

Chapter 2

Background

Aviation safety

2.1 Aviation transport, albeit the safest form of transport in Australia, requires ongoing vigilance to remain safe. To protect and maintain public safety, every facet of Australia's aviation safety system must operate and cooperate in an environment which enables and encourages constant learning and improvement.

2.2 Mistakes in the aviation safety system, however rare, have the potential to produce catastrophic consequences. The ditching of Pel-Air's aircraft, VH-NGA, into the ocean off Norfolk Island following several aborted landing attempts placed six lives in jeopardy. That none were lost on impact is attributable to the skill exhibited by the pilot in command in those critical moments—but clearly something went wrong in the lead up to that moment.

2.3 In the interest of public safety it is imperative for the aviation industry to understand what went wrong and why. However, the findings of the investigation that followed the accident, culminating in a report on its causes issued almost three years later, were and remain highly contentious. It was this report, and the controversy surrounding it, that provided the impetus and focal point for the committee's inquiry.

2.4 In looking at this report and the way in which it was produced, the committee gained an insight into Australia's aviation safety system, within which different agencies play individual roles whilst working together towards a common goal. This chapter sets out the roles of key agencies and legislation which governs the conduct of aviation accident investigations, and in doing so provides context for subsequent chapters.

Role of the ATSB

2.5 As an independent Commonwealth statutory agency, the role of the Australian Transport Safety Bureau (ATSB) is to improve safety and public confidence in the aviation, marine and rail modes of transport. It does this, the ATSB advised the committee, through:

- a) investigation of transport accidents and other safety occurrences
- b) safety data recording, analysis and research
- c) fostering safety awareness, knowledge and action.¹

2.6 The ATSB's functions are best understood by referring to the legislation under which it was established, the *Transport Safety Investigation Act 2003* (TSI Act). The TSI Act clearly sets out the agency's functions:

1 Australian Transport Safety Bureau (ATSB), *Submission 2*, p. 4.

(1) The ATSB's function is to improve transport safety by means that include the following:

- (a) receiving and assessing reports of transport safety matters, reportable matters, and other safety information that is prescribed by the regulations;
- (b) independently investigating transport safety matters;
- (c) identifying factors that:
 - (i) contribute, or have contributed, to transport safety matters;
 - or
 - (ii) affect, or might affect, transport safety;
- (d) communicating those factors to relevant sectors of the transport industry and the public in any way, including in any one or more of the following ways:
 - (i) by making safety action statements;
 - (ii) by making safety recommendations;
 - (iii) by issuing safety advisory notices;
- (e) reporting publicly on those investigations;
- (f) conducting public educational programs about matters relating to transport safety;
- (g) any other means prescribed by the regulations.²

2.7 To this end, the ATSB investigates accidents and other transport safety issues involving civil aviation, marine and rail operations that fall within Commonwealth jurisdiction. The ATSB also participates in overseas investigations involving Australian registered aircraft and ships.³

2.8 The extent to which ATSB investigations enhance aviation safety is limited by the extent to which any safety recommendations made are actioned. The ATSB has no enforcement powers.

2.9 ATSB accident and incident investigations are conducted independently of transport regulators such as the Civil Aviation Safety Authority (CASA), the Australian Maritime Safety Authority, Airservices Australia, rail authorities and other parties. The independence of the ATSB is paramount to fulfilling its functions and is discussed in the context of this inquiry in the next chapter.

2.10 The TSI Act underpins the ATSB's independence but emphasises the importance of cooperation between Australian Government and state bodies. Furthermore, the Act provides the ATSB with a mandate to conduct 'no blame'

2 *Transport Safety Investigation Act 2003*, subsection 12AA(1).

3 ATSB, *Submission 2*, p. 4.

investigations, also discussed in the next chapter in the context of this inquiry. Briefly, under the Act, it is not the ATSB's function to:

- a) apportion blame or provide a means for determining liability for transport safety matters;
- b) assist in court proceedings between parties, except as provided by the Act; or
- c) allow any adverse inference to be drawn from the fact that a person was involved in a transport safety matter.⁴

2.11 As well as setting out the ATSB's functions, the TSI Act also provides the legal basis and requirement for these functions to be performed in accordance with relevant international agreements.⁵

Obligations under international agreements

2.12 The principal relevant international agreement, the *Convention on International Civil Aviation* (the Chicago Convention), binds 191 member states, including Australia, to the requirements of the International Civil Aviation Organization (ICAO).

2.13 Established in 1944 with the advent of the Chicago Convention, ICAO is a specialised agency of the United Nations (UN) and the global forum for civil aviation:

It sets standards and regulations necessary for aviation safety, security, efficiency and regularity, as well as for aviation environmental protection.⁶

2.14 Article 26 of the Chicago Convention obligates Australia to investigate all accidents involving international carriers, while ICAO standards and recommended practices (SARPS) in Annex 13 extend this responsibility to accidents involving Australian aircraft.⁷

2.15 Australia's duty to conduct aviation accident investigations in accordance with international agreements is clearly set out in section 12AD of the TSI Act, which states:

- (1) The ATSB must ensure that the ATSB's powers under this Act are exercised in a manner that is consistent with Australia's obligations under international agreements (as in force from time to time) that are identified by the regulations for the purpose of this section.
- (2) The Chief Commissioner must ensure that the Chief Commissioner's powers under this Act are exercised in a manner that is consistent with Australia's obligations under international agreements (as in force from time to time) that are identified by the regulations for the purpose of this section.

4 See www.atsb.gov.au/media/1371655/mou_atsb-casa.pdf (accessed 3 April 2013).

5 *Transport Safety Investigation Act 2003*, section 12AD.

6 See www.icao.int/Pages/icao-in-brief.aspx (accessed 19 March 2013).

7 ATSB, *Submission 2*, p. 4.

- (3) In exercising powers under this Act, the ATSB and the Chief Commissioner must also have regard to any rules, recommendations, guidelines, codes or other instruments (as in force from time to time) that are promulgated by an international organisation and that are identified by the regulations for the purposes of this section.

2.16 In light of this, the ATSB's accident investigations and reports must be assessed against its obligations under the Chicago Convention. The committee received considerable evidence suggesting that the ATSB did not comply with ICAO guidelines and standards in completing its investigation and report on the Norfolk Island ditching. Examples are analysed in later chapters of this report. The committee recognises that the ATSB has filed some differences with ICAO but this recognition does not equate to agreement in all cases.

Role of the Chief Commissioner

2.17 In terms of organisational governance, the ATSB Commission comprises of the Chief Commissioner, currently Mr Martin Dolan, and two Commissioners. The Commission oversees three branches, including Strategic Capability, Safety Investigations and Enabling Services. The Aviation section of the Safety Investigations branch is headed by a General Manager, currently Mr Ian Sangston.

2.18 The Chief Commissioner is appointed by the minister and must have 'a high level of expertise in one or more areas relevant to the ATSB's functions.'⁸

Report approval processes

2.19 Under section 25 of the TSI Act, ATSB investigation reports are approved by the Commission for release to the public. The responsibility for approval cannot be delegated to other officers. Once reports are approved for release, they are dispatched to directly involved parties (DIPs) by way of 'advanced release', before being made public.⁹

2.20 In the case of the VH-NGA report, once approved by the Commission the ATSB dispatched the advanced release report to DIPs and 'other parties' on 21 August 2012. It was then released to the public on 30 August 2012. The ATSB's submission itself did not shed much light on the extent of the comments and reactions of DIPs, but did say:

In the intervening period [between the advance release and publication], comments were received from another of the parties in respect of how the report might be misinterpreted or misunderstood by readers. As with all other comments, they were also fully considered and changes were made to the final report.¹⁰

8 Subsections 13(1) and (3), TSI Act.

9 ATSB, *Submission 2*, p. 43. The advanced release of reports to DIPs is separate from an earlier stage of the report drafting process, where DIPs are given the opportunity to comment on any perceived factual inaccuracies, as outlined in Chapter 4 of this report.

10 ATSB, *Submission 2*, p. 43.

2.21 Evidence received by the committee over the course of this inquiry suggested that several DIPs were strongly dissatisfied with the content of the report when it was released, and that lines of inquiry had been scoped out during the process.¹¹ Consequently, the committee went to some lengths to understand the development of the report.

2.22 The ATSB advised the committee that responsibility for the development of an investigation report rests with the relevant investigator-in-charge (IIC). The IIC works with investigation team members to complete a draft report ready for peer review. The ATSB's submission did not go into detail about the process as it related to the accident and report in question, but did have this to say regarding peer review:

In the case of the Norfolk Island investigation, the peer review was carried out by an investigator from the ATSB's Brisbane regional office. This was later supplemented by an operations investigator and the Team Manager from that office. After the IIC and peer review(er) have worked through any points of contention, addressed any need for additional evidence or work to analyse evidence already held, or considered the amendment of the draft report, the draft report progresses to management review.¹²

Concerns regarding the ATSB report drafting process

2.23 The committee was concerned by this process as it related to the VH-NGA ditching off Norfolk Island. Evidence received by the committee would appear to suggest that senior ATSB staff may have intervened to alter the final report in order to secure a desirable outcome for both the ATSB and CASA. An excerpt from an internal email outlining an early discussion reads:

We [ATSB Officer and ATSB Chief Commissioner] were discussing the potential to reflect the intent of our new MoU that describes the 2 agencies as 'independent but complementary'. We discussed the hole that CASA might have got itself into by its interventions since the ditching, and how you [Mr Martin Dolan, ATSB Chief Commissioner] might have identified an optimum path that will maximise the safety outcome without either agency planting egg on the other agency's face.¹³

2.24 The committee is concerned that the ATSB's independence and the quality of its investigation report may have been compromised during this process. These concerns are discussed in later chapters of this report.

Role of CASA

2.25 CASA is Australia's aviation safety regulator, established on 6 July 1995 as an independent statutory authority. Its key role is to conduct the safety regulation of civil

11 See Mr Gary Currall, *Submission 9*; Mr Mick Quinn, *Submission 11*, p. 18; Mr Bryan Aherne, *Submission 10*.

12 ATSB, *Submission 2*, p. 42.

13 Internal ATSB email regarding the ATSB and CASA's approach to the Pel-Air investigation (dated 9 February 2010), *Additional Information 12*, received 10 October 2012.

air operations in Australia and the operation of Australian aircraft outside Australian territory by:

- Developing and promulgating appropriate, clear and concise aviation safety standards;
- Developing effective enforcement strategies to secure compliance with aviation safety standards;
- Issuing certificates and licences;
- Conducting comprehensive aviation industry surveillance, including assessment of safety-related decisions taken by industry management at all levels; and
- Conducting regular reviews of the system of civil aviation safety in order to monitor the safety performance of the aviation industry, to identify safety-related trends and risk factors and to promote the development and improvement of the system.¹⁴

2.26 CASA is headed by the Director of Aviation Safety, currently Mr John McCormick. The Director is appointed by, and responsible to, the minister. Although CASA is an independent body, the minister has the power to issue written directions of a general nature.¹⁵

2.27 CASA is responsible for ensuring that Australian airspace is administered and used safely.¹⁶ To achieve this, CASA works as part of an integrated system within a tripartite structure along with Airservices Australia and the Department of Infrastructure, Transport, Regional Development and Local Government.¹⁷

2.28 In performing its functions, CASA must act in a manner consistent with Australia's obligations under the Chicago Convention. Except where CASA has given ICAO notice under Article 38 of the Chicago Convention, it must comply with international obligations Australia has accepted.¹⁸

Investigative activities

2.29 Like the ATSB, CASA conducts investigative activities. Although their respective investigations into a given incident or accident may at times unfold concurrently, the purpose and practical outcomes of these activities can be quite different. As explained by Mr John McCormick:

14 Civil Aviation Safety Authority (CASA), *Submission 1*, pp 1–2.

15 Civil Aviation Act, subsections 12(1), (1A) and (2).

16 CASA, *Annual Report 2010-2011*, p. 4.

17 CASA, see www.casa.gov.au/scripts/nc.dll?WCMS:STANDARD::pc=PC_91621 (accessed 22 March 2013). The committee notes that the Department of Infrastructure, Transport, Regional Development and Local Government preceded the Department of Infrastructure and Transport, and the Department of Regional Development, Local Government, Arts and Sport.

18 ATSB/CASA Review, Report to the Minister for Infrastructure, Transport, Regional Development and Local Government (the Miller Review), Appendix 1, p. 18.

CASA and the ATSB perform different but decidedly complementary roles in the interests of air safety with a view to the prevention of aircraft accidents. From the time of CASA's establishment in 1995, it has been one of our statutory functions to cooperate with the ATSB and its predecessor, the Bureau of Air Safety Investigation or BASI, as it was known at the time. Similar functions appeared in the Civil Aviation Act at the time of CASA's predecessor, the Civil Aviation Authority, which was established in 1988 and corresponding provisions appear in the ATSB's governing legislation.

In keeping with our complementary safety related objectives—and CASA and the ATSB are the only government agencies whose organisational activities relate exclusively to the enhancement of aviation safety—CASA has consistently endeavoured to support and assist the ATSB in their investigative efforts to the extent we can do, remaining cognisant of the difference in our respective roles and functions and in a manner that accords with the applicable legislation.¹⁹

2.30 Unlike ATSB investigations, CASA's may result in enforcement action where appropriate in order to 'minimise the likelihood that a particular individual, organisation or aircraft may place others at risk of harm.'²⁰

2.31 The interplay between CASA and ATSB investigative activities is complex. Although conducted with complementary safety-related objectives in mind, their respective investigations require both independence and a degree of cooperation. Striking the right balance, that is, ensuring independence whilst navigating a largely shared space, is imperative. To this end, CASA and the ATSB have developed and worked to the terms of a series of memoranda of understanding (MoUs) which intend to define the space within which the agencies operate and cooperate:

Without a clear understanding of the nature and purpose of these parallel investigations, there is a potential for confusion about these matters in the minds of those people with whom CASA and the ATSB must deal, and a risk that, in conducting its own investigation, CASA or the ATSB may complicate and possibly compromise the other's investigation. Much of the content of the interagency MOU is to avoid that confusion and to mitigate that risk.²¹

2.32 The current MoU was the source of some consternation for the committee over the course of this inquiry. The implications and requirements of the current MoU, as well as whether these were met, are discussed in later chapters of this report. The general terms and objectives of the MoU are outlined below.

19 Mr John McCormick, Director of Aviation Safety, CASA, *Committee Hansard*, 22 October 2012, p. 27.

20 Mr John McCormick, Director of Aviation Safety, CASA, *Committee Hansard*, 22 October 2012, p. 27.

21 Mr John McCormick, Director of Aviation Safety, CASA, *Committee Hansard*, 22 October 2012, p. 27. See also www.casa.gov.au/scripts/nc.dll?WCMS:STANDARD::pc=PC_91621 (accessed 22 March 2013).

The Miller Review and the MoU between the ATSB and CASA

2.33 The current MoU between the ATSB and CASA came into effect in February 2010, with the aim of addressing a series of objectives:

- a) maximisation of beneficial aviation safety outcomes
- b) enhancement of public confidence in aviation safety
- c) support for the adoption of systemic approaches to aviation safety
- d) development of knowledge of the operations and the safety impact of each organisation's actions
- e) promotion and conduct of ATSB independent no-blame safety investigations and CASA regulatory activities in a manner that assures a clear and publicly perceived distinction is drawn between each agency's complementary safety-related objectives, as well as CASA's specialised enforcement-related obligations
- f) to the extent practicable, the avoidance of any impediments in the performance of each other's functions
- g) acknowledgement of any errors and a commitment to seeking constant improvement
- h) fostering strategic discussion between both organisations.²²

2.34 The origins of this MoU, and its emphasis on cooperation between the two agencies, can be traced to concerns expressed by the State Coroner of Queensland in bringing down his findings after the fatal 2005 airplane crash at Lockhart River. Questions were raised then about evident friction in the relationship between the ATSB and CASA, leading the then Minister for Transport and Regional Services, the Hon Mark Vaile MP, to engage Mr Russell Miller AM to conduct a review into this relationship in 2007 and assess whether high level intervention was needed.

2.35 The Miller Review was primarily about improving how CASA and the ATSB work together within the Australian aviation safety system, and was ultimately required to assess whether the agencies' administrative and legislative frameworks were conducive to them playing their roles in this system. Among its terms of reference, the review was also required to assess:

The role and value of the Memorandum of Understanding (MOU) in place between CASA and the ATSB, and areas where the MOU can be strengthened or improved to achieve better working relationships between the agencies.²³

22 Memorandum of Understanding between the ATSB and CASA, available at: www.atsb.gov.au/media/1371655/mou_atSB-casa.pdf (accessed 5 February 2013).

23 ATSB/CASA Review, Report to the Minister for Infrastructure, Transport, Regional Development and Local Government (the Miller Review), Appendix 1, p. 82.

2.36 The Miller Review made nineteen recommendations, of which Recommendation 17 called for a new MoU to be negotiated between the two agencies to foster better communication and improved cooperation.

2.37 The wording of the current MoU reflects this aim. However, the committee received a considerable volume of evidence suggesting that the reality of the relationship between the two agencies may still fall well short of the objective. This is examined in more detail in later chapters of this report.

Airservices Australia

2.38 Airservices Australia is the country's air navigation service provider (ANSP). A Commonwealth statutory authority established under the *Air Services Act 1995*, Airservices:

- provides facilities for the safe navigation of aircraft within Australian-administered airspace;
- promotes and fosters civil aviation in Australia and overseas;
- provides air traffic services, aviation rescue and fire fighting services, and aeronautical information, radio navigation and telecommunications services in line with the Chicago Convention and to ensure the safety, regularity and efficiency of air navigation;
- cooperates with the Australian Transport Safety Bureau in investigating aircraft accidents and incidents;
- adheres to regulations relating to impacts associated with the operation of Commonwealth jurisdiction aircraft; and
- undertakes functions as required under the *Air Navigation Act 1920* and the *Aviation Transport Security Act 2004* or by regulation.²⁴

2.39 Airservices Australia conducts its management of Australia's sovereign airspace on behalf of the Australian Government. Responsibility for air traffic management is assigned to countries by ICAO, which divides the world's airspace into 'flight information regions' (FIRs). Australian airspace consists of two FIRs, known as 'Brisbane' and 'Melbourne', and covers roughly 11 per cent of the Earth's surface.²⁵

2.40 The airspace around Norfolk Island, where events leading to the ditching of VH-NGA culminated, is not included in Australia's FIRs. It belongs instead within the New Zealand FIR, and is managed by the Airways Corporation of New Zealand on behalf of the New Zealand Government. Since the Pel-Air flight in question did not enter Australian airspace, Airservices informed the committee, it was not managed by

24 Airservices Australia, *Submission 17*, p. 2.

25 Airservices Australia, *Submission 17*, p. 2.

Airservices Australia.²⁶ The latter's direct involvement extended to the receipt and distribution of VH-NGA's flight plan and providing pre-flight weather information.²⁷

2.41 The involvement of New Zealand and Fiji air traffic controls as it relates to the accident is discussed in later chapters of this report.

Bureau of Meteorology

2.42 The pre-flight weather information Airservices Australia provided to the pilot in command of VH-NGA came from the Bureau of Meteorology (BoM), which provides aviation meteorological services in accordance with Annex 3 of the Chicago Convention.²⁸

2.43 BoM forecasters produce aerodrome forecasts²⁹ (TAFs) by collating information from past and present *in situ* observations, satellite and radar imagery, climate information and weather forecasting models. Amendments to these TAFs are issued if and when 'one or more the forecast elements...varies by an amount that is significant to operations at the aerodrome.'³⁰

2.44 Other types of meteorological observations BoM issues are Meteorological Aerodrome Reports (METARs) and special reports called SPECIs. METARs are usually issued every thirty minutes at most airports with the necessary instrumentation, while SPECIs are issued 'when one or more weather elements meet specified criteria significant to aviation.'³¹

2.45 SPECIs are routinely issued when visibility drops below specified 'alternate minima' conditions:

Alternate minima are a set of cloud base and visibility conditions...generated for each airfield that has a published instrument approach procedure. The alternate minima are based on the minimum descent altitude and minimum visibility of each of the available instrument approaches.³²

26 Airservices Australia provides operational documentation which pilots can use to find out about hazards prior to planning or operating into a location. See for example: www.airservicesaustralia.com/aip/current/dap/AeroProcChartsTOC.htm#N and www.airservicesaustralia.com/aip/aip.asp?pg=40&vdate=7-Mar-2013&ver=1 (accessed 19 April 2013).

27 Airservices Australia, *Submission 17*, p. 2.

28 Bureau of Meteorology (BoM), *Submission 14*, p. 1.

29 TAFs are statements of meteorological conditions expected for a specific period of time for the airspace within a 5 nautical mile radius of a given aerodrome. See BoM, *Submission 14*, p. 1.

30 BoM, *Submission 14*, p. 1.

31 BoM, *Submission 14*, p. 1.

32 BoM, *Submission 14*, p. 1.

2.46 The committee notes that Australia's State Aviation Safety Program requires BoM to conduct investigations into aviation weather-related incidents.³³

2.47 The committee heard during its inquiry that Norfolk Island, although noted for its incidence of low cloud, nonetheless experienced a rare meteorological event on the night in question.³⁴ The handling of those rare conditions and the effect of this on the flight is discussed in later chapters of this report.

33 Australia's State Aviation Safety Program, April 2012, available at: www.infrastructure.gov.au/aviation/safety/ssp/index.aspx (accessed 1 May 2013).

34 Mr Barry Hanstrum, Regional Director NSW/ACT, BoM, *Committee Hansard*, 19 November 2012, p. 15.

