CAA is, and the second is to highlight areas that may need targeted intervention by the CAA. Were safety targets ‘fundamental’, routine regulatory work would assume a secondary importance to that of meeting the specific outcome targets and gaps in regulatory coverage would soon appear.”

We agree that regular auditing may need to continue until the regulator is totally confident in an operator’s performance.

However, we reassert that the safety targets are fundamental, and will challenge the CAA to move from an outputs focus (e.g. number of audits), to a risk-based approach (e.g. how we target the bigger risks) and then to a value-based approach (e.g. where do we put our money and time for optimal public safety).

The General Aviation group, for example, operates to an outputs focus. The Airlines Group operates to a risk-based approach. The CAA needs to look to the spectrum of risks and apportion resources on its ability to change safety profiles (the policy perspective).

The consultation response from the executive then goes on to say

“Again, there is a basic misunderstanding of the CAA’s fundamental regulatory role – and that is to regulate, not chase arbitrarily set safety targets.”

We understand from the Director that some of the initial implementation issues have been dealt with. The Authority indicated to us that management were asked to map its activities against the targets in this year’s Statement of Intent. The Authority and the Director are on the right path and, like all Government organisations, will need to take time to get agreement and change the direction of existing activities.

The targets require a 20 percent per year reduction in accidents and incidents. There is little doubt in the General Aviation operational team that those targets will not be met without significant changes to the way that the CAA does its business. We accept that the organisation will evolve to have a greater acceptance of the safety targets but we have not had evidence presented to us that would indicate that the General Aviation group, which was the major focus of our interviews, would be able to achieve the proposed targets.

It is very clear in the interviews that the management signals that are felt at the operations level are very different from the intentions set out in the planning framework. A number of interviewees note a lack of clear direction in management and a disconnect between operations with the articulated goals, mission and vision, and strategies of the CAA. This was seen most clearly in the interviews when the question “what considerations do you take into account when you undertake an audit?” was asked. Indeed, inspectors

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113 Section 3.3.4, 1st paragraph

114 Note that this question was asked of operational staff.
responded that they were undertaking their work in exactly the same manner, with the same emphasis and tools, as they were several years ago.

It is also difficult to measure what costs would be allocated where. Any attempts to assess resource allocation by regulatory function (entry, monitoring, enforcement) is a complex exercise given that the accounts are prepared on the basis of the outputs defined in the performance agreement and internal operational lines. It is made even more difficult by the fact that general operating groups such as the aviation groups (Rotary and Fixed Wing) may be responsible for both certification and surveillance functions. In addition investigations relevant to the operational units and various enforcement regulatory tools are also costs incurred within the group. Only prosecution enforcement is separately accounted for and conversely this would need to be broken down for the three main operational groups.

6.4 Transparency of regulatory decision making

Transparency in the intended approach to balancing the interests of public safety and industry participants creates regulatory certainty. This helps improve the perception of fairness and consistency and may help industry participants to be more certain about how the CAA will intervene (for example, improving incentives for appropriate investment in safety measures).

The Authority in its comments to us states that, with regard to the balance between the interests of the public and interests of the industry, that “The Authority and Executive Management are in no doubt where the balance lies”. We agree that there are now clearer comments about balance. However, our interviews revealed, for instance, a clear difference between the Director and the General Manager General Aviation on the approach to implementation of that standard. There was a clear difference of understanding of practice around whether industry participants would be taken into the system and managed up or, alternatively, stopped at the point of certification. We believe that it is necessary to break the Authority’s and the Director’s views down systematically across the safety model to ensure full certainty of understanding throughout the CAA.

There is always a trade-off in regulatory decision-making between acting in the interests of the public and acting in the interests of the industry. The CAA receives some legislative guidance as to how it should balance these interests and is appropriately permissive as to level and implementation. As noted, s 72AA of the Civil Aviation Act states the CAA’s objective:

“to undertake its safety, security and other functions in a way that contributes to the aim of achieving an integrated, safe, responsive, and sustainable transport system.”

We consider, after review of the planning documents, that an annual statement of the balance of regulatory decision-making could be useful. Further, we expected to find defined decision criteria to assist with systematisation of regulatory decisions. We could not identify explicit decision criteria. The absence of these criteria means that decisions may be taken in isolation from other decisions, and that decision precedents are more difficult to identify.
6.5 Cost-benefit analysis for decision-making

We note also that formal approaches to policy development, such as the use of cost-benefit analysis, are infrequently used\(^\text{115}\). Cost-benefit analysis can be used to test whether a certain policy such as a regulatory intervention has net benefits. Cost-benefit analysis, as a formal tool, can force policymakers to consider the expected outcomes of policy decisions on various stakeholders, and to balance the interests of stakeholders explicitly.

Additionally, such tools can allow ex-post analysis of the extent to which the objectives of policy or rule changes have been achieved. Integrated into the decision-making process in this way, formal cost-benefit tools can provide a means for effective and ongoing self-evaluation.

Cost-benefit analysis may be used to consider possible rule changes. As well as providing an analytical framework to consider possible changes, it can provide a structured way for evaluating diverging views about their effects. Used in this way, it can provide a focal point for consultative processes.

There is little that we could identify in the way of evaluation. This is in clear contrast to the safety gains made in land transport, which rely heavily on strong evaluation and prioritisation of effort\(^\text{116}\). In fact, efforts in the CAA appear to be declining rather than increasing. Cost-benefit analysis at some level of sophistication needs to be one aspect in all decision papers. At times it will be either spurious or too costly to perform a full analysis but even a partial analysis is instructive.

6.6 Risk management principles and tools

There are a number of elements to risk management that are adopted almost universally. Those elements include the ability to learn from feedback, the ability to form an integrated view of risk, and then the ability to change behaviour to manage or eliminate risk. We would expect to see risk management at the heart of a regulatory agency whose primary role is to promote safety.

The CAA generally exhibited a clear view of where the sector risks are. But we found that the General Aviation group had significant risks but has the least ability to manage their risks. Audits of operators include calculating Quality Index rating, and additional regulatory attention is expected where operators fail to reach certain benchmarks. Apparently, the QI average is improving, as would be expected in the post-certification era. However, it was difficult for us to identify how operators who had been considered more risky were being consistently identified and managed. This was a similar finding to the Auditor General report.

\(^{115}\) We formulated this view after extensive document search of decision papers in the case studies and in a review of Authority papers. There was some evidence of cost-benefit analysis (e.g. on options for management of Taupo airspace) but it was not as pervasive as we would expect.

\(^{116}\) One consultee noted that it is unfair to compare land transport safety with air safety. The measures in land safety are more immediate. However, just because it is more difficult to measure, does not mean that prior cost-benefit analysis and post evaluations should not be undertaken. It just means that they are harder to do.
We stated in previous drafts that the Safety Analysis Unit appears isolated and there is a disconnect between policy and practice in relation to it. We received considerable consultation comment that the analysis group is not isolated. For instance, one executive noted that the unit provides risk assessment on a daily basis and is responsible for the Risk Assessment Project. Another indicated that the analysis unit does a lot of work – we agree, the unit does a lot of work.

However, we observed very weak linkages with other operating groups – for instance, regular risk assessment meetings were routinely cancelled, there were negative comments about the risk assessment reports, and a lack of two-way communication about the nature of that risk assessment – and a strong view that the risk perspectives of the safety analysis unit did not impact on regulatory intervention activity in the operations group. In fact, the manager of the Safety Analysis Unit is himself very open about its isolation.

It is an open question whether the disconnect is a result of the lack of responsiveness of the analysis unit, or of communication failure, or because there is not a strategic imperative to use the information. Whatever the reason, it is our view that the Safety Analysis Unit is clearly isolated from the operations of the CAA and that closer integration is needed. We accept that there is a Risk Assessment Project but the disconnect is a more fundamental one of needing to embed risk analysis in the operational planning and activity particularly of the General Aviation group.

6.7 Regulatory enforcement

From the evidence reviewed, it appears to us that CAA has sufficient tools to undertake the primary regulatory functions relating to entry, monitoring (surveillance) and regulatory enforcement (including exit), but we have identified, in the case studies in particular, that there could be variable outcomes.

Moreover the various regulatory tools available do not appear to be adequately coordinated, measured or reported by the CAA. We review each tool as follows:

- Certification: We have no substantive comments on certification from a review at this level, although we note that there is considerable comment later in the document. The Auditor General report gives relatively clear evidence that the certification process and its implementation were too light. The view of that report is that too many operators have entered the system without appearing to have fully internalised the safety process;

- Fit and Proper Person test: While Fit and Proper Person test investigations are specifically required by s9(1)(b)(iii) of the Act and enabled by section 10, in practice this is not routinely observed at entry. Quite often the CAA relies more heavily on s15A to conduct these investigations with a view to exit;

- Monitoring Tools: The surveillance policy is being redeveloped and therefore we will make brief comments only. The general approach to the audit is, on the surface, appropriate, although issues of consistency of application were raised. There is also a possibility that the exposition upon which certification is based is incorrect, and therefore the audit against the exposition is incorrect. CAA regard the risk of this as being small;
• Suspensions of aviation documents: Our investigation of the usage of investigation, suspensions and revocations of aviation documents is inconclusive because we were not able to get the information that we asked for – which was about the number of organisations that had been investigated, or their aviation documents suspended or revoked. Between 1996 and 2000 there were 11 such investigations. Since 2001 there have been, we understand, 20 investigations involving individuals, but we were shown no evidence of any investigations of organisations. This difference is important, the Personnel Licensing and Aviation Services group leads generally on the first, and General Aviation group on the second. Our finding is that there is less investigative activity in General Aviation than we would have expected, even given anticipated post-certification improvements in the industry;

• The offences regulations relate to offences under specific rules as referenced in those regulations. Any subsequent changes to rules leads to a potential loss of a cause of action for the CAA to prosecute offences, which are then incorrectly referenced to current rules. This has resulted in some offences having to be prosecuted under different sections. As such it is imperative that rules are up to date and that any offences under the regulations are correctly referenced to current rules.

The Auditor General’s report is very clear in its analysis and recommendations. The CAA’s executive team have generally accepted the report. The Authority notes in its comments to us, as do a number of senior managers, that there was full acceptance of that report. Indeed, the General Manager General Aviation, who had dismissed many of the Auditor General’s findings, notes that the report was extensively discussed in management meetings and at quarterly training days.

However, the interviews showed the opposite - a clear lack of acceptance. That buy-in may now have happened, as our view was articulated some months ago, but the remaining question is why the lessons from the Auditor General report did not trickle down faster.

6.8 Prosecution enforcement - level of fines

The lack of observed regulatory investigations, suspensions and revocations, and the absence of administrative fines in relation to infringement offences, indicates a heavy reliance on prosecution as the main enforcement tool.

While mapping the different interventions to the safety model, we noted that the level of fines appears low compared to the operating costs of the industry.

Low penalties are likely to reduce the payoff from intervention at the same time as reducing the effective threat of regulation to industry participants. As a result, the incentives for firms to respond may be reduced.

The level of maximum and hence actual penalties imposed for aviation offences generally appear to be too small and do not seem to sufficiently reflect the degree of gravity of offences in relation to safety risk. As such they may not be placing a sufficient deterrent to prevent future offences. For instance, the costs of operating a helicopter for one hour compares with some of the fines provided by the courts for endangerment. The cost of
applying the fines is greater than the incentive effect on safety, and we understand from the CAA legal team that the courts tend to apply minimum fines because of the implied signal that the offences are not that great.

Another issue for examination relates to the quantum of any penalties imposed on prosecuted offences and infringements. The Minister has established the maximum penalties for offences under the Act.

A comparison of the maximum penalties for offences and infringements demonstrates major issues:

- Firstly, the maximum financial penalty for an individual is limited to $10,000 for offences, including serious offences such as endangerment and dangerous activity (excluding penalties for commercial gain) and $30,000 for the highest summary offences under the rules. This raises the question of whether or not these fines are sufficient as an upward ceiling for the most serious offences (notwithstanding other penalties such as a prison sentence, disqualification or imposing of conditions on documents or penalties for commercial gain). All other offences (and infringements) must then be graded within the lower and upper bounds for financial penalties.

- Secondly, there appears to be some disparity, at least in relation to financial penalties, for the varying gravity of safety offences. One example is that endangerment attracts a maximum fine of $10,000, whereas a failure to maintain accurate records attracts a maximum fine of half of that amount ($5,000).

- Thirdly, maximum penalties for infringement offences are virtually nominal in many cases ($250 for individuals and $1000 for body corporate). As a result it is no surprise that infringement offences are rarely prosecuted. This would not even represent anything close to the direct costs associated with enforcing these safety breaches.

The actual level of fines imposed by the courts is low:

- Since 2000, there have been no known cases of additional fines imposed for commercial gain under section 47. There have been five known cases where there have been disqualifications imposed by the courts. These have been a 3 month disqualification for operating in a careless manner (s 53A) in 2003 and another on two charges in 2005, disqualifications for 9 months for causing unnecessary danger in 2001 and 2003 (s 43 and s 44), a disqualification for 12 months for causing unnecessary danger in 2002 (s 44).

- In terms of fines the highest fine imposed on an individual was $6,768.28 for unnecessary danger in 2001 (compared to the maximum of $10,000). Notably there was also a $5,000 fine imposed for operating an aircraft without a private pilot licence in 2004 (s 46(1)). Another example of a material fine was a $3,000 fine imposed in 2000 for failure to provide the Director with information that was 117

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117 There have also been a couple of conditions imposed relating to not being involved with an airline for a period of five years on at least two occasions in this timeframe
known to the defendant in application for a private pilot Licence s 49 (1) (b). More
generally speaking, the higher fines (over $1,000) have been for unnecessary
danger, and dangerous goods offences.

- The highest imprisonment related penalty imposed was for 200 hours community
service for which was a Crimes Act related offence passing off a fraudulent
document. In terms of the Civil Aviation Act, the highest penalty was 150 hours
community service, which was for the same unnecessary danger charge as the
highest fine noted above.

- The CAA has appealed dismissed charges on a few occasions and has also
appealed lenient penalties on a few occasions in the timeframe examined (once
with success in upgrading a penalty from $200 to over $3,000).

The major point to derive from these figures is that the courts have been reluctant to
impose penalties in the top half of the maximum range indicated. They have also been
reluctant to impose prison sentences for even the most serious categories of offences
under the Act, with sentences for community service also being selectively utilised on an
infrequent basis.

We concur with the CAA’s legal counsel’s comments that there needs to be a full review
of fines prior to forming a final view. Full consideration of the issue is outside the scope of
this report.

6.9 The rules engine

The rules engine is a key regulatory lever. There are substantial concerns about the pace
of rules development. For instance, rules development can take 18 months or more and,
other than simple amendments, typically take 2-4 years from initiation to coming into
effect as a final rule. An issue from the Airlines Group is whether the rules engine can
keep pace with the necessarily dynamic pace of development in the airlines sector (such as
with the introduction of new airliner technology). An interviewee states that there is a
lack of feedback from safety investigations into rules development that means that the
rules that are being developed may not be appropriately prioritised. On the other hand,
the internal audit function claims that they were. We investigated one project and it was
clear that the project was late, needed greater policy guidance, and was not clear on its
priority for action. We recommend that a specific review of the rules engine is undertaken
before final conclusions are made.

6.10 Core management information and database issues

A number of issues were raised around the core database. It is difficult to pinpoint who is
responsible for the development and maintenance of the database. There are data input
issues and unreliable data and as a result there is diminished confidence in the database
and also diminished confidence in any analysis.

CAA has now rectified the non-recording of hours on audits identified in its internal
audit reports initially and later in the Auditor General report.

The CAA without external input would identify this issue if the databases were used
more in prioritisation and resource planning.
6.11 Management of interest

There is wide agreement that there is a changing relationship with the industry. Since 2001 the relationship has been characterised as “keeping the industry happy” and “being customer focussed”. Some of the context for this is the very poor relationship that the regulator had with the industry prior to 2001, which is observable in other countries, and which is to be avoided.

The relationship with the industry is not, the Review believes, one of deliberate conflict of interest, but relates to the range of pressures on the CAA. The close networks of personal involvement demonstrates that the CAA veers too far to the interests of the industry, and drifts away from the public good. The inherent relationship with the industry and the possible conscious or unconscious signals could bias the decision-making process at the inspector level.

We note that the Authority has made clear statements about acting in the public interest that will help with keeping an appropriate balance.

We also note the CAA’s fundamental statements on public good, highlighted in our section 4.3 on page 38-41, which are expected to focus personnel and provide guidance in all decision-making and relationships.

Alleged conflicts of interest of senior managers

There were allegations raised with us of direct conflicts among senior CAA managers. We did not find evidence of conflicts of interest however there needs to be closer management of interest to avoid resources being guided to areas of less priority. At present, there is a conflicts register. We understand that there is declaration of interest at executive meetings. A more full statement, in writing, of possible or perceivable conflicts at the time of taking decisions could help. Such a statement could also help guide managers as to where they should seek further input to reduce the possibility of accusations of conflict.

The CAA personnel’s close networks with the industry are recognised, and it is difficult to see how they could ever have strong contacts. However, this need not necessarily lead to a lack of independence, so long as any actual or perceived conflicts of interest are both publicly declared and well-managed.

6.12 Management issues

We observe that senior roles in the CAA require a high level of technical skill. In organisations with a high technical skill need there is always a trade-off with management skill. The job descriptions for some of the key positions in the CAA, such as the Director, require one person to fulfil the position of a top-level public servant and also to be a technical leader in the aviation industry. It is possible, but not likely, that this can be achieved. This creates stress on the organisation from trying to combine too much into these senior roles.

Further, because it is difficult to have full mastery of operational technical skill, other skills such as those that might be seen in senior policy makers and in regulators are less prominent in the organisation. A number of managers copied us their CVs after we made this comment. We have considered those CVs and make two points. The first is that the
experience level and technical level, as well as level of other training is significant. The second is that much of this experience is gained within the aviation industry and not in regulatory or policy settings. This may necessarily be the case where the individuals are required to represent the CAA on significant technical issues, but it also means that the CAA does not have the depth of policy experience that could assist it in its next evolutionary steps or, alternatively, if it has that depth, that its experience may not be appropriately integrated into decision making.

There are a number of questions around the organisation structure. Most comment is about the configuration of the organisation and the number of management layers. Several groups are in temporary positions. The draft organisation structure that we suggested in Terms of Reference Two should lead to resolution of most of these issues.

6.13 Resourcing issues

The CAA appears to be running on the momentum built up several years ago. Several managers and staff reported that procedures were largely out of date. The internal audit manager reported that they are being updated.

(a) Reported overload

Resourcing issues were mentioned in a number of interviews. One manager noted that the resourcing issue was so substantial that it was getting in the way of proactive management. Also, staff felt that some core safety functions, such as safety investigations into non-fatal incidents, were not given sufficient effort - these occurrences were collected but not investigated. There is also some concern from the operational groups that any additional money has gone to support functions rather than to shore up the work of front-line personnel.

The workload pressure means that the core accountability documents are not a very useful indicator of output expectations as there may not be the resource to realistically achieve them.

(b) A need to prioritise

The front-line staff are clearly under strain and the organisation has grown in other areas as it absorbs additional roles. The counter to the resource argument is that the CAA does not prioritise and it might very well be able to work within the current resource constraints if it were able to target its efforts better.

One of the crucial issues is that the CAA does not have a strong ability to prioritise. Partly this is because a lack of a fully articulated way of prioritising (criteria, costs/ benefits, etc). There is also a crucial lack of agreement over how to target high-risk operators.

It is difficult to tell whether the organisation as a whole is over or under resourced because of the lack of clarity around prioritisation of activity. However, it would appear that the current level of front-line staffing could be improved to some benefit.
6.14 The funding model

A large number of issues were identified around the funding model. The issues that were identified are as follows:

- Levy funding provides a soft option: There is a general view the levy funding is a soft option and that it means that the CAA can decide on its outputs and allocations with very little accountability;

- Activities taken on without funding streams: The legislation has presented the CAA with extra activities for which there is no current funding streams;

- Charging is inevitably unpopular: Charging for audits has its pressures and the CAA operational teams struggle with the dual tensions of being helpful to the industry and, at the same time, recovering costs;

- Cross subsidisation is seen as a way out: Cross subsidisation of general aviation by the passenger levy is readily apparent;

- Exposure to airline business fluctuations: The only source of variation in the passenger levy is the number of domestic and international passengers. As has been noted in the 2005 Statement of Intent, passenger numbers are a function of cyclical factors and external demand and supply shocks including economic growth, oil price shocks, terrorism and health epidemics such as SARS.

It is beyond the scope of this report to complete a full funding review. We comment briefly that the passenger levy is currently a pragmatic way of raising money. It appears to be a relatively well embedded but has a number of consequences as follows:

- There is considerable dependence on third party passenger levies as a source of revenue to fund CAA regulatory activities. They collectively account for 76.7 percent of all non crown revenue;

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118 The Authority challenges whether the funding model is within the ambit of the review. We strongly believe that the funding model is a significant aspect of the institutional structure of the CAA. The incentives established by the funding model are the source of comment in a number of interviews. The issues of cross-subsidisation, and the lack of analysis of spending options, is often sourced back to the nature of the funding model.

119 The funding issue is a complex one – as an external interviewee notes “Cost recovery was bitterly opposed by the sector and is only partially successful as there is a substantial cross subsidy of the general aviation sector from the international passenger levy. In other words, charges applied to the general aviation sector are not cost reflective. However, the airlines are comfortable with the cross subsidy as it makes the skies safer for all operators and the airlines have the most to lose from a reduction in the safety of the NZ skies. A previous attempt to move toward cost recovery, resulted in a reduction in compliance and decrease in the safety of the skies. “

120 p 69

121 This point was noted in the Annual Report for 2004
• Fees and charges collected from certification, licensing and monitoring activities, collectively account for 19.9 percent of all revenue;
• The aeronautical information service levy accounts for only 2 percent of non-crown revenue;
• The participation levy, paid by the majority of general aviation participants, accounts for only about 1.4 percent of non-crown revenue.

The CAA both retains and is, prudently, still building a reserve to protect against downward fluctuation. However, efficiency issues that may arise as result of upturns in revenue income, such as upswings in demand for domestic and international airline services place a soft budget constraint on CAA.

6.14.1 General cross subsidisation trends

Activities undertaken by the CAA for the Crown were fully self-funding (including allocation of overheads) in the most recent financial year.

Levies, however, are providing subsidies to aviation industry participants in the form of fees and charges below the level of the direct cost of providing those services, even prior to the allocation of indirect costs.

This point is clearly demonstrated through certification functions of the Airlines Group. More than half of the total revenue for the provision of certification functions in the airlines group comes from levy.\(^{122}\) This is before allocating any overheads from within the airlines group, for example from the Management unit, which is for analytical purposes, levy funded in the accounts.

| Aircraft Certification Unit Sources of Revenue, for the year ending 30 June 2005 |
|---------------------------------|---|---|
| **Revenue Source** | **Revenue** | **Percentage of Revenue** |
| Levies | 1,095,878 | 55.4 |
| Fees (non audit) | 858,523 | 43.3 |
| Fees (audit) | 24,407 | 1.2 |
| TOTAL | 1,978,808 | 100 |

A similar analysis could be undertaken with similar conclusions, by way of example, for the Flight Operations and Maintenance Units in the Airlines Group, the Rotary and Fixed Wing Units under General Aviation Group (which undertake both certification and surveillance functions for relevant aircraft), or the Personnel Licensing unit in the Personnel Licensing and Aviation Services Group.

\(^{122}\) Whilst this unit did operate at a surplus of $303,271, even if this entire amount of revenue was deducted from levy funding as a levy surplus, this still demonstrates a significant level of subsidisation of certification services by passenger based levies.
Both the Aeronautical Services and Medical Units (in the Personnel Licensing and Aeronautical Services Group) are almost entirely reliant on levy funding. The following table reports the revenue sources for these units for the year ending June 30, 2005.

**Aeronautical Services and Medical Units, Sources of revenue for the year ending 30 June 2005**

<table>
<thead>
<tr>
<th>Revenue Source</th>
<th>Revenue</th>
<th>Percentage of Revenue</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Aeronautical Services Unit</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Levies</td>
<td>1,711,408</td>
<td>96.4</td>
</tr>
<tr>
<td>Fees (non audit)</td>
<td>16,977</td>
<td>1</td>
</tr>
<tr>
<td>Fees (audit)</td>
<td>46,313</td>
<td>2.6</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>1,744,698</td>
<td>100</td>
</tr>
<tr>
<td><strong>Medical Unit</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Levies</td>
<td>2,467,417</td>
<td>99.4</td>
</tr>
<tr>
<td>Fees (non audit)</td>
<td>13,815</td>
<td>0.6</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>2,481,232</td>
<td>100</td>
</tr>
</tbody>
</table>

Most, if not all, services lying in these units, are almost entirely cross subsidised by levy revenue. A specific example, for illustrative purposes, are maps offered as aeronautical services which are sold for $30-$40 and cost close to triple that amount. The levels of cross subsidisation, after accounting for any surplus or deficit, are $2,070,711 and $1,764,148 respectively.

In conclusion, the extent of this cross subsidisation is unusually large and there needs to be a good analysis both of the charging and incentive issues, and the effect that may have on different sectors of the aviation industry, and on sources of funds where public good funding is appropriate.
7 Terms of Reference One - comment and reflections

7.1 Comment on development of the final review document

Consultation has been long and difficult. A number of pertinent comments were made after consultation on the final draft version of the review. Some of these comments are worthy of formal recognition in the final report and are as follows:

- Considerable time has passed since the review was initiated and considerable time has passed since consultation was initiated on the draft reports. A number of claims have been made about the improvement in integration of the management team, evolution of the linkages between safety targets and operations, of the bedding down of a new Authority. We have therefore modified our findings substantially to focus on issues that we consider are systemic in nature and, also, where we have not been presented with evidence that convinces us that the issue is resolved. A number of persons consulted might disagree with our conclusions particularly around root causes. We have modified this version of the report to give some indication of where there is widespread agreement with the findings or, alternatively, less agreement.

- The Airlines Group has made particular comment that the focus of the review was, through the process of identification of issues, and focus on those issues, more relevant to comment about the General Aviation group. We agree in part but not in whole. The Airlines Group works with a part of the aviation industry which is particularly attuned to safety issues and that has a depth of operation that is not possible in general aviation. The group was also, clearly, using an active risk based approach. It is therefore fair comment that the issues that might lie within the airlines group are possibly less relevant. The Personnel Licensing and Aviation Services Group had a similar concern. For instance, that group felt that it had a very good conception of the public good and could evidence active use of its regulatory toolkit. However, systemic issues such as the nature of the change process to the rules engine, issues of cross-subsidisation and the nature of the funding model are relevant.

- There is considerable comment on standards of evidence with a number of the executive team dismissing the interview data as anecdotal. The first issue is whether consistent opinion expressed in interviews is good evidence. We take a very firm position that interview data is highly relevant particularly when reviewing management process. Qualitative research relies on the grouping of similar statements as evidence. Thus, for instance, where a number of persons

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123 The Authority in its comments on the final draft were particularly concerned about issues of timing. In its letter to LECG dated 5 May 2006 “.... We understand the bulk of your interviews were carried out between April and May 2005 and you have acknowledged to the Authority that Minutes of Authority meetings and other documents between May 2004 and May 2005 were reviewed. The current Authority has been in existence since late November 2004 when there was a change of Chairman and two new members. For the first month new members went through induction processes and the new Chairman recommended changes which were implemented at its meeting in February 2005.” [The letter goes on to comment on organisation changes.]
indicate an issue, then, prima facie, there is an issue. The second point is that the interviews were not the only source of evidence. In fact, findings came from a number of sources and not just interviews. There was considerable desk research. There was considerable file review around decision-making. Most of the time, there was reinforcing other evidence. Thirdly, and lastly, the findings were then shared and open to challenge, both in workshop format and in the provision of several draft reports. There were several interviews over 10 hours with one senior executive where the findings were shared and comment sought. Our views were modified in some instances substantially in the process of consultation and challenge. Only findings that are supported through this process have been included.

- There is some comment that effectiveness needs to be measured in terms of safety outcome and that the review would be measured in terms of safety outcomes. This, of course, is beyond the scope of the review for a number of reasons. First, the CAA itself is not able to fully explain its performance against safety targets. Secondly, the industry takes responsibility for its own safety and some of the safety improvements may be attributable to changing industry needs, such as certification for market purposes such as tourism. Finally, it is not at all clear what the counterfactual would have been, and therefore what the effectiveness of the CAA might have been if it had acted otherwise. Despite all of this, it is possible to evaluate the CAA against expected criteria for a regulator as a useful proxy.

### 7.2 Reflections

There are three major institutional issues that need to be taken into account when considering the reasons for the findings. First, there is the issue of the design of the legislation. There is a fundamental trade-off in the design of a regulatory authority as to whether the institution is given a broad objective, and therefore has to more tightly define its role, consequential goals, and core responsibilities, or whether it is tightly constrained in legislation. The CAA is given a broad objective in legislation and its approach to defining its role and activities therefore needs to be thorough.

Second is the design of the organisation and adoption of a management and governance model that best suits the institution's purpose in the context of the particular industry. We make some recommendations around organisation structure in a separate paper – in particular to assist with development of a partnership model with management and technical aspects, and identification of a greater need for focus on adventure aviation. However, we make no specific finding about the institution and of its governance model – all looks to be in order. The crown entity nature of the CAA, its independence of operation with the Authority in a governance role, and (internally) an industry-facing organisation structure, all make good sense.

However, the usual public sector discipline of delivery of contracted services under the performance agreement is substantially weaker because of the soft nature of the funding model. We can see this manifest itself as follows:

- There is little that pulls the activities together with the desired safety targets. Operational groups attract funding without having to make the link through to the organisation objectives.
Notably the funding model increases internal competition for resource allocation. From an economic perspective such internal lobbying is an inherently inefficient exercise. From a management and operational perspective this also leads to poor dynamics within the organisation and ultimately to interpersonal conflict.

Decision making processes

There is, however, within the CAA, a lack of focus on some of the integrating mechanisms that we would expect to see. There is a lack of integration of safety data in funding decisions. There is a lack of cost benefit analysis. There is a need for more explicit decision criteria in regulatory decisions. There is an observed need to break down the vision, strategy and view of the public good as an anchor for decision making and action further than has been done. There is some agreement but not general agreement in the Authority and the executive that these are areas that the CAA needs to improve in but they are all areas that, in our view, will define the continuing success of the CAA as a regulator.

The Director

The Director has acted with personal integrity. He has not always acted with sufficient rigor from a strategic public management or regulatory perspective. And, possibly, he may not have been able to as the organisation was not at that stage of evolution. The combination of the executive management team and the Authority has not at the moment adequately supported the position although we note that an Office of the Director has been established.

The Director was recruited from the airline industry to perform a particular task the previous Authority considered vital - building relationships with the aviation community. He has proved a capable ambassador, and, as a technical regulator, has acted with some success.

However, he is less experienced in the other capabilities that the CAA may now need to develop. We see these two areas of public management and stronger regulatory practice to be the two primary capabilities that the CAA needs to develop further.

The Authority

The Authority is a key to the CAA’s success. Boards require a strategic capability to describe direction and set milestones on the strategic pathway, the progress along which it must monitor. A non-prescriptive Act combined with the funding incentives place particular onus on this Authority.

Boards also need time to develop and this board is still developing. We note that the Authority at the time of initiation of the review was still relatively new.

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\[124\] For instance, if there is a funding proposal for a training intervention, there is, on the one hand, good consultation with stakeholders. There is not, however, provision of a cost-benefit analysis, formal integration of safety data and an a priori impact analysis, nor is there an exploration of the funding sources and, finally, there is very little in the way of a post evaluation review. In short, the operators that are less likely to need it might take up the training initiative.
The Authority made a very full statement of its skills which are considerable. When we reduce the core strengths of the Authority, we regard them as very competent in a number of areas, particular in operational and management skills in the aviation industry (three persons) and particularly strong in legal skills (two lawyers). There are also a number of other useful strengths. This mix of skills may be appropriate if there were a strong executive. However, from our review of Authority papers, we were less able to tell how specific spending proposals linked with the objectives of the organisation, and additional skills may be needed at the executive level or in the Authority to bootstrap this area that we identify needs greater attention. The number of persons on the Authority may need to be expanded if it were felt that additional skills were required.

We recommend that the Authority consider an appropriate governance review in conjunction with the Ministry of Transport. This may lead to a clear identification of skills needed and gaps, and a possible progression path. We do not believe that this can be achieved without also addressing the mix of skills in the executive. The two have to happen together. We would also like to see stronger links to other regulators particularly where evaluation skills have progressed further (such as in the land transport arena).

We have challenged the Authority and it has responded. Its behaviour has changed over time. The behaviour of the executive management team may also have changed over time. However, we note that a number of papers presented to the Authority provided opportunity for comment in the manner we indicate (e.g. on consideration of cost benefit, evaluation, funding sources). The Authority acknowledged that aspects of the debate around issues were improving but needed to improve further. It is a moot point as to whether this analysis or request for analysis happens first from the Authority or whether it is driven from the executive.

Governance and management skill set needs to evolve

There is considerable comment in the interviews about shortcomings in governance and management. We have investigated a number of issues and have commented under separate cover if we feel that the concerns enunciated were sustained at an individual level. Initial drafts were very clear about issues of the need for greater integration at the management level and we have received considerable comment about the specific nature of senior managers’ competency.

We received considerable comment and good evidence from both the Authority and from senior managers about their level of training and competency. For instance, one manager noted that there was 120 years of senior management experience in the executive management team. The CAA managers are, as a group, highly competent individuals. We also note that the comments in this report support the need for the continuing high level of competence of the CAA staff. The Authority provided an exposition of its qualifications and linkages/networks. We note the extensive qualifications and the extensive experience of the Authority.

We do, however, note that the integrative processes in the management team are not as successful as they could be. This is the fault of no one particular manager. And it also reflects our perspective that the CAA is well positioned to move to another stage of evolution, with that evolution characterised by stronger analysis and more integration between desired outcomes and organisation activities.
We make the following additional observations:

- There is considerable tension between the Authority and the Director. We are not party to the detail of the relationship but by way of example that there was a fundamental difference of opinion as to the purpose of this review. Our observation is that there are a number of tensions that has made the progression of the review particularly difficult. We would be surprised if we did not see those tensions elsewhere in the organisation.

- There are considerably different worldviews between the operating groups and in particular General Aviation, and a lack of alignment with the espoused vision of the CAA. We understand from the Director that since identifying this issue that there has been a substantial improvement in alignment. We accept that this may be so although we are not in a position to validate the comment. However, we note that it might be beneficial to consider the mix of skills in the management team and, also, to review its operation. The operational element needs to be there, but there also needs to be a stronger policy element.
8 Terms of Reference One - Conclusions

8.1 Regulatory and policy analysis

1. The primary way of improving the performance of the CAA is by evolution into an integrated, analytical regulator supported by stronger evaluation and analysis with clear understanding of its regulatory and intervention tool kit.

There are two branches to this.

The first lies with the CAA’s corporate management; particularly strategic management, resource alignment and structure.

The second lies with its regulatory management; particularly in its internal expression of public management and public good, use of regulatory tools, and government mechanisms.

The outcomes that we would expect to see are greater clarity over how decisions are made in the public good, clearer decision criteria, greater use of cost-benefit analysis, better consideration and evaluation of the effects of actions, and better consideration of funding sources.

There are clear consequences for the capacity and capability of the organisation to take this next stage in evolution. Both governance and management sit in the middle of this next stage of evolution. Both governance and management need to retain the existing excellent technical skill base and better use and integrate, or build, the future necessary skill base at a strategic regulatory and public policy level.

That the CAA appears to perform well is largely due to the high level of technical competence and personal beliefs of its staff. CAA personnel generally have very high technical skills, but over-emphasis of these skills when making an appointment to a management position seldom transcribes into excellence without commensurate training that encourages reflection about the new role.

8.2 Strategic management

2. There is a continuing need for development and implementation of an articulated strategic purpose and vision.

While the strategies may be ably described in planning material, at the operational level there is little that connects policy and strategy with the outcomes, and no ownership of these impacts on the environment.

The open role for the CAA and the soft funding mechanisms place increased pressure on both governance and management to describe its ethos and strategy, implement the strategy, and then evaluate it. For instance, although the Authority has stated that the CAA needs to act firmly in the public interest, and this is reflected in its planning documents, it seems difficult to implement these in the organisation’s decision-making. We expected to find decision criteria, formatted analyses and risk reporting that responded to the direction of the Authority.
Instead, the General Aviation staff interviewed were unaware of a strategic pathway and mechanisms of achievement of safety objectives. This might be acceptable if there was full alignment between the directions articulated in the strategic documents, but is less than satisfactory if the operational processes are highly technical. Implicit policy objectives may differ without managers realising the nature of the difference.

We acknowledge that the CAA operates in a very difficult environment – with the need for a high level of technical input and with multiple objectives. But there is also, increasingly in our view, a need to integrate and make more transparent the trade-offs in decision making and the analytical and policy backdrop. Technically the CAA appears to be highly proficient. Strategically, the management team were more fragmented than desirable.

The result is that the planning and policy processes are in place but there is a disconnect between the strategic thought of the CAA, as developed in its Strategic Plan, Safety Targets and Statement of Intent, and its actual operations. The Safety Targets drive its strategies, but at operational levels there is very little that connects safety failures and their underlying systemic causes with action.

The CAA over the period of the review has started to articulate a stronger and more cohesive strategic view.

8.3 Risk and resource alignment

3. The Safety Targets need to be “owned” at an operational level, and there needs to be a clear statement of the regulatory levers by which they will be achieved.

4. The CAA’s effort needs to be more closely aligned to risks.

5. Risk management needs to be connected from the CAA’s strategy and activity. This is not because of design, but because of lack of focus and implementation.

The Safety Targets have changed fundamentally but there was little that connects them, or the strategic plan, to the operating groups whose efforts remained unchanged at the time of the review. Frontline staff interviewed said, for example, that their practices had not changed in years. Subsequently, the Authority indicated that management have put a considerable amount of effort into linking projects with safety targets in the 2006/07 Statement of Intent. We have reviewed that Statement of Intent and the consultation responses from management. Our view is that there may have been progress but there needs to be considerable progress still.

The CAA does not have a strong ability to prioritise. Prioritising - the planning and targeting of operational effort and resource - was clearly based more on history and reactive need than formalised research and evaluation. There is a recorded view that a lack of management information impacts on the ability to prioritise, and that the core databases are too complex and too difficult to access.

However, there is also a lack of incentive that they be properly used. Partly this is because of the strategic vacuum and lack of a fully articulated way of prioritising (criteria, costs/benefits, and so on). There is also argument over how to target high-risk operators, the conclusion of which would assist prioritisation. These same managers complain of a
lack of resource which makes it very difficult to unbundle whether there is a resource issue, or an allocation issue.

The counter to the resource argument is that the CAA does not prioritise and it might very well be able to work within the current resource constraints if it were able to target its efforts better. However this must be undertaken from a strategic, rather than contingent, perspective. The responses indicate that, even if the CAA were overloaded, resource would not necessarily gravitate to the areas of greatest need.

**8.4 Organisational disconnects**

6. There is a need to improve the connections particularly between the safety analysis unit and the operational groups, and, possibly, also, with the policy group.

Organisation linkages need to be strong and constant. In the CAA’s case the strategies are impacted by the Safety Analysis Unit which has multiple flow connections with, say, the General Aviation Group, Airline Group, and policy unit, internally, and with the aviation community externally. There are multiple significant disconnects between this group and the rest of the CAA. It is an open question as to why.

**8.5 Organisational structure**

7. An organisational structure aligned with industry sectors is appropriate;

8. The structure is incomplete and does not reflect the full industry, nor areas of greatest risk or growth;

9. There is room to develop a technical stream that is separate from the management stream;

Our options for the structure of the CAA in Terms of Reference Two have been delivered under separate cover.

It is sufficient to note here that the CAA’s current structure is appropriate in that it is generally aligned to aviation sectors. However, the structure is incomplete. Some sectors, such as Part 115 Adventure Aviation, private and other non-revenue operations, and to a degree General Aviation Maintenance, which includes sectors of highest risk and growth, have little or no direct interface with the CAA and the existing industry structure could be extended to deal with the identified gaps.

Further, some of the identified disconnects could be resolved if the structure more closely defined internal relationships and accountabilities.

The structure needs to better support the multiple roles both of the Director and other senior managers. One of the CAA’s greatest strengths – its technical capability – is under pressure from the range of tasks being undertaken. Consideration could be given to developing a management/technical partnership.

For about 180 staff there are 34 managers some of whom have small or no staff responsibilities.
8.6 Decision making in the public interest

10. There is the possibility of inconsistent decision making in the public interest due to lack of systemised decision criteria, and lack of use of precedent.

11. The balance of industry needs and public good needs must be made more clear.

The requirements on the CAA in decision-making and attitude to regulation are prescribed clearly in the Act and in the CAA’s strategic documents. These are not driven through the organisation with the decision criteria, precedent building or analytical tools that we would expect to see, leading to less than optimal clarity around the purpose of the organisation and the standards to be upheld in making decisions.

Managers and other personnel find themselves guided by operating procedures that have not been updated, and by both individual interpretation and technical interpretation. In many instances, this may be enough. However, from our case studies, it is apparent that different individuals could end up taking quite different decisions.

In some instances, in interviews, and in our interpretation of case studies, there is a weak finding that the CAA is reluctant to follow through with regulatory intervention that we would expect. There is little evidence on the files or in the interviews that the full range of options were considered even if more aggressive regulatory action were then discounted. The CAA may not agree with this finding, as it, in the past, has had a belief that persuasion and influence are the major tools. We agree in part with the CAA – an effective regulator needs a good relationship with the industry that it regulates - but suggest that there could be more determined regulatory intervention in some of the cases reviewed.

The Auditor General has covered the weaknesses of the General Aviation certification and monitoring processes extensively.

8.7 The regulatory toolkit

12. The CAA’s regulatory toolkit is generally sufficient.

13. The level of administrative fines needs to be reviewed.

The CAA’s regulatory toolkit is sufficient. There is some evidence that at times the CAA has been reluctant to use regulatory interventions against organisations.

At the heart of this lies perceptions of the balance of the public and the industry good. The Authority has made a clear statement about public interest.

We suggest a review of the level of fines. The incentives provided by the level of fines for prosecutions seems inadequate considering the severity of some offences, and the cost structures of the aviation community.

125 There is conflicting evidence of this. The internal audit function notes that all policies and procedures will be fully updated by September 2006. We suspect that the discrepancy in evidence is due to a project underway during the period of this review to update procedures.
8.8 General Aviation Group

14. The General Aviation group can be given significantly better direction.

The General Aviation Group faces the industry sectors with the most significant risks but it appears from evidence in the interviews to be the least flexible in meeting those risks.

8.9 Perceived conflicts of interest

15. Direct or indirect conflicts of interest need to be made more explicit at the time of significant or material decisions.

We found no evidence of conflicts of interest. However, it is not sufficient for CAA personnel to declare their interests and exclude themselves at a superficial level while they continue their interest by some other means. We suggest that an explicit statement of potential conflicts is made at the time of the decision, that this disclosure is in the context of the decision, and is additional to the conflicts register.

8.10 Mechanisms - funding and rules

16. The funding model provides a soft option

17. There is cross subsidization and little analysis of the effects of that cross subsidisation

18. The Rules engine is neither appropriately used nor understood.

The passenger-levy dominated funding model, while pragmatic from a recovery perspective, provides less than optimal accountability incentives within the CAA. A situation where all CAA departments tap a source for which they are not responsible - the money comes in regardless of anything they actually do - leads to internal budgetary competition and, potentially, to inefficiency.

The rules engine is, in our view, a significant part of the machinery of the CAA. However, from a brief review, it appears to face a number of issues around responsiveness. The CAA is responsible for only part of the rules engine. Overall thrust and funds allocation is set by the Ministry of Transport, which also maintains policy input. The review team and some interviewees had substantial concerns at the pace of rules development that has led to a significant backlog of rules and amendments, and of the nature of the Rules programme. The lack of safety investigation feedback into the Rules is particularly noted. Whilst we understand that there has been a review of the rules engine, we recommend a review from a policy perspective to make rules development more flexible more timely, and underpinned with greater analysis.
9 Terms of Reference One - Recommendations

9.1 Regulatory and policy analysis

For a time the CAA has performed its job well with the introduction of the revised legislative and regulatory framework but now needs to become more focussed on regulatory and policy issues requiring a greater level of policy analysis than before. It needs to retain its technical skill base and integrate that skill base and the risk management systems that are currently being upgraded, with greater policy analysis.

Both the CAA and the Authority have made representations of their skill base which we acknowledge, but note that skill base needs may have changed. This may mean that additional skills are needed rather than displacing existing skills.

Recommendation 1:

Determine the requirements for CAA’s governance to ensure an appropriate mix of skills and governance experience is available to the Authority. Further, determine the requirements of the CAA senior executive team to ensure skills resources are aligned to the evolving needs of the CAA and where these skills are available, that management mechanisms allow them to come to bear on decisions at the appropriate time.

9.2 Strategic management

There is Australian precedent for the Minister to define to the Authority and to the CAA what he or she expects of the CAA. That letter would cover issues of good regulation, such as the need for consistency and transparency, and would allow for comment on the balance between industry interest and public interest. This could then be articulated more fully and could be more useful than a ministerial direction.

Recommendation 2:

The Authority and Director must more fully develop and espouse a strategic vision for the CAA – and ensure that there is a full understanding of that vision at operational level. A foundation stone for this is a Letter of Expectation from the Minister.

9.3 Structure and capability

We identified gaps in the structure and the possibility of realigning some roles.

Recommendation 3:

Implement the draft structure in Terms of Reference Two provided as a separate document to the CAA.

9.4 Funding

The soft funding model, while pragmatic, may provide incentives contrary to good regulation. Either accountability or funding, or both, could be changed with improved organisational incentives.
Recommendation 4:

The CAA conduct a funding review. This must evolve from economic first principles of efficiency and incentives, while taking into account safety as well as cost recovery.

9.5 Prioritisation framework

The decision criteria that the CAA operates from need to be more explicit and the tools expected of a regulator, such as cost benefit analysis, need to be used more.

Recommendation 5:

We recommend that the CAA develop relevant decision criteria and introduce a cost-benefit analysis approach. All policy decisions taken by the Authority or by the Director need to weighed systematically against these criteria.126

9.6 Regulatory decision-making

The CAA needs to develop greater cohesion in decision-making. The case studies the review developed provide a good base for this if developed as research and teaching instruments. They could be used to grow a common understanding of issues from the Authority to the frontline personnel.

Recommendation 6:

Develop an overarching statement of how the CAA intends to approach regulation and how it will implement that approach over the next three to five years. A Ministerial Statement would form a foundation for this.

Recommendation 7:

Develop a library of case studies that demonstrate the CAA ethos on difficult regulatory matters, particularly those that require interpretative decision making, and particularly those that illustrate the tensions of making decisions in the context of competing industry, private, and public interests. Routinely use these in staff and executive training.

9.7 Safety targets

The CAA plans do not align strategy and safety targets with activity. Such a plan may cause stress as it may mean providing a different mix of services. The CAA has moved from the targets being isolated to asking managers to align activities with targets. The need for a plan is particularly an issue in General Aviation.

Recommendation 8:

Develop a plan for meeting safety targets, particularly in General Aviation.

126 The CAA’s legal counsel believes that this recommendation would take a change in legislation. The legislation is not prescriptive and managerial decisions need to be taken in the context of a public policy framework. However, the CAA may need to consult with industry.
9.8 Regulatory tool-kit

The CAA has evolved from a time of certifying operators under new Rules and in a new regulatory regime. There is now more time for greater effort in targeted auditing aligned with risk. Where there are issues, it is our view that the regulatory tool-kit could be used more rigorously in the public good. This recommendation primarily relates to the General Aviation area.

Recommendation 9:

Apply the full regulatory tool-kit more rigorously.

9.9 Rules Process

The Rules process is an essential element in the safety loop. A dynamic rules engine would ensure developments in a timely and proactive fashion. The backlog and delays currently experienced may reflect on CAA’s programme management, the funding and prioritisation process involving the Ministry, or other factors in combination. The consultation responses indicate a need for better initial engagement and better connection to the safety targets. The last review of the rules engine was a highly competent piece of work but the continuing issues suggest room for further improvement. We recommend that the perspective of the review is strategic and operational as well as legal.

Recommendation 10:

Review current processes and establish a dynamic rules “engine”. As part of this, review with the Ministry of Transport the manner in which it interacts with the CAA.

9.10 Disconnects

There are a number of operational and strategic disconnects within the CAA and, in particular, there are disconnects with the core risk management activities.

Recommendation 11:

This is a general management issue and general management steps must be taken to improve the connections. We suggest the Authority undertake an independent review of organisation connections in a year.

9.11 Conflicts of interest

Recommendation 12:

Make explicit disclosures at the time of taking decisions.
10 Terms of Reference Three - Implementation

In our view, the implementation priorities are as follows:

10.1 Governance, organisation and management systems

- Complete a governance review;
- The Authority to complete a review of the executive management team;
- Begin the process of changing the organisation structure;
- Identify the appropriate network of connections and make measurement explicit. Formally review after a year;
- Introduce formal risk management reporting immediately;
- Develop a plan aligning actions with safety targets, particularly in General Aviation;
- Develop an external statement of approach to regulation.

10.2 Cost benefit analysis and regulatory decision making

- Introduce decision criteria and begin applying cost benefit analysis to decisions even if in a rudimentary form;
- Put in place a development plan for integration of the analytical base and the decision making processes;
- Develop the case studies undertaken by the review team as teaching and discussion tools. These case studies could be used as the basis for developing the decision criteria, and for facilitating discussions between the Authority, the Director and the senior management team.

10.3 External interfaces and institutional incentives

- Review the relationship with the Ministry of Transport with a view to improving monitoring and with a view to making the process of rules development more flexible;
- Review the funding model from economic first principles. We are aware that this would be controversial but we also believe that a soft funding model has not been helpful to the CAA, although it has been comfortable.

10.4 Implementation risks

There are some activities that we recommend stopping. For instance, the current funding review is being undertaken from an accounting perspective. It needs to be undertaken from an economic perspective, with full consideration of the implications of cross-subsidisation, the role of public good funding, and the consequences of generalised passenger funding.
There are some activities that we recommend the CAA continue with. In particular, the current move to risk-based auditing is a priority from our perspective (although we note that we are not familiar with the full detail of the programme of activity) and therefore should continue.

We recommend that the CAA establish as specific implementation committee and report on progress to the Authority.

**10.5 Further work**

There are issues around the nature of the regulatory toolkit and the detail of the information management systems that will, we believe, be raised as issues and addressed as the CAA proceeds to better organise its core functionality. We make no specific recommendations on these issues. Likewise, completing a strategic communications plan can only be undertaken if the CAA itself becomes more strategic. We believe that the core recommendations above would address 90 percent of the issues facing the CAA. However, we also suggest a review in one year’s time to ensure that the issues have been addressed, and that the other issues in the findings no longer have currency.
Appendices

Appendices are as follows:

Appendix 1 – The CAA regulatory process

Appendix 2 – Fees and levies
Appendix 1 - The CAA Regulatory Process

The CAA has a number of levers with which it can modify behaviours in the aviation sector. The principal behavioural levers are described in this section.

The safety model envisages a process of entry into the aviation “ballpark”, monitoring of safety performance, and exit when a participant has demonstrated safety standards are consistently unable to be met. The standards, encapsulated in the Act and Civil Aviation Rules, are key levers in that if current standards fail to provide a requisite level of safety, they can be adjusted. So too, can the levers of certification, monitoring and the other enforcement processes.

The aviation model is founded on voluntary compliance with safety standards. “Enforcement” encompasses all the mechanisms available to the regulator to bring about compliance, and not just the narrow-based lever of prosecution action.

The certification process

To perform certain functions, such as the carriage by air of passengers and goods for hire or reward, an aviation participant must enter the aviation system through a process called certification. The certification concept is generic but while certification is required for some maintenance organisations and those providing air traffic and meteorological services, for example, this section is focused on commercial air operations where the process culminates in an Aircraft Operating Certificate (AOC). The AOC outlines the specific type of operation that can be performed and is relative only to that operator and their operation. It is not transferable.

Certification is entirely a safety function. There is no economic regulatory element. The CAA does not determine route structures, for example, nor control the level of competition within the aviation industry.

CAA’s approach to certification is largely outlined in Rule Part 119. Separate teams from within each CAA Group undertake certification for their sector. The cost for obtaining an AOC varies depending on the complexity and the nature of the operation for which certification is sought - certification of a Part 121 operator using large aircraft for passenger operations requires a commensurately more robust package. For general aviation, costs range from $3,000-$10,000.127 This compares with a typical helicopter hire rate of about $1,500 an hour.

In general, the certification process has six phases covering formal application, document compliance, demonstration and inspection, initial certification, spot check and final certification.128

127 Ibid p. 2
The formal application phase involves the submission of a letter and standard form with several key attachments including an exposition, a compliance matrix, a management qualification resume, as well as various documents establishing the status of the organisation. This must be submitted 90 days prior to the expected commencement of revenue operations of the organisation.\footnote{129 ibid p.2}

The exposition is a series of manuals, or sections of manuals, which outline the organisation’s general policies, duties, operational control policy, procedures and responsibilities of personnel. Under the rules an exposition is to include instructions, procedures, and all information necessary for personnel to perform their duties and responsibilities in compliance with safety standards. The procedures should reflect the true nature of the operations. Specific consideration in the exposition should be given to how, when, where and by whom specific tasks required under the Rules will be carried out.\footnote{130 ibid p. 3} A simple exposition will contain an operations manual, maintenance manual with maintenance reliability programmes, weight and balance procedures, training programme, competency assessment programme, dispatch and flight following procedures, organisational management system details, and where applicable minimum equipment list, passenger briefing cards, security programme, and dangerous goods programme.\footnote{131 ibid pp. 5-6}

The compliance matrix is submitted and verified to ensure that the exposition sufficiently covers all the Rules and subparts applicable to the operation.\footnote{132 ibid}

The management qualification resumes must outline the qualifications, certificates, ratings and aviation experience for each Senior Person’s functions and must fulfil the requirements under Part 119. Each senior person should have knowledge of the organisation’s manuals, operations specification’s, the rules, and their responsibilities within the organisation.\footnote{133 ibid} The qualifications and experience requirements cascade as the size and complexity of operation, aircraft type, or fleet, increases.

While not essential, the CAA also recommends the attachment of a business plan and cash flow forecast for the first year of operation to establish the requisite financial backing for continued compliance with safety requirements under the rules.\footnote{134 ibid p. 4}

The document compliance phase assesses the exposition for any areas that are not adequately addressed. This review results in a written critique by the CAA inspector. Once the exposition is approved, a date is scheduled for the entry inspection.\footnote{135 ibid p. 6}
The demonstration and inspection phase (entry inspection) ensures the management systems detailed in the exposition are in place before the commencement of any revenue operations. This involves on-site evaluations by the CAA of support facilities, aircraft, training facilities, and maintenance equipment and maintenance facilities. At the completion of the entry inspection the CAA prepares a written report that outlines any deficiencies/findings. Corrective action may need to be taken before progressing to the certification phase.

The initial certification phase involves the CAA documenting an AOC with operations specifications that include authorisations, limitations and provisions specific to the organisation’s operations. The AOC and operations specifications are issued for an initial period of six months.

The operator may be subject to an unscheduled spot check following the initial certification and prior to the final certification check. Spot checks assist the operator in identifying any issues prior to the compliance inspection.

Usually five months following the issue of the initial AOC, and one month prior to its expiry, CAA inspectors will carry out a final compliance inspection. This ensures the certificate holder is able to demonstrate compliance with their documented systems and procedures, and also confirms the documented systems and procedures are appropriate for the nature and size of the operation. Upon satisfactory completion of this inspection (including any necessary amendments) the AOC will be reissued for a period not exceeding five years.

The life-cycle safety approach means organisations need to “re-enter” the civil aviation system after a period of five years. The renewal periods within the five-year life cycle period are at the discretion of the sector CAA Manager.

The monitoring and surveillance process

“Surveillance aims to identify and correct non compliant behaviours and unsafe practices before they cause an accident or incident.”

136 Ibid
137 Ibid p.8
138 Ibid
139 emphasis added to demonstrate the subjective nature of systems and procedures and that compliance is hence relative to these subjective standards not objective standards
140 Civil Aviation Authority, Part 135 Air Operations - Certification Process, 1 February 2005, p. 8
141 Ibid p. 8
142 Ibid p. 1
143 Civil Aviation Authority Surveillance Policy, 21 July 2004, p. 5
As with entry and exit, responsibility for surveillance is undertaken by the CAA’s airlines, general aviation and the personnel licensing and aviation services operational groups with each carrying responsibilities in regards to surveillance in their sector. In response to industry performance, the groups are expected to:

- Develop and adjust their surveillance programme;
- Select and apply the appropriate surveillance tools;
- Schedule surveillance activities, assigning staff and resources;
- Maintain records of surveillance activities;
- Enter findings in the CAA database;
- Follow up implementation and closure of corrective actions;
- Recommend regulatory action where necessary to ensure compliance with the rules;

The surveillance regulatory tools include routine audits, inspection, special purpose audit or inspection, spot check, unobserved surveillance, meetings and interviews with document holders and monitoring. The following tables summarises these surveillance regulatory tools, when they are commonly used, their objective and their source of funding. There is discretion in the use of these regulatory tools and audit methodologies used vary with the category of the organisation, its activities and history, and according to particular circumstances.

<table>
<thead>
<tr>
<th>Surveillance Tool</th>
<th>When used</th>
<th>Objective</th>
<th>Source of Funding</th>
</tr>
</thead>
<tbody>
<tr>
<td>Routine Audit</td>
<td>Annually, or as adjusted following evaluation of surveillance results, either for category of participant or individual participant. For larger organisations, an audit program may be customised by mutual agreement.</td>
<td>Establishes the level of compliance with current legislation and conformity with documented procedures. Identifies any non-compliances or non-conformances, and initiates corrective actions.</td>
<td>Fees &amp; Charges</td>
</tr>
<tr>
<td>Inspection</td>
<td>For programmed surveillance of participants where the systems based approach of a routine audit is not appropriate, eg. Organisations not required to hold an exposition.</td>
<td>Establishes the level of compliance with current legislation and adherence to conditions of aviation document where held.</td>
<td>Fees &amp; Charges for programmed inspections of participants.</td>
</tr>
</tbody>
</table>

144 Ibid p. 6
145 Ibid, p. 7
146 Ibid pp. 20-21
147 Ibid p. 19
<table>
<thead>
<tr>
<th>Surveillance Tool</th>
<th>When used</th>
<th>Objective</th>
<th>Source of Funding</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inspection of products eg. Aircraft and components and inspection of documents and records eg. Licences and logbooks.</td>
<td>In other cases as required.</td>
<td>To ascertain the cause of a poor safety performance or to identify a particular problem within an organisation.</td>
<td>Levy for inspections of products, documents and other sampling activity where this is not undertaken as part of programmed audit or inspection.</td>
</tr>
<tr>
<td>Special Purpose Audit or Inspection</td>
<td>When deemed necessary as a result of an occurrence, information received, or safety concern that justifies an audit prior to the next due routine audit. When a narrower audit focus is required.</td>
<td>To sample the end product on an unannounced basis, to establish or verify the ongoing level of compliance in specific areas.</td>
<td>Fees &amp; Charges</td>
</tr>
<tr>
<td>Spot Check</td>
<td>Planned as part of a programme of spot checks. Planned on an individual basis.</td>
<td>To ascertain the compliance behaviour of a document holder.</td>
<td>Levy</td>
</tr>
<tr>
<td>Unobserved Surveillance</td>
<td>When the Director has grounds to believe that a document holder will significantly alter their compliance behaviour pattern if warned of impending surveillance.</td>
<td>To ascertain the compliance behaviour of a document holder.</td>
<td>Levy</td>
</tr>
<tr>
<td>Meetings &amp; Interviews</td>
<td>When it is necessary to modify client behaviour and change attitudes to compliance. When feedback to a participant on compliance performance is required. When it is necessary to review performance with a particular activity eg. ETOPS.</td>
<td>To raise the level of compliance through the exchange of information, perhaps at a high level in order to initiate corrective action not achieved through other tools. To coach individuals and test knowledge/understanding of requirements.</td>
<td>Fees &amp; Charges</td>
</tr>
<tr>
<td>Monitoring</td>
<td>Desktop sampling of data, approvals, and output on a planned basis.</td>
<td>To monitor the output of individuals exercising delegated functions and powers.</td>
<td>Fees &amp; Charges</td>
</tr>
</tbody>
</table>

Operational personnel undertake the following activities in undertaking surveillance:

- Carry out audits and inspections on participants in the civil aviation system, identifying any safety findings and causal factors;
- Establish and agree the due date for corrective actions that need to be taken by holders of aviation documents and approvals in order to achieve compliance;
- Follow up corrective actions and their implementation by participants within the agreed time scale;
- Report observed breaches of the rules and where appropriate take action in accordance with delegated powers and functions to remove a safety hazard;
- Enter and maintain audit findings and other information from surveillance activities on the CAA database;
• Raise safety concerns arising from surveillance activities and initiate other action by CAA where action is necessary in the interests of safety and compliance with the rules.\textsuperscript{148}

The outcome of surveillance activities is information relating to the safety performance of the operator and the sector. Information is reported to the Director, who is the primary customer of the surveillance process. A report is also generated for the document holder. This information is formalised in the Aviation Safety Management System (ASMS) as either a surveillance finding or as an aviation related concern (ARC). Surveillance findings are: “The act of identifying and concluding from objective evidence, a failure by a person or organisation to comply with a specified standard or a condition attached to an aviation document.” \textsuperscript{149}

Findings are classified as either non compliance, which means “failure to comply with Civil Aviation legislation, a Civil Aviation Rule, or a condition attached to an aviation document”,\textsuperscript{150} or as non conformance, which means “failure to conform to the provisions of any document, forming in whole or in part, the agreed standards or conditions on which the issue and continuance of an aviation document depends.”\textsuperscript{151} In general, non-conformance means the inspectors found the document holder was not operating to their exposition. Findings are also classified by degree of severity - critical\textsuperscript{152}, major\textsuperscript{153} and minor\textsuperscript{154}.

An ARC is where there is a perceived concern that could affect safety but does not constitute a non-compliance or non-conformance.\textsuperscript{155}

The overall level of safety performance of document holders determines the overall level of surveillance activity both individually and collectively. Surveillance measures the extent of compliance with documented procedures and with the Rules (although arguably this is indirect as the documented procedures are assumed to be in compliance with the rules once certified).\textsuperscript{156}

\textsuperscript{148} quoted from ibid, p. 7
\textsuperscript{149} Ibid p 25, emphasis in original
\textsuperscript{150} Ibid
\textsuperscript{151} Ibid
\textsuperscript{152} “An occurrence or deficiency that caused, or on its own had the potential to cause, loss of life or limb”, ibid
\textsuperscript{153} “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”, ibid
\textsuperscript{154} “An isolated occurrence or deficiency not indicative of a significant system problem”, ibid
\textsuperscript{155} Ibid p 25
\textsuperscript{156} p. 9
Any standard less than full compliance is considered to need attention as the Rules represent minimum safety standards. Any periods allowed for voluntary rectification do not alter the existence of any finding as entered into the ARC.

**The enforcement process**

The enforcement philosophy is that prevention measures, including education and publicity, are the preferred method of achieving safety compliance. This reflects the general principle that voluntary compliance is a better method of achieving safety than by prosecuting offences after they have occurred.

The CAA has a range of regulatory tools for use in carrying out its safety functions. These tools become significant when the normal corrective surveillance processes of findings and follow-up are not sufficient and further measures are necessary to ensure compliance with the rules, and safe operation. These enforcement activities are to be implemented in firmly, fairly and consistently.

This behaviour modification toolbox contains statutory duties, functions, and powers under the Act. The regulatory tools in order of increasing severity are:

- Providing safety education and safety material, including the fostering of safety education programmes;
- Issuing finding notices from CAA surveillance activities. (Note: Rule Part 12 provides for voluntary compliance whereby participants may report occurrences without further action being taken by the CAA);
- Carrying out increased levels of surveillance such as spot checks, increased depth of audit, and/or increased frequency, including unobserved surveillance, and follow-up;
- Publishing findings in respect of an aviation document holder;
- Developing new standards (Functions of the Authority;
- Meeting with the aviation document holder to explain the seriousness of non-compliance and discuss the options available to the holder and CAA.

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157 ibid p. 9
158 ibid p.10
159 Ibid p.3
160 Civil Aviation Act s72B(i)
161 ibid s15 and s24
162 s72B(2)(c).
If these tools are insufficient to ensure the public good, there a range of regulatory enforcement tools which include:

- Prohibiting or imposing conditions on the operation of an aircraft or class of aircraft, or the use of any aeronautical product or any class of aeronautical products;\(^{163}\)
- Imposing conditions in respect of an aviation document;\(^{164}\)
- Suspending an aviation document;\(^{165}\)
- Revoking an aviation document;\(^{166}\)
- Detaining an aircraft or any class of aircraft, or seizing an aeronautical product or any class of aeronautical products;\(^{167}\)
- Fines for infringements or offences;\(^{168}\)
- Prosecution through the courts.\(^{169}\)

These statutory regulatory tools are powers conferred on the Director by the Act. The Director retains the sole discretion to the revocation of any document, but operational responsibility is, however, shared across the CAA. The Director is largely reliant on the operational groups for undertaking the surveillance processes and recommending that these actions are required.

Operational responsibility for prosecution of offences and infringements lies with Chief Legal Counsel and the Law Enforcement Unit (LEU). The Manager of Law Enforcement (MLE) is responsible for developing enforcement policies, guidelines and procedures, functional supervision of LEU activities, to serve as the control point for enforcement of Civil Aviation Legislation and for the ongoing management of the LEU.\(^{170}\)

Having noted the above enforcement philosophy, it is evident that the ultimate purpose of prosecution is to prevent the occurrence of future offences by establishing a sufficient deterrent in the form of precedents.\(^{171}\) The LEU must exercise considered discretion in

\(^{163}\) s21
\(^{164}\) s17
\(^{165}\) s17
\(^{166}\) s18
\(^{167}\) s 21
\(^{168}\) s.72I(4) and Civil Aviation Offence Regulations 1997
\(^{169}\) s72I(4) & Part V of the Act
\(^{170}\) Law Enforcement Unit Policy, 28 July 2000
\(^{171}\) Ibid pp. 2-3
determining which offences to progress to prosecution. In practice several factors must be weighed against each other and will vary in discrete cases. Prosecutions will be generally considered where:

- The offence gave rise to unnecessary danger to persons or property;
- Where a breach of the law was flagrant (even if it did not give rise to danger or damage);
- Where the offender has not heeded previous warnings or prosecutions;
- Where factors involving the public interest and safety, such as the use of aircraft on an air transport operation, are present;
- Where there is a need for special deterrent action in a particular regulatory area or segment of industry. 172

Even when prim facie evidence of guilt is available, the following reasons may be sufficient to warrant not prosecuting:

- Obsolete rules, not repealed, but out of tune with proposed Rules;
- Technical breaches of the letter of the law;
- Trivial contraventions;
- Controversial laws, where legislation is being debated or awaiting amendment;
- Prosecutions which in the past have been discouraged by the courts;
- Vexatious, oppressive and malicious prosecutions;
- Prosecutions which will attract ridicule or bring the law into contempt;
- Stale offences, or where unreasonable delay has occurred in bringing a prosecution;
- Where suitable alternatives to prosecutions are available - infringement notice, suspension or revocation of an aviation document;
- Where alternatives have already been initiated and continuing compliance has been achieved or satisfactory progress towards compliance is being made. 173

172 Directly quoted from ibid p.4
173 Directly quoted from ibid pp.4-5
### Maximum Penalties for Offences under the Act

<table>
<thead>
<tr>
<th>Section of the Act</th>
<th>Nature of Offence</th>
<th>Individual</th>
<th>Body Corporate</th>
<th>Individuals and Body Corporates</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Max prison sentence (months)</td>
<td>Max fine ($)</td>
<td>Max fine ($)</td>
<td>Disqualify or impose conditions</td>
</tr>
<tr>
<td>43</td>
<td>Endangerment</td>
<td>12</td>
<td>10,000</td>
<td>100,000</td>
</tr>
<tr>
<td>43 A</td>
<td>Operating aircraft in careless manner</td>
<td>0</td>
<td>7,000</td>
<td>35,000</td>
</tr>
<tr>
<td>44</td>
<td>Dangerous activity involving aircraft, aeronautical product or aviation relate service</td>
<td>12</td>
<td>10,000</td>
<td>100,000</td>
</tr>
<tr>
<td>44A</td>
<td>Failure to comply with inspection or monitoring request</td>
<td>0</td>
<td>10,000 (+ 2,000 per day if continuing offence)</td>
<td>100,000 (+ 20,000 per day if continuing offence)</td>
</tr>
<tr>
<td>46</td>
<td>Acting without necessary aviation document</td>
<td>12</td>
<td>10,000</td>
<td>100,000</td>
</tr>
<tr>
<td>46 A</td>
<td>Acting without required medical certificate</td>
<td>12</td>
<td>10,000</td>
<td>NA</td>
</tr>
<tr>
<td>46 B</td>
<td>Fraudulent, misleading or intentionally false statements to obtain medical certificate</td>
<td>12</td>
<td>10,000</td>
<td>NA</td>
</tr>
<tr>
<td>46 C</td>
<td>Failure to disclose information required by Director</td>
<td>12</td>
<td>5,000</td>
<td>NA</td>
</tr>
</tbody>
</table>

---

174 s 45
175 s 47
<table>
<thead>
<tr>
<th></th>
<th>Description</th>
<th>Amount</th>
<th>Penalty</th>
<th>N/A</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>46 D</td>
<td>Failure to provide information to Director relating to Australian AOCS with ANZA privileges</td>
<td>0</td>
<td>5,000</td>
<td>25,000</td>
<td>N</td>
</tr>
<tr>
<td>46 E</td>
<td>Failure to cease air operations in NZ</td>
<td>0</td>
<td>10,000</td>
<td>100,000</td>
<td>N</td>
</tr>
<tr>
<td><strong>General Offences</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>48</td>
<td>Applying for variation document while disqualified</td>
<td>6</td>
<td>2,000</td>
<td>20,000</td>
<td>N</td>
</tr>
<tr>
<td>49</td>
<td>Communicating false info. or failing to disclose info. relevant to granting or holding of aviation document</td>
<td>12</td>
<td>10,000</td>
<td>50,000</td>
<td>N</td>
</tr>
<tr>
<td>49 A</td>
<td>Carrying on scheduled international air service without licence or contrary to licence</td>
<td>0</td>
<td>10,000</td>
<td>50,000</td>
<td>N</td>
</tr>
<tr>
<td>49 B</td>
<td>Operating unauthorised non-scheduled international flight or carrying on non-scheduled international flight contrary to licence</td>
<td>0</td>
<td>6,000</td>
<td>30,000</td>
<td>N</td>
</tr>
<tr>
<td>50</td>
<td>Obstruction of persons duly authorised by Director</td>
<td>3</td>
<td>2,000</td>
<td>10,000</td>
<td>N</td>
</tr>
<tr>
<td>50 A</td>
<td>Failure or refusal to produce or surrender documents (s 24(3))</td>
<td>0</td>
<td>1,000</td>
<td>NA</td>
<td>N</td>
</tr>
<tr>
<td>51</td>
<td>Trespass</td>
<td>3</td>
<td>2,000</td>
<td>NA</td>
<td>N</td>
</tr>
<tr>
<td>52</td>
<td>Failure to maintain accurate records</td>
<td>0</td>
<td>5,000</td>
<td>30,000</td>
<td>N</td>
</tr>
<tr>
<td>52 A</td>
<td>Failure by pilot in command to notify emergency breach of Act or regulations or rules (s 13A(6))</td>
<td>0</td>
<td>5,000</td>
<td>NA</td>
<td>N</td>
</tr>
<tr>
<td>52 B</td>
<td>Failure by pilot in command to notify accident or incident (s 26(1)(2))</td>
<td>0</td>
<td>10,000</td>
<td>50,000 (+10,000 per day for continuing offence)</td>
<td>N</td>
</tr>
<tr>
<td>52 C</td>
<td>Failure to provide identifying information</td>
<td>0</td>
<td>10,000</td>
<td>50,000</td>
<td>N</td>
</tr>
<tr>
<td>53</td>
<td>Contravention of emergency rule, prohibition or condition</td>
<td>0</td>
<td>5,000</td>
<td>30,000</td>
<td>N</td>
</tr>
<tr>
<td>53 A</td>
<td>Flight over foreign country without authority or for improper purpose</td>
<td>12</td>
<td>10,000</td>
<td>100,000</td>
<td>N</td>
</tr>
</tbody>
</table>
The full range of individual offences under the regulations are fully outlined in Schedule 1 of the Civil Aviation (Offences) Regulations 1997. The following table summarises the range of maximum penalties for the various offences under each Part of the rules.

<table>
<thead>
<tr>
<th>Part</th>
<th>Context of Offences to Rule Parts</th>
<th>Individual Min</th>
<th>Individual Max</th>
<th>Body Corporate Min</th>
<th>Body Corporate Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>19</td>
<td>Transition rules</td>
<td>625</td>
<td>5,000</td>
<td>3,750</td>
<td>30,000</td>
</tr>
<tr>
<td>21</td>
<td>Certification of products and parts</td>
<td>1,250</td>
<td>5,000</td>
<td>7,500</td>
<td>30,000</td>
</tr>
<tr>
<td>39</td>
<td>Airworthiness directives</td>
<td>5,000</td>
<td>5,000</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>43</td>
<td>General maintenance rules</td>
<td>625</td>
<td>5,000</td>
<td>3,750</td>
<td>30,000</td>
</tr>
<tr>
<td>47</td>
<td>Aircraft registration and marking</td>
<td>1,250</td>
<td>5,000</td>
<td>7,500</td>
<td>30,000</td>
</tr>
<tr>
<td>61</td>
<td>Pilot licences and ratings</td>
<td>625</td>
<td>5,000</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>63</td>
<td>Flight engineer licences and ratings</td>
<td>625</td>
<td>5,000</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>91</td>
<td>General operating and flight rules</td>
<td>625</td>
<td>30,000</td>
<td>2,000</td>
<td>50,000</td>
</tr>
<tr>
<td>92</td>
<td>Carriage of dangerous goods</td>
<td>1,250</td>
<td>5,000</td>
<td>7,500</td>
<td>30,000</td>
</tr>
<tr>
<td>103</td>
<td>Microlight aircraft- certification and operating rules</td>
<td>625</td>
<td>5,000</td>
<td>3,750</td>
<td>30,000</td>
</tr>
<tr>
<td>119</td>
<td>Air transport operator - certification</td>
<td>1,250</td>
<td>5,000</td>
<td>7,500</td>
<td>30,000</td>
</tr>
<tr>
<td>121</td>
<td>Air transport operations - large aeroplanes</td>
<td>5,000</td>
<td>5,000</td>
<td>30,000</td>
<td>30,000</td>
</tr>
<tr>
<td>125</td>
<td>Air transport operations - small aeroplanes and helicopters</td>
<td>625</td>
<td>5,000</td>
<td>3,750</td>
<td>30,000</td>
</tr>
<tr>
<td>137</td>
<td>Agricultural aircraft operations</td>
<td>1,250</td>
<td>5,000</td>
<td>500</td>
<td>30,000</td>
</tr>
</tbody>
</table>
### Civil Aviation Authority

#### CAA independent review

<table>
<thead>
<tr>
<th>Part</th>
<th>Context of Offences to Rule Parts</th>
<th>Summary Offences</th>
<th>Infringements</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Individual</td>
<td>Body Corporate</td>
</tr>
<tr>
<td>139</td>
<td>Aerodromes – certification, operation and use</td>
<td>Min: 1,250</td>
<td>Max: 5,000</td>
</tr>
<tr>
<td>141</td>
<td>Aviation training organizations – certification</td>
<td>Min: 625</td>
<td>Max: 5,000</td>
</tr>
<tr>
<td>145</td>
<td>Aircraft maintenance organizations - certification</td>
<td>Min: 625</td>
<td>Max: 5,000</td>
</tr>
<tr>
<td>148</td>
<td>Aircraft manufacturing organisations - certification</td>
<td>Min: 625</td>
<td>Max: 5,000</td>
</tr>
<tr>
<td>157</td>
<td>Notice of construction, alteration, activation, and deactivation of aerodromes</td>
<td>Min: 2,500 **</td>
<td>Max: 2,500 **</td>
</tr>
<tr>
<td>171</td>
<td>Aeronautical telecommunications service organisations-certification</td>
<td>Min: 625</td>
<td>Max: 5,000</td>
</tr>
<tr>
<td>174</td>
<td>Aviation meteorological service organisations-certification</td>
<td>Min: 625</td>
<td>Max: 5,000</td>
</tr>
<tr>
<td>175</td>
<td>Aeronautical information services organizations - certification</td>
<td>Min: 625</td>
<td>Max: 5,000</td>
</tr>
<tr>
<td><strong>Overall</strong></td>
<td></td>
<td>Min: 625</td>
<td>Max: 30,000</td>
</tr>
</tbody>
</table>

* Only one offence in this category; ** only two offences in this category.

**Source:** Civil Aviation (Offences) Regulations 1997
Appendix 2 - Fees and levies

Aeronautical Information Service Levy

The Aeronautical Information Service (AIS) Levy is charged to generators of aeronautical information including Airways ($281,300 per annum), MetService ($3,300 per annum) and aerodromes (see the table below). These AIS levy amounts are exclusive of GST. In the year to 30 June 2005 this is expected to yield approximately $0.498 million in revenue.

<table>
<thead>
<tr>
<th>Aerodrome</th>
<th>AIS Levy ($/Annum)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Auckland</td>
<td>73,510</td>
</tr>
<tr>
<td>Chatham Islands</td>
<td>310</td>
</tr>
<tr>
<td>Christchurch</td>
<td>34,370</td>
</tr>
<tr>
<td>Dunedin</td>
<td>4,000</td>
</tr>
<tr>
<td>Hamilton</td>
<td>5,840</td>
</tr>
<tr>
<td>Invercargill</td>
<td>1,530</td>
</tr>
<tr>
<td>Manapouri</td>
<td>200</td>
</tr>
<tr>
<td>Mount Cook</td>
<td>210</td>
</tr>
<tr>
<td>Napier</td>
<td>3,970</td>
</tr>
<tr>
<td>Nelson</td>
<td>10,270</td>
</tr>
<tr>
<td>New Plymouth</td>
<td>3,160</td>
</tr>
<tr>
<td>Ohakea</td>
<td>8,960</td>
</tr>
<tr>
<td>Palmerston North</td>
<td>8,300</td>
</tr>
<tr>
<td>Queenstown</td>
<td>2,080</td>
</tr>
<tr>
<td>Rotorua</td>
<td>4,150</td>
</tr>
<tr>
<td>Taupo</td>
<td>1,430</td>
</tr>
<tr>
<td>Tauranga</td>
<td>2,770</td>
</tr>
<tr>
<td>Timaru</td>
<td>470</td>
</tr>
<tr>
<td>Wanganui</td>
<td>1,170</td>
</tr>
<tr>
<td>Wellington</td>
<td>41,610</td>
</tr>
<tr>
<td>Westport</td>
<td>260</td>
</tr>
<tr>
<td>Woodbourne</td>
<td>5,370</td>
</tr>
</tbody>
</table>
## Annual Participation Levies

<table>
<thead>
<tr>
<th>Category</th>
<th>Maximum Certificated Take Off Weight (Kg)</th>
<th>Annual levy per Aircraft ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heavy</td>
<td>&gt;100,000</td>
<td>10,000</td>
</tr>
<tr>
<td>Medium heavy</td>
<td>13,600 &lt; weight &lt; 100,000</td>
<td>2,400</td>
</tr>
<tr>
<td>Medium</td>
<td>5,7000 &lt; weight &lt; 13,600</td>
<td>1,000</td>
</tr>
<tr>
<td>Medium light</td>
<td>2,730 &lt; weight &lt; 5,700</td>
<td>400</td>
</tr>
<tr>
<td>Light (Air transport/ aerial work)</td>
<td>1,000 &lt; weight &lt; 2,730</td>
<td>150</td>
</tr>
<tr>
<td>Light (Private)</td>
<td>1,000 &lt; weight &lt; 2,730</td>
<td>85</td>
</tr>
<tr>
<td>Very light (Air transport/ aerial work)</td>
<td>&lt;1,000</td>
<td>150</td>
</tr>
<tr>
<td>Very light (Private)</td>
<td>&lt;1,000</td>
<td>60</td>
</tr>
</tbody>
</table>
Fees and Charges

The following table provides a range of fixed prices for CAA services.

A full list of fees and charges is summarised in the document “CAA Fees, Charges” which is found on the CAA website:

### Fees and Charges - Range by Service Category

<table>
<thead>
<tr>
<th>Service Category</th>
<th>Rule</th>
<th>Fixed Charge Min. - incl. GST ($)</th>
<th>Fixed Charge Max. - incl. GST ($)</th>
<th>$133 Hourly Rate - incl. GST</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personnel Licensing</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flight crew licensing</td>
<td>Part 61</td>
<td>50</td>
<td>60</td>
<td>NA</td>
</tr>
<tr>
<td>Flight testing</td>
<td>Part 61</td>
<td>487</td>
<td>1,972</td>
<td>Y</td>
</tr>
<tr>
<td>Private pilot licence</td>
<td>Part 61</td>
<td>19</td>
<td>38</td>
<td>NA</td>
</tr>
<tr>
<td>Commercial pilot licence</td>
<td>Part 61</td>
<td>44</td>
<td>88</td>
<td>NA</td>
</tr>
<tr>
<td>Airline transport pilot licence</td>
<td>Part 61</td>
<td>83</td>
<td>166</td>
<td>NA</td>
</tr>
<tr>
<td>Flight engineer</td>
<td>Part 61</td>
<td>44</td>
<td>88</td>
<td>NA</td>
</tr>
<tr>
<td>Instrument rating</td>
<td>Part 61</td>
<td>44</td>
<td>88</td>
<td>NA</td>
</tr>
<tr>
<td>Chemical rating</td>
<td>Part 61</td>
<td>44</td>
<td>88</td>
<td>NA</td>
</tr>
<tr>
<td>Basic turbine knowledge</td>
<td>Part 61</td>
<td>44</td>
<td>88</td>
<td>NA</td>
</tr>
<tr>
<td>Air traffic service personnel licences and ratings</td>
<td>Part 65</td>
<td>50</td>
<td>60</td>
<td>NA</td>
</tr>
<tr>
<td>Aircraft maintenance personnel licences and ratings</td>
<td>Part 66</td>
<td>121</td>
<td>161</td>
<td>NA</td>
</tr>
<tr>
<td>AME licence ratings</td>
<td>Part 66</td>
<td>35</td>
<td>163</td>
<td>NA</td>
</tr>
<tr>
<td>Medical assessments</td>
<td>Part 67</td>
<td>81</td>
<td>162</td>
<td>Y</td>
</tr>
<tr>
<td>Aviation medical assessor designated medical examiner certification</td>
<td>Part 67</td>
<td>55</td>
<td>169</td>
<td>NA</td>
</tr>
<tr>
<td>Trans-Tasman mutual Recognition agreement</td>
<td>Part 61</td>
<td>25</td>
<td>25</td>
<td>NA</td>
</tr>
<tr>
<td>Aircraft related fees and charges</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aircraft registration</td>
<td>Part 47</td>
<td>30</td>
<td>171</td>
<td></td>
</tr>
<tr>
<td>Type certificate</td>
<td>Part 21</td>
<td></td>
<td></td>
<td>Y</td>
</tr>
<tr>
<td>Certificate Type</td>
<td>Part Number</td>
<td>Code</td>
<td>Y/N</td>
<td></td>
</tr>
<tr>
<td>------------------------------------------------------</td>
<td>-------------</td>
<td>------</td>
<td>-----</td>
<td></td>
</tr>
<tr>
<td>Type acceptance certificate</td>
<td>Part 21</td>
<td>266</td>
<td>Y</td>
<td></td>
</tr>
<tr>
<td>Design certification of aircraft parts or equipment</td>
<td>Part 21</td>
<td></td>
<td>Y</td>
<td></td>
</tr>
<tr>
<td>Airworthiness certificate</td>
<td>Part 21</td>
<td>266</td>
<td>Y</td>
<td></td>
</tr>
<tr>
<td>Export airworthiness certificate</td>
<td>Part 21</td>
<td></td>
<td>Y</td>
<td></td>
</tr>
<tr>
<td>Airworthiness certificate</td>
<td>Part 21</td>
<td></td>
<td>Y</td>
<td></td>
</tr>
<tr>
<td>Approval of minimum equipment list</td>
<td>Part 21</td>
<td></td>
<td>Y</td>
<td></td>
</tr>
<tr>
<td>Approval of aircraft modifications</td>
<td>Part 21</td>
<td></td>
<td>Y</td>
<td></td>
</tr>
<tr>
<td>Approval of flight manuals or amendments</td>
<td>Part 21</td>
<td></td>
<td>Y</td>
<td></td>
</tr>
<tr>
<td>Approval of aircraft radio station</td>
<td>Part 21</td>
<td></td>
<td>Y</td>
<td></td>
</tr>
<tr>
<td>Special flight permit</td>
<td>Part 21</td>
<td></td>
<td>Y</td>
<td></td>
</tr>
<tr>
<td><strong>Certificated Organisations</strong></td>
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