Australian Government

Australian Transport Safety Bureau

ATSB Annual Report

2010–2011

www.atsb.gov.au

Acknowledgements

Specific acknowledgements for the use of data, photographs and other materials are included throughout this report. Where we do not do so, the ATSB is the source of the material.

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Australian Transport Safety Bureau
Chief Commissioner

28 October 2011

The Hon Anthony Albanese MP
Minister for Infrastructure and Transport
Parliament House
CANBERRA ACT 2600

Dear Minister

We are pleased to present the Annual Report of the Australian Transport Safety Bureau, reporting on the ATSB's operations for the year ended 30 June 2011.

This annual report has been prepared in accordance with section 63A of the *Transport Safety Investigation Act 2003* (TSI Act). Subsection 63A(1) of that Act requires that we give this report to you. We recommend that, consistent with the normal provisions for annual reports, you make the report available to the Parliament.

In addition to the information required by subsection 63A(2) of the TSI Act, the report summarises the ATSB's performance for the year, consistent with the government's policies on the preparation of annual reports. It also includes the ATSB's financial statements, as required by section 49 of the *Financial Management and Accountability Act 1997,* and an audit report on those statements in accordance with section 57 of the same Act.

The Chief Commissioner also certifies, under section 9 of Guideline 1 of the Commonwealth Fraud Control Guidelines, that he is satisfied that the ATSB has prepared fraud risk assessments and fraud control plans, and has in place appropriate fraud prevention, detection, investigation, reporting and data collection procedures and processes that meet the specific needs of the ATSB and comply with the Guidelines.

Yours sincerely

Martin Dolan
Chief Commissioner/CEO

Noel Hart
Commissioner

Carolyn Walsh
Commissioner

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Guide to this report

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This report is also available on our website, at <www.atsb.gov.au>. It is usually available online the day after it is tabled in the Parliament.

Before making decisions or acting on information in this report, you are advised to contact the ATSB. This report was up-to-date when it was tabled, but details do change over time due to legislative, policy and other developments.

Equally, if you have suggestions about ways in which we could improve our annual report, please let us know.

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Review by Chief Commissioner

This Annual Report covers the second year of operation of the Australian Transport Safety Bureau (ATSB) as an independent statutory agency. It has been a year of consolidation in how we conduct transport safety investigations, matched by expansion in our safety research, analysis and education functions. In both areas we have increased our capacity to bring about improvements in transport safety.

A key element of consolidation is our progressive clearing of what was becoming a backlog of incomplete larger investigations. This was most noticeable in aviation, which still represents about 80% of our investigation task: there were 51 larger aviation investigations on hand at the end of this year, compared to 70 last year. This represents a sustainable level of activity that will allow us to meet our targets for timely investigation while maintaining the quality of our work. The number of investigations on hand in rail and marine has remained relatively stable by comparison.

Later in my review I have highlighted some larger investigations that have raised significant issues in transport safety. It is a requirement of the *Transport Safety Investigation Act 2003* that I report on this, but it is also important to show that our work of investigation leads both to the identification of problems and to the implementation of practical solutions to those problems in the interests of improved transport safety.

The reduction in the backlog of larger investigations was matched by a substantial increase in our 'short' investigation output. As highlighted last year, we have developed a targeted capacity to produce timely, short investigation reports which compile information on the circumstances of a safety occurrence and on any safety action that may have been taken or identified as a result.

The Short Investigations team produced 19 reports in 2009–10. This increased to 52 reports in 2010–11. As set out later in this review, these reports are already showing their value in providing more detailed data on a larger number of safety occurrences and indicating safety trends. In addition, they assist Australia in meeting its international obligations to investigate all accidents and serious incidents. They are also a highly effective way of illustrating safety messages with real and timely examples.

The work of consolidating our investigation function has been matched by expanded activity in research, analysis and education. As well as improving the quality and usefulness of our statistical publications in all three transport modes, we are also turning good research into practical education material. This is allowing the ATSB to address one of the key issues identified in last year's annual report: shifting the emphasis in our general

aviation work towards good practical safety educational material based on sound research. We have also made significant advances in finding better ways to engage with our stakeholders, including through a more user-friendly web presence and through judicious use of social media.

AVIATION SAFETY INVESTIGATIONS

The aviation investigation teams completed 113 aviation accident and incident investigations in the past year, several of which attracted substantial national and international interest. Many of those investigations, and the remaining ongoing investigations, have helped to identify important safety issues and to bring about significant safety improvements.

One significant investigation (AO-2008-003) was an occurrence involving a Boeing 747-438 aircraft which was subject to a number of electrical power-related malfunctions affecting many of the aircraft's communication, navigation, monitoring and flight guidance systems. While the consequences were potentially very serious, the aircraft's engines and hydraulic and pneumatic systems were largely unaffected and the aircraft landed safely at Bangkok.

The malfunctions were found to have been caused by leaks resulting from an overflowing galley drain. The investigation identified a number of serious and systemic safety issues regarding the protection of aircraft systems from liquids. In response, the aircraft manufacturer and operator implemented a number of safety actions intended to prevent a recurrence. In addition, the United States Federal Aviation Administration issued a notice of proposed rulemaking to adopt a new airworthiness directive for certain 747-400 and 747-400D series aircraft to install improved water protection. The ATSB issued two safety recommendations and one safety advisory notice as a result of the investigation (see Table 7 for details).

In a similar vein, a separate investigation (AO-2009-004) highlighted significant electrical problems associated with inadequate waterproofing in AgustaWestland AW139 helicopters. In response, the manufacturer initiated several actions to rectify the problem and the ATSB is satisfied that action adequately addresses the safety issue.

Another investigation (AO-2009-065) highlighted potential problems with unreliable airspeed indications in Airbus A330 and A340 aircraft. When airspeed data is unreliable, some aircraft systems respond in ways that pilots do not encounter often. Airspeed data is derived from mechanisms called pitot probes, which respond to variations in the airflow outside an aircraft.

In the occurrence the ATSB investigated, involving an Airbus A330-202 aircraft, there was a brief period of disagreement between the aircraft's three sources of airspeed information. The autopilot, autothrust and flight directors disconnected and the flight control system reverted to alternate law, which meant that some flight envelope protections were no longer available. There was no effect on the aircraft's flight path, and the flight crew followed the operator's documented procedures. The airspeed disagreement was due to a temporary obstruction of the captain's and standby pitot probes, probably due to ice crystals. A similar event occurred on the same aircraft on 15 March 2009.

Both of the events occurred in environmental conditions outside those specified in the certification requirements for the pitot probes. That is, the certification requirements were not sufficient to prevent the probes from being obstructed with ice during some types of environmental conditions. As a result of its own investigations of similar occurrences, the French Bureau d'Enquêtes et d'Analyses pour la sécurité de l'aviation civile (BEA) has recommended the European Aviation Safety Agency (EASA) to review the certification criteria for pitot probes in icing environments. The ATSB is satisfied that this work, when complete, will address this significant safety issue.

The ATSB played a significant role in support of the Papua New Guinea (PNG) Accident Investigation Commission (AIC) investigation into the controlled flight into terrain that occurred near Kokoda, PNG on 11 August 2009 and involved a de Havilland Canada DHC-6 Twin Otter aircraft.

The investigation identified a number of factors that led to increased safety risk. These related to the crew of the aircraft, the weather conditions affecting the flight, crew training and the conduct of the flight. A number of the safety factors had the potential to adversely affect the safety of future aviation operations.

As a result of the investigation, the AIC PNG issued a safety recommendation in respect of the installation of cockpit voice recorders (CVR) in PNG aircraft with a seating capacity of 18 or more passengers. In response, the Civil Aviation Safety Authority of PNG (CASA PNG) is proposing legislation to require the installation of CVRs in turbine-powered aircraft with seating for more than nine passengers. As a result of the investigation, CASA PNG has also established a principal medical officer position and has advised of action to move responsibility for the administration of the PNG mandatory occurrence notification system to the AIC PNG. Extensive proactive safety action has been taken by the aircraft operator in response to the risk of inadvertent flight into cloud while employing visual flight procedures and regarding operations into Kokoda Airstrip, in an effort to prevent a recurrence. The investigation report (AE-2009-050) is available from the ATSB website.

Finally, the ATSB is continuing to investigate an uncontained engine failure on a Qantas Airbus A380 aircraft over Batam Island, Indonesia on 4 November 2010. The aircraft's No 2 engine had sustained an uncontained failure of its intermediate pressure turbine disc. Sections of the disc had penetrated the left wing and the left wing-to-fuselage fairing, resulting in structural and systems damage to the aircraft.

Within a month of the accident, the ATSB, leading an investigation that involved a range of other countries and major corporations, had established the presence of fatigue cracking within a small stub pipe that feeds oil into one of the engine's bearing structures. The fatigue was attributed to misaligned counter-boring of the stub pipe as part of the engine manufacturing process. Such fatigue cracking, if it occurred in other engines, had the potential to create oil leakage which could lead to catastrophic engine failure from a resulting oil fire.

As a result of this work, a number of safety actions were immediately undertaken by Qantas, the Australian Civil Aviation Safety Authority, Airbus, Rolls-Royce plc, and the European Aviation Safety Agency that enabled the resumption of safe flight by all aircraft equipped with the failed engine type.

The ATSB prepared a preliminary factual report on the investigation of the occurrence. That report was publicly released on 3 December 2010. The investigation continues so that all the safety implications and lessons from the accident, including positive lessons about how the emergency was handled, can be reviewed and published.

Other investigations also identified significant safety issues relating to the safety of air transport. These related to the supervision of agricultural pilots, training and supervision of charter pilots, potentially hazardous helicopter winching procedures, turbulence caused by buildings at airports, airspace design and management and problems with the management by air traffic control of compromised separation of aircraft. In each case, the ATSB was satisfied that action had been taken or was in train to address the identified safety issues.

MARINE SAFETY INVESTIGATIONS

The marine investigation team completed 11 safety investigations. While all investigations are conducted by the ATSB with the aim of identifying and promulgating useful safety messages, three raised significant issues for transport safety.

The first was the loss overboard of containers from the container ship *Pacific Adventurer*.

On 11 March 2009, the *Pacific Adventurer* lost 31 containers overboard in gale force weather conditions and large swells off Cape Moreton, Queensland. The cargo included 50 containers of ammonium nitrate in the form of prills. The substance, which is used as an oxidiser in the mining industry, is classified as dangerous goods under the International Maritime Dangerous Goods Code. All the containers sank, and two of the ship's fuel oil tanks were holed as the containers went overboard. About 270 tonnes of oil leaked from the holed tanks and 38 miles of Queensland coastline was affected by oil pollution.

The ATSB investigation (MO-2009-002) found that the ship was probably subjected to synchronous rolling at the time and that the severe and sometimes violent rolling motions caused the lashings on the containers, and possibly some containers themselves, to fail. In addition, much of the fixed and loose container lashing equipment was in a poor condition and the inspection and replacement regime in the ship's safety management system had not been effectively implemented.

The ATSB identified four safety issues during the investigation: the inspection and maintenance regime of the ship's fixed and loose lashing equipment had been deficient; there was no requirement for a third party to inspect this equipment; the cargo in the containers which were lost overboard was not packaged in accordance with international dangerous goods shipping requirements; and the dangerous goods shipping compliance audit regime did not pick up on this fact.

Safety action to address the safety issues was taken by several of the responsible organisations. The ATSB has issued one safety advisory notice in regard to the outstanding safety issue concerning third party inspections of lashing equipment.

The second investigation of particular significance involved the grounding of the bulk carrier *Shen Neng 1*.

On 3 April 2010, the Chinese registered bulk carrier *Shen Neng 1* grounded on Douglas Shoal, about 50 miles north of the entrance to the port of Gladstone, Queensland. The ship's hull was seriously damaged by the grounding, with the engine room and six water ballast and fuel oil tanks being breached, resulting in a small amount of pollution.

The ATSB investigation (MO-2010-003) found that the grounding occurred because the chief mate did not alter the ship's course at the designated course alteration position. His monitoring of the ship's position was ineffective and his actions were affected by fatigue.

The ATSB identified four safety issues during the investigation: there was no effective fatigue management system in place to ensure that the bridge watchkeepers were fit to stand a navigational watch after they had supervised the loading of a cargo of coal in Gladstone; there was insufficient guidance in relation to the proper use of passage plans, including electronic route plans, in the ship's safety management system; there were no visual cues to warn either the chief mate or the seaman on lookout duty, as to the underwater dangers directly ahead of the ship; and, at the time of the grounding, the protections afforded by the requirement for compulsory pilotage and active monitoring of ships by the coastal vessel traffic service REEFVTS were not in place in the sea area off Gladstone.

The ATSB has issued two safety recommendations to *Shen Neng 1*'s management company regarding the safety issues associated with fatigue management and passage planning and acknowledges the safety action taken by the Australian Maritime Safety Authority (AMSA) in relation to the extension of REEFVTS coverage to include the waters off Gladstone.

The third investigation of particular significance was into the grounding of products tanker *Atlantic Blue*. This investigation (MO-2009-001) was significant in that it was the initiator for an ATSB safety issues investigation into the adequacy from a safety perspective of the whole Australian coastal pilotage regime. This investigation is still under way and will examine the systemic issues involved in coastal pilotage.

Another investigation (MO-2008-013), arising from a fatality, identified a gap in the regime for regulating work safety at sea. While work is in train to change the relevant legislation, the risk remains that, during some operations, it is possible a ship would not come under the jurisdiction of any Australian safety regulatory regime.

RAIL SAFETY INVESTIGATIONS

The rail investigation team completed nine transport safety investigations in the past year and issued six preliminary factual reports. Three of these investigations identified significant safety issues.

The first (RO-2009-009) occurred at Cootamundra, New South Wales and involved a passenger train almost colliding with the last wagon of a stationary freight train. This was despite the signal indicating that the route the passenger train was taking was set and unobstructed. The investigation determined that a signalling system design error allowed the signal to be cleared for the passage of the passenger train, even though its route was obstructed by the freight train, which was on the adjacent line. The ATSB is satisfied that actions taken by the track operator should mitigate the risk of a similar occurrence.

The second investigation (RO-2009-008) involved a passenger train, en route from Melbourne to Sydney, which passed a signal by about 33 m while it was displaying a Stop (red) indication. While no injuries or damage resulted from the occurrence, the report identified three safety issues in relation to prioritisation of operational tasks, signal lamp voltage and signalling design standards.

The third involved a safe-working incident within the Junee station yard limits when a locomotive was moved from one road to another without authority while a Track Occupancy Authority (TOA) was in force. TOAs are designed to prevent such movements so as to protect workers on the track. While no injuries or damage resulted, the investigation found problems with the overall management of and communication about TOAs that are yet to be resolved to the ATSB's satisfaction.

SAFETY TRENDS

I referred earlier to the Short Investigation team and how its work complements that of established investigation teams by providing more detailed data on a larger number of safety occurrences for future research and analysis. The team produced three bulletins containing a total of 52 short summary reports in the course of the year. Examining these in conjunction with our research reports and our larger investigations draws out some potentially significant safety trends in Australian aviation.

The first is the continuing prevalence of incidents and some accidents involving inadequate execution by pilots of 'see-and-avoid' procedures in the vicinity of smaller airports. The ATSB has consistently drawn attention to the limitations of 'see-and-avoid', but work remains to be done in making sure pilots understand and respond to this.

The second is a range of occurrences which involve issues with the training, checking and supervision of pilots. This trend is independent of the total hours of flight experience pilots have and often involves the execution of normal but rarely used procedures. The ATSB will continue to monitor this area to see if the underlying issue can be drawn out more clearly.

Third is the number of occurrences involving the breakdown of air traffic control separation of aircraft or problems in recovery of a compromised separation. Airservices Australia has taken safety action to deal with recovery from compromised separation (see investigation report AO-2009-080), but several investigations currently under way are likely to clarify whether a series of separation breakdowns point to any systemic safety issue.

Finally, there are a number of safety occurrences in general aviation which point to a continuing exposure to known risks: a sequence of collisions with previously identified powerlines; poor management of fuel leading to fuel exhaustion; and pilots flying visually into instrument conditions. As was indicated in last year's report, the ATSB has dealt with the continuing prevalence of these types of occurrence by the production of focused educational material for pilots and by conducting safety education programs based on this material.

In the course of a number of rail investigations, the ATSB continues to observe a concerning pattern of safe-working irregularities, including one resulting in a fatality. We draw the attention of track maintenance organisations to the need for adherence to rules and procedures, improved procedures and training, and effective radio communication between train controllers and train crew and track workers.

Three marine investigations, two arising from a fatality and the other from a serious injury to a seafarer, highlighted the continuing risk to life of unsafe working practices. While in each case the necessary action has been taken to manage the hazardous work, much still remains to be done to ensure the safety of work at sea.

OUTLOOK FOR 2011–12

This review reflects the continued preponderance of aviation in the ATSB's work. The next two years, however, will see a substantial growth in our role in the rail sector as we take on primary responsibility for all rail investigations across Australia as part of a broader national transport reform process. It is likely, although not yet agreed by governments, that we will acquire similar national responsibilities in the maritime sector.

This expansion of the ATSB's scope sets challenges for us that I am confident we will rise to: collaborative work with our state and territory colleagues to ensure adequate resources are available for the task; management and use of national safety data sets for the rail and maritime sectors; and the capacity to respond quickly and effectively to safety events as they occur.

In parallel with this, we will start to reap the benefits of consolidating our existing investigative work. In particular, we have freed up some of the time of our investigators to focus on systemic investigations of developing safety issues with the aim of preventing accidents. Our current investigations of the overall safety of marine coastal pilotage and of safety issues associated with the Melbourne to Sydney rail line are examples of our growing capability in this area.

We will also maintain our enhanced focus on engaging with stakeholders and discharging our responsibility for transport safety education. We will work harder to ensure that the safety messages from our investigations are understood and acted on, while still ensuring that our investigations and their associated reports are comprehensive, rigorous and timely.

Agency overview

The Australian Transport Safety Bureau (ATSB) is established under the *Transport Safety Investigation Act 2003* (TSI Act) as the national transport safety investigation agency.

Its primary function is to improve aviation, marine and rail safety.

The ATSB is also required to cooperate with other parties that have functions and powers relating to transport safety or functions affected by the ATSB's function of improving transport safety. The ATSB is independent and operates on a 'no blame' basis: it is prevented from apportioning blame or providing the means to determine liability in transport safety matters.

OUR OBJECTIVES

In discharging its functions of improving transport safety and cooperating with others, the ATSB:

- focuses its resources in the areas that are most likely to result in safety improvements
- harnesses the expertise and information necessary to its safety role
- conducts impartial, systemic and timely investigations
- identifies safety issues based on evidence and expert analysis
- reports safety issues clearly and objectively, without attributing blame or liability
- ensures the significance of safety issues is clearly understood by all concerned
- promotes effective safety action.

The ATSB works actively with the aviation, marine and rail industries, as well as with transport regulators and governments at a state, national and international level, to improve transport safety standards for all Australians, particularly those travelling within Australia and overseas. Investigations and related activities seek to raise awareness of identified safety issues and to encourage stakeholders to implement actions to improve future safety.

OUR FUNCTIONS AND APPROACH

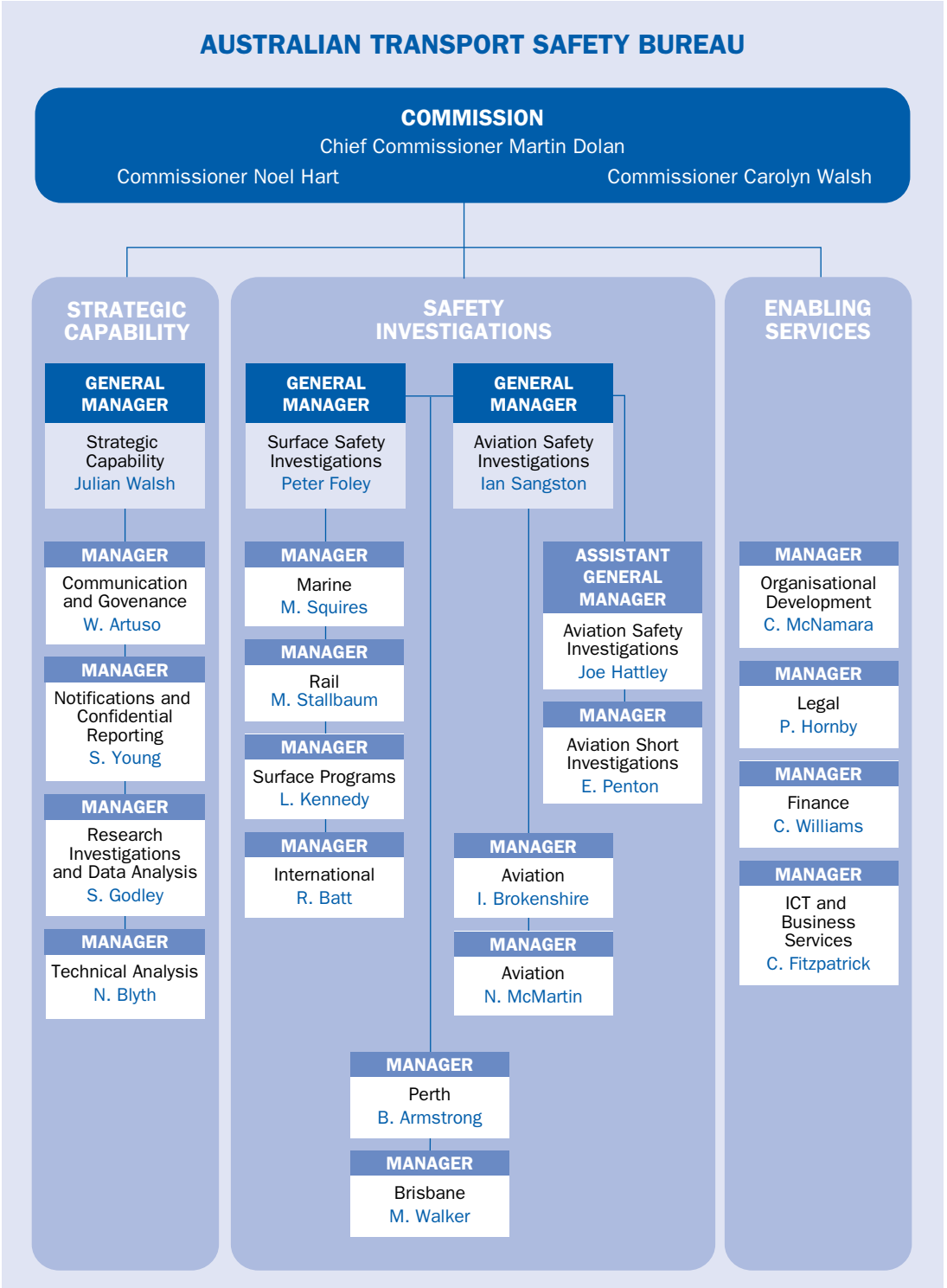
The ATSB's primary function is to improve aviation, marine and rail safety by means that include:

- receiving and assessing reports of transport safety matters, including notifications of safety occurrences and confidential reporting
- independently conducting no-blame investigations of accidents and other safety occurrences, including investigations based on research
- identifying factors that contributed to those accidents and other safety occurrences or which affect, or might affect, transport safety
- encouraging safety action in response to those safety factors by acknowledging safety action already taken and by issuing safety recommendations and advisory notices
- raising awareness of safety issues by reporting publicly on investigations and conducting public educational programs.

The ATSB's capacity to carry out its primary function of improving transport safety is critically dependent on the quality of its relationship with industry and the community. The ATSB therefore has the additional role under the TSI Act of cooperating with government agencies, private organisations and individuals who have transport safety functions and responsibilities or who may be affected by its transport safety activities. In addition, the ATSB cooperates with equivalent national bodies in other countries.

In carrying out its functions to the highest possible standards, the ATSB will actively engage in consultation, target its communications to ensure that transport industry stakeholders understand the importance of no-blame investigation, and encourage the open reporting of accidents and other safety occurrences. In doing so, the ATSB will promote an appropriate level of confidentiality and protection for sensitive safety information provided to it.

Our organisational structure as at 30 June 2011



Executive profiles

MR MARTIN DOLAN
CHIEF COMMISSIONER

Martin Dolan was appointed as the first Chief Commissioner of the ATSB on 1 July 2009 for a term of five years. Mr Dolan has worked as a Commonwealth public servant for over 30 years. Prior to the ATSB, he was Chief Executive Officer of Comcare, with responsibility for the occupational health and safety and workers compensation of Commonwealth employees. From 2001 to 2005 he was Executive Director, Aviation and Airports at the Department of Transport and Regional Services, with responsibility for airport sales and regulation, aviation security, aviation safety policy and international aviation negotiations.

Previously, Mr Dolan had undertaken various corporate management roles in the Department of Agriculture, Fisheries and Forestry, including Chief Finance Officer and Head of Corporate Management. He started his public service career in 1980 with AusAid, managing aid projects in developing countries.

Mr Dolan has a Bachelor of Arts degree.

MS CAROLYN WALSH
COMMISSIONER

Carolyn Walsh has over 25 years' experience in policy development, regulation and safety management at both the Commonwealth and state levels. She has over 10 years' experience in the transport sector, both in policy and regulatory roles. Prior to becoming a Commissioner of the ASTB, Ms Walsh was the Chief Executive of the NSW Independent Transport Safety and Reliability Regulator (ITSRR).

Ms Walsh is currently a member of the NSW WorkCover Authority Board and of the NSW Minister's Freight Advisory Council. She is also a member of the Audit and Risk Committees for NSW government agencies including: the Aboriginal Lands Council (Chair), Compensation Authorities Staff Division (Deputy Chair), Police Integrity Commission (member), and the Public Transport Ticketing Corporation (member).

Ms Walsh has specialist expertise in safety (both transport and occupational health and safety), risk management and the regulatory framework governing transport operations in Australia. She was the Chair of the national Steering Committee that advised the National Transport Commission on the development of the national Model Bill for Rail Safety.

Ms Walsh has a Bachelor of Economics degree and is a graduate of the Australian Institute of Company Directors Company Directors Course.

MR NOEL HART

COMMISSIONER

Noel Hart has over 30 years' experience in the shipping industry, including thirteen years at sea in senior deck officer positions. His qualifications include a Master Mariner Class One degree and business administration and MBA certificates.

Mr Hart left his seagoing career to join BP Australia in 1985 and has held management positions with BP Shipping in Melbourne, London and Chicago in roles including Australasian Regional Shipping Manager, Liquefied Natural Gas and Shuttle Tanker Fleet Manager, Marine and Technical Assurance Manager (UK), and Regional and Commercial Manager (USA).

From 2006 to 2009, he held the position of General Manager of North West Shelf Shipping Service Company, based in Perth. In this position, Mr Hart was responsible for the safe shipping of Liquefied Natural Gas from north-western Australia to Asian and other global customers.

Whilst based in London, Mr Hart was Chairman of the General Purposes Committees of both the Oil Companies International Marine Forum and the Society of International Gas Tankers and Terminal Operators. He also served as director of the Middle East Navigational Aids Service, and was an alternate director of both the Alaskan Tanker Company and the Marine Preservation Society in the USA, as well as the Marine Oil Response Centre in Australia.

In November 2008, Mr Hart was elected as Chairman of the Australian Shipowners Association, and in July 2009 he was appointed as a Commissioner of the Australian Transport Safety Bureau.

MR IAN SANGSTON

GENERAL MANAGER, AVIATION SAFETY INVESTIGATION

Ian Sangston, General Manager, Aviation Safety Investigation, joined the ATSB as a Senior Transport Safety Investigator (STSI) in April 2002 after 23 years' service in the Australian Defence Force. In addition to a number of pilot qualifications, he also has an undergraduate degree and two post-graduate masters' degrees in Management Studies and Employment Relations.

Mr Sangston managed a number of high profile and other investigations as an STSI and completed his Diploma of Transport Safety Investigation in June 2005. He was promoted to Team Leader, Transport Safety Investigation in mid-2006 and assumed responsibility for the Perth Regional Office. As Team Leader, he oversaw more than 80 aviation safety investigations.

In August 2009, Mr Sangston was promoted to his present position.

MR PETER FOLEY

GENERAL MANAGER, SURFACE SAFETY INVESTIGATION

Peter Foley is General Manager of Surface Safety Investigation, a role he has held since August 2006. He is responsible for marine and rail safety investigations and the ATSB's work on the proposed reforms to the National Transport Regulatory framework and the ATSB's international programs.

Mr Foley joined the ATSB in 1999 after a career at sea as a marine engineer with Australian shipping companies, including ANL Limited, the Commonwealth shipping line. Since joining the ATSB, he has been responsible for a large number of marine investigations, many of them significant, and has also had a close involvement in many rail investigations. He has represented the ATSB and Australia at many national and international marine and rail industry meetings and conferences.

Mr Foley holds professional qualifications in marine engineering and transport safety investigation, degrees in both marine and mechanical engineering, and a graduate diploma in business management.

MR JULIAN WALSH

GENERAL MANAGER, STRATEGIC CAPABILITY

Julian Walsh, General Manager Strategic Capability, joined the ATSB as a Senior Transport Safety Investigator (STSI) in September 1998 after nearly 21 years of service as an officer in the Royal Australian Air Force.

While in the Air Force, Mr Walsh gained extensive experience both as an operative Air Traffic Controller and as an Air Traffic Services manager. He is a graduate of the Royal Australian Navy Staff College and has held a range of command, personnel, project management, training and aviation safety related positions in Defence.

Since joining the ATSB, Mr Walsh has been responsible for a number of significant aviation investigations and has overseen a range of functions within the ATSB. He has served as a Team Leader of Notifications and Technical Analysis and as an Aviation Investigation team leader. He was Director, Aviation Safety Investigation from March 2006 until June 2009.

In January 2004, he was awarded an Australia Day Medallion for his leadership and ethics in major aviation safety investigations and analysis.

OUTCOME AND PROGRAM STRUCTURE

Outcome 1: Improved transport safety in Australia including through: independent, 'no-blame' investigation of transport accidents and other safety occurrences; safety data recording, analysis and research; and fostering safety awareness, knowledge and action.

Program 1.1: Australian Transport Safety Bureau

Program 1.1 Objective

The Australian Transport Safety Bureau (ATSB) will work actively with the aviation, marine and rail industries, transport regulators and governments at a state, national and international level, to improve transport safety standards for all Australians, particularly those travelling within Australia and overseas. Investigations and related activities seek to raise awareness of identified safety issues and to encourage stakeholders to implement actions to improve future safety.

Components of program 1.1:

i. Independent, 'no-blame' investigation of transport accidents and other safety occurrences

Independent investigations that are selective and systemic, and which focus on future safety rather than on blame, increase stakeholder awareness and action on safety issues, and foster industry and public confidence in the transport system.

ii. Safety data recording, analysis and research

Timely receipt and assessment of transport accident and other safety occurrence notifications allow the ATSB to identify and refer safety issues at the earliest opportunity. The maintenance and analysis of a body of safety information (including transport safety data and research and investigation reports) enable stakeholders and researchers to gain a better understanding of safety trends and safety issues.

iii. Fostering safety awareness, knowledge and action

Awareness and understanding of transport safety issues is increased through a range of activities, including consultation and education, and through the promulgation of research and investigation findings and recommendations. These contribute to the national and international body of safety knowledge and foster action for the improvement of safety systems and operations.

INVESTIGATION PRIORITIES AND CLASSIFICATIONS

The ATSB's highest operational priority is to undertake those investigations of accidents and safety occurrences that have the greatest potential to deliver improved transport safety outcomes, with a particular focus on fare-paying mass passenger transport operations.

For many occurrences, the contributing factors and safety issues are well known and there are likely to be few benefits or safety lessons to warrant an extensive investigation. In those cases, the ATSB may undertake a limited fact-gathering investigation only (Short Investigation). Equally, there is often as much or more to be learned from serious incidents or patterns of incident as there is from accidents and, where appropriate, the ATSB will give priority to those sorts of investigations.

The following broad hierarchies for aviation, marine and rail, which reflect the priorities described above, are taken into account when deciding whether to investigate and when determining the level of response required.

Aviation broad hierarchy

The ATSB allocates its investigative resources in line with the following broad hierarchy of operation types:

1. Passenger transport—large aircraft
2. Passenger transport—small aircraft
   - regular public transport and charter on small aircraft
   - humanitarian aerial work (for example, Royal Flying Doctor Service, Search and Rescue flights)
3. Commercial (that is, fare-paying) recreation (for example, joy flights)
4. Aerial work with participating passengers (for example, news reporters, geological surveys)
5. Flying training
6. Other aerial work
   - non-passenger carrying aerial work (for example, agriculture, cargo)
   - private transport/personal business
7. High risk personal recreation/sports aviation/experimental aircraft operations

Marine broad hierarchy

The ATSB allocates its investigative resources in line with the following broad hierarchy of marine operation types:

1. Passenger operations
2. Freight and other commercial operations
3. Non-commercial operations

Rail broad hierarchy

The ATSB allocates its investigative resources in line with the following broad hierarchy of rail operation types:

1. Mainline operations that impact on passenger service
2. Freight and other commercial operations
3. Non-commercial operations

Level of response

The level of investigative response is determined by resource availability and factors such as those detailed below. These factors are presented in no particular order and may, depending on the circumstances, vary in the degree to which they influence the ATSB's decision to investigate and the level of response. Factors include:

- anticipated safety value of an investigation, including the likelihood of furthering the understanding of the scope and impact of any safety system failures
- likelihood of safety action arising from the investigation, particularly of national or global significance
- existence and extent of fatalities/serious injuries and/or structural damage to transport vehicles/other infrastructure
- obligations or recommendations under international conventions and/or codes
- nature and extent of public interest; in particular, the potential impact on public confidence in the safety of the transport system
- existence of supporting evidence or requirements to conduct a special investigation based on trends
- relevance to an identified and targeted safety program
- the extent of resources available and projected to be available in the event of conflicting priorities
- the risks associated with not investigating, including consideration of whether, in the absence of an ATSB investigation, a credible safety investigation by another party is likely
- timeliness of notification
- training benefit for ATSB investigators.

The objective of the classification process is to identify quickly, determine the necessary allocation of resources for, and manage appropriately, those occurrences that:

- require detailed investigation
- need to be recorded by the ATSB for future research and statistical analysis
- need to be passed to other agencies for further action
- do not contribute to transport safety.

Three ways to action

The *Transport Safety Investigation Act 2003* (TSI Act) requires specified people and organisations to report to the ATSB on a range of safety occurrences (called 'reportable matters'). In principle, the ATSB can investigate any of these reportable matters. In practice, they can be actioned in one of three ways to contribute to the ATSB's functions:

1. A report of an occurrence that suggests that a safety issue may exist will be investigated immediately. Investigation may lead to the identification of the safety issue and evaluation of its significance, and set out the case for safety action to be taken in response.

2. A report of an occurrence that may not warrant a full investigation may benefit from additional fact gathering for future safety analysis to identify safety issues or safety trends.

3. Basic details of an occurrence, based primarily on the details provided in the initial occurrence notification, can be recorded in the database to be used in future safety analysis to identify safety issues or safety trends.

Note: In the third approach, the occurrence is not investigated immediately, but may be the subject of a future investigation.

The investigation levels

Investigations and other responses to reported safety matters are classified by the level of resources and/or the complexity and time they require.

The list below describes the transport safety investigation levels used by the ATSB:

Level 1 investigations are likely to involve the majority of ATSB resources, in addition to significant external resources, for up to 24 months, and are likely to require additional one-off government funding.

Level 2 investigations involve a large number of ATSB (and possibly external) staff, and their scale and complexity may require up to 18 months to complete.

Level 3 investigations involve in-the-field activity and several ATSB (and possibly external) staff, and their scale and complexity may require up to 12 months to complete.

Level 4 investigations are less complex and require no more than nine months to complete (they may, at times, be a 'desktop' exercise requiring no in-the-field activity) and they involve only one or two ATSB staff.

Level 5 Short Investigations are limited-scope factual information-only investigations which result in a short summary report of one to two pages. These are generally completed within four to six weeks and published quarterly. They require only one ATSB staff member.

Fot the purposes of reporting against the Portfolio Budget Statement performance measures, the ATBS regards complex investigations as Levels 1-3, and less complex as Levels 4 and 5.

Report on performance

This chapter provides a review of performance in relation to the deliverables and key performance indicators of the ATSB's program and the agency's effectiveness in achieving planned outcomes.

SUMMARY OF PERFORMANCE

Table 1 summarises the ATSB's results in delivering Program 1.1 against the key performance indicators, deliverables, and targets published in the 2010–11 Portfolio Budget Statements.

Table 1: Summary performance for Program 1.1, 2010–11

Key performance indicator	Target	Result
Safety action is taken by stakeholders to address identified critical safety issues [1]	100%	One critical safety issue was identified in the aviation mode. The ATSB issued a safety recommendation and the issue was immediately addressed.
Safety action is taken by stakeholders to address identified significant safety issues[2]	70 % or higher	A total of 34 significant safety issues were identified. At the time of publishing, 71% were adequately addressed and 86% were either partially or adequately addressed.
Stakeholder awareness of safety issues is raised as a result of investigation, research and analysis findings and through safety education activities (as measured through a biennial survey; scored on a 7-point rating scale).	5 or higher	In a survey of industry stakeholders conducted in July 2011, around one third believed that there had been a substantial increase in awareness of transport safety issues in the past 12 months. The average score was 3.9 (on a 7-point scale)'
Stakeholders are satisfied with the ATSB's performance (as measured through a biennial survey; scored on a 7-point rating scale)	5 or higher	In the survey, 80% of stakeholders who were aware of the ATSB rated its performance as good or better (5 or higher on a 7-point scale). Two thirds of those with direct personal dealings with the ATSB rated its performance as 'good' or better.
Program deliverable	**Target**	**Result**
We will assess, classify and record all accident and incident notifications and confidential safety reports that we receive.	12,500 incident notifications	The ATSB was notified of almost 15,000 aviation, marine and rail safety accidents and incidents. Following assessment, 8,599 were classified as occurrences and entered into the ATSB's safety databases. The ATSB also received 235 confidential reports.
We will undertake complex investigations based on safety priorities and trends and complete them in a timely manner.[3]	50 (365 days)	The ATSB initiated 6 aviation, 11 marine and 5 complex rail investigations, and it completed 21 aviation, 11 marine and 4 complex rail investigations. Of those completed, 5 were finalised within 365 days .
We will undertake less complex investigations based on safety priorities and trends and complete them in a timely manner.	70 (220 days)	The ATSB initiated 108 aviation, 0 marine and 11 less complex rail investigations, and it completed 92 aviation and 5 less complex rail investigations. Of those completed, 61 were finalised within 220 days.

1 The ATSB defines critical safety issues as ones that identify an intolerable level of safety risk.
2 The ATSB defines significant safety issues as ones that identify a level of safety risk that should be reduced to as low a level as is reasonably practicable.
3 As measured from the commencement of the investigation to the release of the final report.

Program deliverable	Target	Result
We will undertake research and analysis investigations based on safety priorities and trends.	10	The ATSB released 11 research and analysis investigation reports, basing them on safety priorities and trends.
We will ensure we are prepared for a major accident by reviewing and testing our major accident response and management capabilities.	Annually	Exercises were conducted in Aviation Safety Investigation and Notifications. These included participation in the Melbourne Airport emergency exercise on 6 December 2010, and an exercise held in conjunction with Sydney Airport and Marrickville Council on 13 April 2011.
We will comply with relevant international safety investigation obligations based on the Australian legal and governance framework.	100% compliance	There were no breaches of compliance with international requirements recorded in 2010–11.
We will publish final investigation reports and make them available on our website.	100%	There were 133 final investigation reports published by the ATSB. In addition, 11 safety research and analysis investigation reports were published. All of them were placed on the ATSB website, <www.atsb.gov.au>.
We will measure stakeholder awareness of safety issues as a result of the ATSB's communication and education activities and the level of satisfaction in the delivery of our services.	Yes	A stakeholder survey was conducted in July 2011. See KPI results above.

SUMMARY OF FINANCIAL PERFORMANCE

This section should be read in conjunction with the ATSB's audited financial statements for 2010–11 which appear in the Financial Statements section of the Annual Report.

ATSB Finances

This is the second full financial year in which the ATSB has operated as a separate FMA agency having been established on 1 July 2009. The main assets of the ATSB were transferred from the Department of Infrastructure and Transport and include plant and equipment, including specialised laboratory assets, and intangible software assets.

In its first year of operation, the ATSB was in receipt of appropriation to cover the non-cash expenses of depreciation and amortisation. The Government no longer funds this expense and this is the main reason for the reduction in appropriation in 2010–11, from $22.4m in 2009–10 to $19.8m in 2010–11.

In the absence of revenue for depreciation and amortisation, the ATSB and other FMA agencies are more likely to deliver a negative operating result or deficit and these will accumulate. Offsetting this build-up of retained deficits is a commitment by the Government to provide annual capital injections to meet new capital requirements as set out in the ATSB's departmental capital budget in the 2011–12 Portfolio Budget Statement. Over time, the ATSB's capital injections are expected to offset the deficits associated with the non-funding of depreciation and amortisation, thus maintaining the underlying equity and net assets.

The ATSB's underlying result, after the effects of depreciation and amortisation are removed, is shown in Note 17 of the financial statements. This shows that the ATSB realised an underlying operating loss of $224,000 which compares to the $289,000 surplus in 2009–10. A significant factor in this result was the costs, primarily for overseas travel, in our investigation of the Qantas QF32 engine failure which occurred on a flight out of Singapore.

Table 2: Summary of financial performance and position

		2010–11 $m	2009–10 $m
Revenue from Government		19.8	22.4
Other revenue		1.1	0.7
Total income		20.9	23.1
Employee expenses		15.0	14.1
Supplier expenses		6.1	7.1
Depreciation and amortisation		1.2	1.7
Total expenses		22.3	22.8
Operating surplus/(deficit)		-1.4	0.3
Financial assets	A	8.1	8.4
Non-financial assets	B	3.5	3.9
Liabilities	C	5.0	5.0
Net Assets - A + B – C		6.6	7.3

DETAILED REPORT ON PERFORMANCE

The following report describes the performance of the components of Program 1.1 defined in the 2010–11 Portfolio Budget Statements. Given changes to the key performance indicators and deliverables for 2010–11, detailed trend information is not available. Please note that for this program, section IV Other activities has been added to address the development of National Transport Safety Reforms.

I Independent 'no blame' investigation of transport accidents and other safety occurrences

The purpose of all ATSB investigations and research is to prevent the occurrence of accidents and incidents, rather than to apportion blame or provide a means for determining liability.

Number of selective investigations of accidents and incidents based on safety priorities and guidelines

The ATSB investigates selectively, as do many equivalent international organisations. The aim is to concentrate resources on the in-depth investigations considered most likely to enhance transport safety. As many types of accidents are repetitive, investigating all accidents in detail is not justified in terms of likely safety outcomes when compared with other priorities. In such cases, the ATSB will not necessarily attend the scene, conduct an in-depth investigation or produce an extensive report. However, such occurrences may form the basis of the development of safety promotion and/or educational material.

In Australian aviation, the mandatory reporting requirements are comprehensive.[4] This, combined with a healthy reporting culture within the aviation industry, results in the ATSB receiving a large volume of occurrence reports each year, around 8,600 of which are classified as accidents, serious incidents and incidents. It is from the information provided in these notifications that the ATSB makes a decision on whether or not to investigate. While further information is sought in some cases to assist in making those decisions, the need to ensure best use of investigation resources dictates that a significant amount of professional judgement needs to be exercised.

There are times when more detailed information about the circumstances of the occurrence allows the ATSB to make a more informed decision both about whether to investigate at all and, if so, what necessary resources are required. In addition, further publicly-available information on accidents and serious incidents increases safety awareness in the industry and enables improved research activities and analysis of safety trends, leading to more targeted safety education.

In previous years rail safety investigations into level crossing collisions have comprised a significant proportion of ATSB investigations. It is therefore pleasing to report that no level crossing collision investigations were necessary during 2010–11.

The ATSB has focused significant resources on the investigation of these accidents in recent years and this work, in combination with the actions of the relevant regulatory bodies, may have contributed to a trend of improved safety in this area. The ATSB will continue to focus on level crossing occurrences where further safety lessons are expected to be learned.

4 In accordance with the Transport Safety Investigation Regulations 2003, marine and rail stakeholders are obliged to report accidents and incidents only, while Aviation stakeholders are required to report all safety occurrences (accidents, serious incidents and incidents).

This year, the ATSB's rail investigation team has responded to the industry's call for earlier information on investigations by routinely releasing preliminary factual reports on many of our more complex investigations. Similar to aviation, the rail investigation team has also started to conduct shorter, mostly factual investigations into some rail safety occurrences, where there is clear value in detailing the circumstances surrounding an occurrence and the safety action taken by parties involved.

In marine, the ATSB again investigated a broad range of occurrences including fatalities and serious injuries, fires, groundings and loss of cargo. Two occurrences also involved serious pollution. In particular, the ATSB remains concerned about occurrences involving fires in machinery spaces and has also launched a safety issues investigation into coastal pilotage in Torres Strait and the Great Barrier Reef, following the investigation of the grounding of a products tanker in Torres Strait where a coastal pilot was on board.

Table 3 presents transport safety investigations statistics. In 2010–11, the ATSB initiated 114 aviation investigations, of which 72 were Level 5 Short Investigations. It also initiated 11 marine investigations and 16 rail investigations of which three were Level 5 Short Investigations. The ATSB completed 113 aviation investigations (of which 52 were Level 5 Short Investigations), 11 marine and nine rail investigations of which one was a Level 5 Short Investigation.

Table 3: Transport safety (occurrence, issue and external) investigations, 2010–11

	Mode	Q1	Q2	Q3	Q4	Total
Investigations commenced	Aviation	9	12	12	9	**42**
	Aviation Short	14	23	18	17	**72**
	Marine	1	6	2	2	**11**
	Rail	2	6	6	2	**16**
Completed investigations	Aviation	12	20	10	19	**61**
	Aviation Short	17	16	0	19	**52**
	Marine	1	5	3	2	**11**
	Rail	0	2	3	4	**9**
Investigations active at end of period	Aviation	68	60	61	51	**51**
	Aviation Short	11	18	36	33	**33**
	Marine	11	12	11	11	**11**
	Rail	10	14	17	15	**16**

Develop, review and test major accident investigation response capabilities

The 2010–11 review and testing of the response capabilities of ATSB staff complemented previous testing of ATSB operational readiness. The ATSB's 2010–11 major accident response program included exercises concerning a major accident investigation response as well as Notifications processes. The exercises included participation in the Melbourne Airport emergency exercise held on 6 December 2010. This exercise provided valuable interaction and processing of occurrence Notifications and immediate response actions for the ATSB's Accident Response Centre (ARC).

A subsequent exercise held in conjunction with Sydney Airport and Marrickville Council in Sydney on 13 April 2011 tested the interaction and co-operation between ATSB, NSW Police, Marrickville Council, Sydney Airport, Airservices Australia and other rescue agencies. The exercise provided a realistic scene off-airport and provided an opportunity for ATSB to evaluate new video-streaming technologies, with an opportunity for one of the part-time Commissioners to be involved in a simulated media briefing. This exercise deployment was followed the next day by a simulated ATSB Investigation Groups meeting which included Civil Aviation Safety Authority (CASA) and Department of Defence participants.

Other activities undertaken to enhance the ATSB's major accident response capabilities included:

- provision of a major accident response briefing to new and existing aviation investigators
- ongoing participation in the National Airport Emergency Planning Advisory Group forum
- meetings and briefings with key stakeholders, particularly police and emergency services personnel, airport operators and major airlines
- a briefing to members of the Civil Aviation Authority of Singapore (CAAS) on major accident preparedness
- the commencement of a review of the ATSB's major accident-preparedness safety investigation guidelines (SIGs)
- a revised major accident key-post listing prepared in electronic form and included in the ATSB's Safety Investigation Quality System (SIQS).

II Safety data recording, analysis and research

Proportion of accident and incident notifications and confidential reports received, assessed, classified and recorded

In 2010–11, the ATSB was notified of almost 15,000 aviation, marine and rail safety accidents and incidents. Following assessment, 8,599 were classified as occurrences and entered into the ATSB's safety databases. The ATSB also received 235 confidential reports.

Number of selective research and analysis investigations based on safety priorities and trends

In 2010–11, the ATSB continued to analyse information held in its aviation safety occurrence database as part of Australia's obligations to the International Civil Aviation Organization (ICAO) in determining whether or not preventative safety measures are needed. The ATSB engaged industry experts and other stakeholders, where necessary or desirable, to ensure that the research was focused, timely and relevant.

The ATSB also compiled statistics from rail data supplied by state and territory rail authorities.

The 11 safety research and analysis reports released in 2010–11 covered a diverse range of topics. They included reviews of accident and incident trends in aviation and rail, airspace-related occurrences at non-towered airports, aircraft loading occurrences, and a review of the safety issues and safety actions from ATSB investigations in the 2009–10 year. The ATSB also continued its pilot education series on avoidable accidents with two more publications. Safety research publications are available on the ATSB's website, <www.atsb.gov.au>.

III Fostering safety awareness, knowledge and action

Contribute to international working groups and major conferences

Representation at meetings of safety investigation agencies from around the world provided opportunities for the ATSB to share insights on best practice and solutions to emerging challenges in the field of no-blame safety investigation during 2010–11. These included meetings of the Marine Accident Investigators' International Forum in January/February 2011, the Marine Accident Investigators' Forum in Asia in Japan, the International Society of Air Safety Investigators in Japan, the Australian & New Zealand Societies of Air Safety Investigators, the International Transport Safety Association and the International Rail Safety Conference 2010 in Hong Kong.

International Civil Aviation Organization

The International Civil Aviation Organization (ICAO) is a specialised agency within the United Nations that provides a global forum for civil aviation. ICAO works to achieve its vision of safe, secure and sustainable development of civil aviation through cooperation amongst its 190 member States.

As a founding member of ICAO, Australia has played a prominent role in the Council and the Air Navigation Commission. Since 1974, Australia has consistently been elected to the Council as a Category One State of Chief Importance in Air Transport, and plays a major part in the activities of ICAO. Australia's role has been underpinned by its perceived integrity and lack of bias, and excellent aviation safety record.

From 28 September to 8 October 2010, ICAO held its 37th Assembly Meeting at the ICAO headquarters in Montreal. Through Australia's efforts, it was agreed that a multi-disciplinary task force should be established to review the standards and recommended practices on the protection of information from safety data collection and processing systems. It is intended that this taskforce will be able to establish a more workable regime that better balances the need to preserve the free flow of safety information (by providing for protections) against the disclosure of information in the interested of justice and/or administrative action. The ATSB has been a strong advocate for these reforms over a number of years.

The ATSB has also been working with ICAO to develop a definition for 'contributing factors' to use as an alternative to the word 'causes'. The term 'cause' has connotations of blame and liability which 'no-blame' safety investigations are meant to avoid. The term 'contributing factor'[5] is used to address a broader range of factors associated with an accident or incident than just those that would normally be associated with causal liability. Identifying a broader range of factors is in the interests of safety.

The other significant ICAO matter that the ATSB has been involved in is the amendment of standards related to the carriage of flight recorders to improve the availability of information for investigation purposes. This work is ongoing.

International Maritime Organization

The International Maritime Organization (IMO) is a specialized agency of the United Nations responsible for measures to improve the safety and security of international shipping and to prevent marine pollution. It is also involved in legal matters, including liability and compensation issues and the facilitation of international maritime traffic. The Flag State Implementation Sub-Committee's (FSI) Casualty Analysis Working Group is the forum for input and discussion about international trends in marine safety and safety investigations.

5 The ATSB has, for a long time, used the term 'contributing safety factor' in its own findings.

The 19th FSI meeting was held in February 2011 at the IMO headquarters in London. An ATSB representative attended and participated in each meeting. This is the international forum for raising marine safety issues and investigations of international significance. The ATSB has always been a regular member of, and prominent contributor to, the group. The specific items dealt with at these meetings included:

- The review of the report analyses and the lessons to seafarers for selected reports reviewed by the correspondence group were accepted and approved for release to IMO. Better dissemination of these lessons to the wider marine community was put to the Secretariat for action. Access to, and improved useability of, the Global Integrated Shipping Information System (GISIS) database was discussed. Methods of promulgation to industry and others of GISIS information were discussed.
- Operation, access and compatibility of another database being set up by the European Union—the European Marine Casualty Information Platform (EMCIP)—was discussed.
- Two inter-sessional correspondence groups were set to review the operation of GISIS and the Casualty Investigation Code.

International engagement

The ATSB's engagement with overseas counterparts is typical of the way the international transportation community cooperates for the common good. Lessons that will benefit safety are shared openly, and the knowledge gained assists other countries to improve transport safety and provide better training for safety investigators.

The ATSB continued to collaborate with overseas agencies on international investigations. In 2010–11, this included providing technical analysis assistance to the New Zealand Transport Accident Investigation Commission (TAIC) to download cockpit voice recordings, and assistance to the Royal New Zealand Air Force with solid state device data recovery.

The ATSB also consulted with the United States on a number of ATSB investigations of accidents and serious incidents involving Boeing and other US aircraft, engine and component manufacturers, and with France and Airbus on a number of ATSB investigations involving Qantas and several foreign carriers' Airbus aircraft.

The ATSB has continued to assist the New Zealand TAIC with their implementation of an information management system based on the ATSB Safety Investigation Information Management System (SIIMS). We have also answered queries from the United Kingdom Air Accidents Investigation Branch and the South African Civil Aviation Authority regarding our information management system, and we will be running familiarisation training in the coming year.

Regional assistance

The ATSB continued an active program of regional engagement with other transport safety agencies, over and above that required by international obligations.

Australia's reputation for high quality and rigorous investigations makes it uniquely placed to assist transport safety in the Asia–Pacific region. In particular, the ATSB has ongoing involvement in the Australian Government Indonesian Transport Safety Assistance Package (ITSAP) and cooperation with Papua New Guinea (PNG) consistent with the *Memorandum of Understanding on Cooperation in the Transport Sector*.

Many countries do not have a well-developed capability to investigate aviation accidents and serious incidents. In this situation, ICAO believes that the establishment of a regional accident investigation organisation or the creation of a regional pool of qualified investigators may be the best way to establish an effective accident and incident investigation and prevention system. This continues to be the topic of discussion in the international aviation community, and Australia will take an active role in this regard in the Asia–Pacific region.

Indonesia

Between July 2010 and June 2011, the ATSB and the Indonesian National Transportation Safety Committee (NTSC) collaborated on a range of ITSAP activities. One project brought together a group of Indonesian human factors professionals to develop and deliver human factors training. Guided by ATSB facilitators, the NTSC human factors team developed the training course during a series of workshops, and then successfully delivered the course to NTSC investigators and Indonesian industry participants. This was a significant achievement, as very few aviation safety agencies worldwide have developed training of this type.

Other ITSAP projects included capability building in NTSC flight data recorder download and analysis, and the development and delivery of a training course to educate Indonesian police on the role, powers, and responsibilities of the NTSC. An NTSC marine investigator also completed the 12-month ATSB Transport Safety Investigation Diploma in Australia.

On 4 November 2010, a Qantas Airbus A380 returned to Singapore after an uncontained engine failure overhead Batam Island, Indonesia. In accordance with ICAO Annex 13, Aircraft Accident and Incident Investigation, as the engine failure occurred over Indonesian territory, the responsibility for conducting the investigation rested with Indonesia as the State of Occurrence. However, Annex 13 permits the investigation to be delegated to another State by mutual arrangement, and following discussion, the NTSC delegated the investigation to the ATSB. The investigation is ongoing.

Following the crash of a Merpati Xi'an MA60 aircraft at Kaimana, West Papua, on 7 May 2011, with the loss of all 25 people on board, the NTSC requested assistance from the ATSB to download and analyse the aircraft flight data recorders. An ATSB recorder specialist worked with NTSC recorder lab staff to download and analyse the cockpit voice recorder, and to analyse data recovered from the flight data recorder at the manufacturer's facility in China.

Papua New Guinea

Under the PNG *Memorandum of Understanding on Cooperation in the Transport Sector*, the ATSB has developed a program of capability building with the PNG Accident Investigation Commission (AIC). An initial ATSB–AIC project to develop sound and comprehensive policies and procedures for the AIC was successfully completed in March 2011.

Further AIC capability building will concentrate on training for AIC investigators and investigation support staff, and guiding and mentoring of AIC investigators by ATSB investigators on accident sites in Australia and Papua New Guinea. The ATSB is also cooperating with the AIC in the investigation of a number of PNG aviation accidents.

After the crash of a PNG-registered Twin Otter aircraft near Kokoda on 11 August 2009, in which nine Australians died, the ATSB committed a team of investigators to work on this accident investigation at the request of the AIC. The ATSB investigators worked alongside AIC staff in PNG, and AIC staff have travelled to Canberra for formal sessions related to the investigation. The AIC investigation report was released to the public on 31 March 2011.

On 31 August 2010, the ATSB appointed an ICAO Accredited Representative to assist the AIC investigation into the runway excursion on Misima Island, PNG. ATSB investigators accompanied AIC staff to the island before returning to Australia to continue their investigative work. It is anticipated that the AIC investigation will be concluded in the third quarter of calendar year 2011.

At the request of the AIC, the ATSB assumed responsibility for investigating the ditching of an Australian-registered aircraft at Milne Bay, PNG, on 26 September 2010. The report of that investigation was published by the ATSB on 16 February 2011.

Proactive implementation of safety action by stakeholders, reducing the need to issue formal safety recommendations

Rather than waiting to make formal safety recommendations through a transport safety investigation report, the ATSB prefers to encourage the relevant stakeholders to initiate proactive safety action while the investigation is continuing. This approach is considered to deliver better and more immediate results in terms of improvements in safety culture and practices. However, depending on the level of risk associated with a safety issue and the extent of corrective action undertaken by the relevant organisation, a safety recommendation or advisory notice may be issued, either during or at the end of an investigation.

A safety recommendation is a formal recommendation by the ATSB to an organisation for it to address a specific safety issue. ATSB safety recommendations focus on stating the problem (i.e. the description of the safety issue). They do not identify specific solutions for reducing risk. A safety advisory notice, in contrast, is advice by the ATSB to an organisation that it should consider the safety issue and take action where it believes it is appropriate. A safety advisory notice is a 'softer' output than a safety recommendation. It is used for less significant safety issues, where the available evidence is more limited, or when the target audience is not a specific organisation.

Further information on safety issues appears in the Safety Actions and Recommendations section of this report.

Details of all safety recommendations and safety advisory notices, including responses received relating to safety recommendations, are available at the ATSB's website <www.atsb.gov.au>.

Publish ATSB final investigation reports and make them available on the ATSB website

There were 133 final investigation reports published by the ATSB. In addition, 11 safety research and analysis investigation reports were published. Further information on ATSB investigations appears in the Transport Safety Investigations section. All were placed on the ATSB website, <www.atsb.gov.au>. The ATSB will continue to make all publicly available information accessible online and provide an information and referral service through the toll-free call centre. Improvements to the ATSB's website are making online information more accessible by allowing the use of assistive technologies. For more details, consult the chapter on Communication and Education.

IV Other activities

National Transport Reforms

The ATSB has been working with the Department of Infrastructure and Transport and state and territory governments to improve safety outcomes for the rail and maritime industries.

In the 2010–11 Budget, $0.8 million was allocated to the ATSB to enable it to prepare for a national role as Australia's no-blame rail and maritime safety investigator. In its latest Budget, the government announced further funding of $2.4 million in 2011–12 and $8 million in 2012–13 for this purpose.

Rail

On 7 December 2009, the Council of Australian Governments (COAG) agreed to the Standing Committee on Transport's advice in relation to the steps necessary to position the ATSB to operate as an enhanced rail investigator. More recently, in May 2011 the Australian Transport Council (ATC) agreed to the proposal for the ATSB's enhanced role. This involves the delivery of investigations in New South Wales and Victoria by the ATSB or existing state investigation agencies, staff of which will be delegated powers under the Commonwealth's *Transport Safety Investigation Act 2003* (TSI Act) and the conduct of investigations by the ATSB in the remaining states. Subject to COAG agreement, implementation of the ATC decision will commence in time for the ATSB's enhanced role to begin when the national rail safety regulator is operational in January 2013.

Maritime

Steps are in train to develop similar arrangements for maritime safety investigation. In May 2011, the ATC agreed to the collaborative management of national, no-blame maritime investigatory resources by the ATSB under the TSI Act. The Australian Maritime Group is developing a detailed proposal to progress ATC's decision, for consideration by the Standing Council on Transport and Infrastructure (replacing the ATC) in the second half of 2011. This reform will potentially expand the ATSB's role from investigating only accidents involving Australian registered, interstate and overseas trading ships to include all corporately owned commercial vessels operating in state waters. It will also enable more efficient and effective use of existing maritime investigatory resources, and provide enhanced investigatory capacity (including the investigation of serious maritime safety matters which are not currently independently investigated).

Transport safety investigations

The ATSB's transport safety investigations result in a published report which includes the factual information relating to the occurrence and the analysis and findings relevant to the circumstance of the occurrence.

The ATSB prefers to encourage early and positive safety action following an accident or incident, and to record such action in its final investigation reports if this is possible, negating the need to issue formal safety recommendations. However, the ATSB will make recommendations when it believes that insufficient safety action may have been taken in relation to a safety issue identified in an investigation. Further information on the ATSB treatment of safety issues appears in the Safety Actions and Recommendations section of this report.

AVIATION INVESTIGATIONS

Role

The ATSB's aviation safety investigation branch investigates accidents and other occurrences involving civil aircraft in Australia. It does so in accordance with Annex 13 to the Convention on International Civil Aviation (Chicago Convention 1944), which has legal force through the TSI Act.

The ATSB may also assist in investigations of accidents and serious incidents involving Australian-registered aircraft overseas, or with overseas investigations involving foreign aircraft if an overseas investigating authority seeks assistance and the ATSB has suitable available resources.

The ATSB works cooperatively with organisations such as CASA, Airservices Australia, and aircraft manufacturers and operators, who are best placed to effect changes to improve safety.

Key aviation safety activities and results

In 2010–11, the ATSB initiated 40 Level 4[6] and above safety investigations from approximately 15,000 accident and incident notifications received (8,599 were classified as aviation occurrences).Of those, four were downgraded and continued as Short Investigations.[7]In addition, two were discontinued as a consequence of the ATSB's primary focus on enhancing safety with respect to fare-paying passengers and, in particular, those transport safety matters that may present a significant threat to public safety.

During 2010–11, the ATSB completed 61 Level 4 and above aviation investigations. The median time for the completion of Level 4 and above occurrence investigations was 461 days, a decrease from 539 days last year but still well above the target of 365 days. Of the 61 completed investigations, one was completed within 365 days.

The median completion time was significantly affected by the release of a number of older investigations that were delayed due to higher priority tasking and the ATSB's involvement in five significant Level 2 investigations into passenger transport accidents.

In line with aviation safety stakeholder expectations, the ATSB has commenced a number of initiatives to improve the timeliness of its aviation safety outputs. This includes a restructure of the aviation safety investigation branch to re-establish regional managers in the Perth and Brisbane field offices and the development of a project management approach to the conduct of investigations. To support improved project management, a number of system enhancements are being developed, including improvements to the Safety Investigation Information Management System and improved effort logging tools for investigators.

At 30 June 2011, the ATSB was investigating 51 Level 4 and above aviation occurrences, down from a high of 106 in 2009–10. That reduction is a result of a strategy to reduce the number of investigations on hand in order to release investigation resources to concentrate on an increased number of systemic investigations.

AVIATION INVESTIGATION CASE STUDY: OXYGEN CYLINDER FAILURE AND DEPRESSURISATION

On 25 July 2008, a Boeing Company 747-438 aircraft carrying a total of 369 passengers and crew rapidly depressurised following the forceful rupture of one of its emergency oxygen cylinders in the forward cargo hold. The aircraft was cruising at 29,000 ft and was 55 minutes into a flight between Hong Kong and Melbourne, Victoria at that time.

Following an emergency descent to 10,000 ft, the flight crew diverted the aircraft to Ninoy Aquino International Airport, Manila, Philippines, where it landed safely. None of the passengers or crew sustained any physical injury.

A team of investigators, led by the ATSB and including representatives from the US National Transportation Safety Board (NTSB), the US Federal Aviation Authority (FAA), Boeing and the Civil Aviation Authority of the Philippines (CAAP) examined the aircraft on the ground in Manila. From that work, it was evident that the oxygen cylinder (No 4 in a bank along the right side of the forward cargo hold) had burst in such a way as to rupture the adjacent fuselage wall and be propelled upwards. The cabin floor was punctured before the cylinder impacted the frame and handle of an external door and the overhead cabin panelling. No part of the cylinder (other than the valve assembly) was recovered and it was presumed lost from the aircraft during the depressurisation.

6 See the earlier section 'Investigation priorities and classifications' for definitions of investigation levels.
7 In 2010–11, 52 Level 5 Short investigations were completed. That investigation methodology and output was adopted in December 2009.

The ATSB undertook a close and detailed study of the cylinder type, including a review of all possible failure scenarios and an engineering evaluation of other cylinders from the same production batch and of the type in general. It was evident that the cylinder failed by bursting through, or around the base, which allowed the release of the pressurised contents to project it vertically upwards. While it was hypothesised that the cylinder may have contained a defect or flaw, or been damaged in a way that promoted failure, there was no evidence found to support such a finding. Nor was there any evidence found to suggest the cylinders from the subject production batch, or the type in general, were in any way predisposed to premature failure.

A number of minor safety issues and areas for potential safety improvement were identified during the flight operations and cabin safety investigations. Those issues and areas have been addressed by the operator's safety action, or were the subject of safety advisory notices that were issued by the ATSB.

AVIATION INVESTIGATION CASE STUDY: CONTROLLED FLIGHT INTO TERRAIN

On 11 August 2009, a de Havilland Canada DHC-6 Twin Otter aircraft, registered P2-MCB, with two pilots and 11 passengers, was being operated on a scheduled regular public transport service from Port Moresby to Kokoda Airstrip, Papua New Guinea (PNG).

At about 1113 PNG local time, the aircraft impacted terrain on the eastern slope of the Kokoda Gap at about 5,780 ft above mean sea level in heavily-timbered jungle about 11 km south-east of Kokoda Airstrip. Prior to the accident, the crew were manoeuvring the aircraft within the Kokoda Gap, probably in an attempt to maintain visual flight in reported cloudy conditions. The aircraft was destroyed by impact forces. There were no survivors.

The PNG Accident Investigation Commission (AIC PNG) invited the ATSB to assist their investigation. The investigation concluded that the accident was probably the result of controlled flight into terrain: that is, an otherwise airworthy aircraft was unintentionally flown into terrain, with little or no awareness by the crew of the impending collision.

The investigation identified a number of factors that led to increased safety risk. Those related to the crew of the aircraft, the weather conditions affecting the flight, crew training and the conduct of the flight. A number of the safety factors had the potential to adversely affect the safety of future aviation operations.

As a result of this investigation, AIC PNG issued a safety recommendation in respect of the installation of cockpit voice recorders (CVRs) in PNG aircraft with a seating capacity of 18 or more passengers. In response, the Civil Aviation Safety Authority of PNG (CASA PNG) intends legislating to require the installation of CVRs in turbine-powered aircraft with seating for more than nine passengers. As a result of the investigation, CASA PNG has also established a principal medical officer position and has advised of action to move responsibility for the administration of the PNG mandatory occurrence notification system to the AIC PNG. Extensive proactive safety action has been taken by the aircraft operator in response to the risk of inadvertent flight into cloud while employing visual flight procedures and in regard to operations into Kokoda Airstrip an effort to prevent a recurrence.

AVIATION INVESTIGATION CASE STUDY: LOSS OF SEPARATION ASSURANCE

On 22 December 2009, at 0253 Central Standard Time, an air traffic controller took action to resolve a loss of separation assurance that occurred 222 km north-west of Tennant Creek, Northern Territory, between an Airbus A330-300 (A330) aircraft, registered B-HLV, and a Boeing Company B737-800 aircraft, registered VH-VUJ.

The aircraft were approaching each other at 37,000 ft while tracking in opposite directions on the same airway route. The air traffic controller managing the airspace did not effectively control the resolution of the developing confliction.

The flight crews of both aircraft identified the traffic confliction and initiated avoidance action to maintain separation.

The investigation found that the controller did not implement a separation plan when the confliction was first identified and that action by the flight crew of the A330 prompted the controller to take action to re-establish separation assurance. A number of safety issues were identified, including that the controller had not received training in compromised separation recovery techniques and that there was no dedicated control room aisle supervisor during the then peak traffic period. Finally, ambiguity was identified between the *Manual of Air Traffic Services* (MATS) and the *Aeronautical Information Publication* (AIP) in relation to the assignment of non-standard cruising levels and the definition of an 'operational requirement'.

In response to this occurrence, Airservices Australia (Airservices) conducted an internal investigation, which recommended a number of actions to address the safety factors and issues that were identified by the Airservices investigation. The ATSB is satisfied that the actions taken by Airservices to clarify the relevant content in the MATS and AIP, and recommended by the Airservices investigation will, when implemented, adequately address the safety issues identified in this ATSB safety investigation.

AVIATION INVESTIGATION CASE STUDY: ENGINE FAILURE OF A ROLLS ROYCE ENGINE ON A QANTAS A380

On 4 November 2010, at 0157 Universal Coordinated Time (UTC), an Airbus A380 aircraft, registered VH-OQA (OQA), being operated as Qantas flight 32, departed from runway 20 centre (20C) at Changi Airport, Singapore for Sydney, New South Wales. On board the aircraft were five flight crew, 24 cabin crew and 440 passengers (a total of 469 persons on board).

Following a normal takeoff, the crew retracted the landing gear and flaps. The crew reported that, while maintaining 250 kts in the climb and passing 7,000 ft above mean sea level, they heard two almost coincidental 'loud bangs', followed shortly after by indications of a failure of the No 2 engine.

The crew advised Singapore Air Traffic Control of the situation and were provided with radar vectors to a holding pattern. The crew undertook a series of actions before returning the aircraft to land at Singapore. There were no reported injuries to the crew or passengers on the aircraft. There were reports of minor injuries to two persons on Batam Island, Indonesia.

A subsequent examination of the aircraft indicated that the No 2 engine had sustained an uncontained failure of the Intermediate Pressure (IP) turbine disc. Sections of the liberated disc had penetrated the left wing and the left wing-to-fuselage fairing, resulting in structural and systems damage to the aircraft.

The No 2 engine was removed from the aircraft and disassembled in an authorised engine workshop for examination, under the supervision of the ATSB. In addition, a large section of liberated IP turbine disc was also recovered from Batam Island for examination.

Examination of components removed from the failed engine at the Rolls-Royce plc facility in Derby, United Kingdom, identified the presence of fatigue cracking within a stub pipe that feeds oil into the High Pressure (HP) / Intermediate Pressure (IP) bearing structure. While the analysis of the engine failure is ongoing, it has been identified that the leakage of oil into the HP/IP bearing structure buffer space (and a subsequent oil fire within that area) was central to the engine failure and IP turbine disc liberation event.

Further examination of the cracked area identified the axial misalignment of an area of counter-boring within the inner diameter of the stub pipe; the misalignment producing a localised thinning of the pipe wall on one side. The area of fatigue cracking was associated with the area of pipe wall thinning.

As a result of this occurrence, a number of safety actions were immediately undertaken by Qantas, the Australian Civil Aviation Safety Authority, Airbus, Rolls-Royce plc, and the European Aviation Safety Agency.

The ATSB prepared a preliminary factual report on the investigation of the occurrence. That report was publicly released on 3 December 2010.

Critical safety issue

Misaligned stub pipe counter-boring is understood to be related to the manufacturing process. This condition could lead to an elevated risk of fatigue crack initiation and growth, oil leakage and potential catastrophic engine failure from a resulting oil fire.

MARINE INVESTIGATIONS

Role

The ATSB marine investigation team investigates accidents and incidents involving Australian-registered ships anywhere in the world and foreign ships in Australian waters or *en route* to Australian ports.

The ATSB works cooperatively with international regulatory authorities, Australia's maritime regulator (AMSA), the state and territory maritime regulatory authorities, other transport safety investigation agencies, ship owners, and operators.

As well as electronic publishing, the ATSB prints and distributes copies of marine transport safety investigation reports and safety and educational material nationally and internationally to promote maritime safety in Australia and overseas. Organisations receiving these reports include the international maritime community, Australian and overseas educational institutions, and maritime administrations in Australia and overseas, including the IMO.

Key marine safety activities and results

In 2010–11, the ATSB initiated 11 marine transport safety investigations from a total of 71 accident and incident notifications. Eleven investigations were completed in this time period. The median completion time for those investigations was 374 days.

The completed investigations involved three groundings, one collision, three fatalities, three fires and one incident each of serious injury and cargo loss. Those investigations recorded 36 safety actions voluntarily taken by stakeholders (in response to 30 safety issues) and included a total of three safety recommendations and five safety advisory notices directed to stakeholders.

At 30 June 2011, the marine investigation team was continuing to investigate 11 marine occurrences.

A marine safety issues investigation into coastal pilotage was started on 14 December 2010. This investigation was initiated after the release of the occurrence investigation final report, MO-2009-262, into the grounding of the tanker *Atlantic Blue*.

MARINE INVESTIGATION CASE STUDY: LOSS OVERBOARD OF CONTAINERS FROM PACIFIC ADVENTURER AND SUBSEQUENT LEAKING OF OIL

Investigation number MO-2009-002

On 11 March 2009, the container ship *Pacific Adventurer* lost 31 containers overboard in gale force weather conditions and large swells off Cape Moreton, Queensland. All the containers sank and two of the ship's fuel oil tanks were holed as the containers went overboard. About 270 tonnes of oil leaked from the holed tanks and 61 kilometres of Queensland's coastline was affected by oil pollution.

The ATSB investigation found that the ship was probably subjected to synchronous rolling at the time and that the severe and sometimes violent rolling motions caused the lashings on the containers, and possibly some containers themselves, to fail. In addition, much of the fixed and loose container lashing equipment was in a poor condition and the inspection and replacement regime in the ship's safety management system had not been effectively implemented.

The ATSB identified four safety issues during the investigation: the inspection and maintenance regime of the ship's fixed and loose lashing equipment had been deficient; there was no requirement for a third party to inspect this equipment; the cargo in the containers which were lost overboard was not packaged in accordance with international dangerous goods shipping requirements; and the dangerous goods shipping compliance audit regime did not pick up on this fact.

Safety action to address the safety issues was taken by several of the responsible organisations. The ATSB has issued one safety advisory notice in regard to the outstanding safety issue concerning third party inspections of lashing equipment.

MARINE INVESTIGATION CASE STUDY:
THE GROUNDING OF THE BULK CARRIER SHEN NENG 1

Investigation Number: MO-2010-003

At 1705 on 3 April 2010, the Chinese registered bulk carrier *Shen Neng 1* grounded on Douglas Shoal, about 50 miles north of the entrance to the port of Gladstone, Queensland. The ship's hull was seriously damaged by the grounding, with the engine room and six water ballast and fuel oil tanks being breached, resulting in a small amount of pollution.

The ATSB investigation found that the grounding occurred because the chief mate did not alter the ship's course at the designated course alteration position. His monitoring of the ship's position was ineffective and his actions were affected by fatigue.

The ATSB identified four safety issues during the investigation: there was no effective fatigue management system in place to ensure that the bridge watchkeepers were fit to stand a navigational watch after they had supervised the loading of a cargo of coal in Gladstone; there was insufficient guidance in relation to the proper use of passage plans, including electronic route plans, in the ship's safety management system; there were no visual cues to warn either the chief mate or the seaman on lookout duty, as to the underwater dangers directly ahead of the ship; and, at the time of the grounding, the protections afforded by the requirement for compulsory pilotage and active monitoring of ships by REEFVTS were not in place in the sea area off Gladstone.

The ATSB has issued two safety recommendations to *Shen Neng 1*'s management company regarding the safety issues associated with fatigue management and passage planning, and acknowledges the safety action taken by the AMSA in relation to the extension of REEFVTS coverage to include the waters off Gladstone.

RAIL INVESTIGATIONS

Role

The ATSB Rail Safety Investigation Team conducts investigations into rail safety occurrences (accidents and incidents) on the Defined Interstate Rail Network (DIRN) under the provisions of the TSI Act. Occasionally in the past, the ATSB has undertaken rail investigations on intrastate rail networks at the request of state and territory authorities. The ATSB also has a mandate from the ATC to coordinate the publication of National Rail Occurrence Data from data supplied by the various state and territory rail regulators.

The ATSB works cooperatively with organisations such as the state and territory rail regulators, the Australian Rail Track Corporation (ARTC), and rail operators, who are best placed to effect changes to improve safety. For example, one investigation was commenced on behalf of the South Australian Office of the Rail Regulator. This high-profile investigation (RO-2011-002) involved a suburban passenger train that collided with another suburban passenger train very shortly after departing the Adelaide Railway Station. Fortunately no person was injured in the occurrence. The investigation was well advanced at 30 June 2011.

Key rail safety activities and results

In 2010–11, the ATSB initiated 15 rail safety investigations on the DIRN under the TSI Act, from a total of 65 rail accident and incident notifications recorded.

There has been a notable decline in reported level crossing collisions, particularly those involving heavy vehicles. The ATSB has focused significant resources on the investigation of these accidents in recent years, and this work, in combination with the actions of the relevant regulatory bodies, may have contributed to a trend of improved safety in this area.

The ATSB completed nine investigations. The completion times for the nine final rail investigation reports ranged from 83 to 661 days.

The completed investigations related to four safeworking irregularities, two Signal Passed At Danger (SPAD) occurrences, one track irregularity, one signalling irregularity, and one collision with a person (not at a level crossing).

As of 30 June 2011, the ATSB was continuing to investigate 13 rail safety occurrences.

RAIL INVESTIGATION CASE STUDY: DERAILMENT OF FREIGHT TRAIN 6MB2 AT TOTTENHAM, VICTORIA

Investigation Number: RO-2009-004

At about 1515 on 30 January 2009, northbound freight train 6MB2, owned and operated by Pacific National, derailed near the beginning of a left-hand curve located near the 8.915 track km point at Tottenham, Victoria. In total, eight wagons derailed and about 400 m of timber-sleepered track was damaged. Damage to rolling stock was minimal and there were no injuries as a result of the occurrence.

At the time of the derailment, major infrastructure works between Melbourne and Sydney were being carried out to improve the general track condition and operating efficiency on the standard gauge rail corridor.

Train 6MB2 derailed as it passed over a section of mainline track in the Tottenham Yard precinct that contained a build-up of longitudinal rail stress after three consecutive days of very high temperatures. Due to the extreme weather conditions, ARTC had implemented heat speed restrictions for train operators between Tottenham and Albury, restricting trains to speeds not greater than 60 km/h.

When train 6MB2 approached the left-hand curve near the Ashley Street Bridge, the train crew observed that a small lateral misalignment had developed in the track. As the train passed over it, the dynamic movement of the rail vehicles added sufficient force to increase the size of the misalignment. A container flat wagon (NQKY 34695L),which was 31st in the consist and near the rear of the train, was the first vehicle to derail.

No evidence was found that defective rolling stock components had contributed to the derailment.

The Tottenham standard gauge passing loop was converted for mainline operation on 28 July 2008. This section of track was not tested after the conversion to mainline to determine if any residual stress was present in the rails and if any treatments were necessary to reduce the likelihood of track misalignments.

Other safety issues identified were that creep monuments had not been installed at the east end of the curve near where train 6MB2 derailed and the rails had not been punch marked to allow track inspectors to detect rail creep. In addition, a record of two rail welds carried out at the 8.351 km point on 30 January 2009 had not been documented for future reference. Attention to both items was a specific requirement of the V/Line Infrastructure Civil Engineering Circular 3/87.

Following the derailment, ARTC reconstructed this section of track and replaced the timber sleepers with concrete sleepers as part of the Tottenham to Dynon infrastructure track upgrade.

RAIL INVESTIGATION CASE STUDY:
SAFEWORKING IRREGULARITY INVOLVING PASSENGER TRAIN SN57 AND TRAIN D231 AT MOSS VALE, NSW

Investigation Number: RO-2010-006

On 17 June 2010, a safeworking irregularity involving CityRail passenger service SN57 and train D231, a Pacific National 'light engine', occurred at Moss Vale in New South Wales. On the day of the occurrence, planned maintenance on the Argyle Street bridge was being conducted in accordance with ARTC's SAFE Notice 2-1334/2010. By way of the SAFE Notice, ARTC had promulgated that Down CityRail services would be routed from the Down Main via 140 points set reverse (an unsignalled movement) then terminate alongside the Moss Vale Up Platform before forming the return Up service to Campbelltown.

The investigation determined that the network controller, in error, gave the driver of CityRail passenger train SN57 verbal authority to pass signals MV15 and MV39 in the Stop position, over 140 points set reverse, to access the Up Platform at Moss Vale. A little earlier, the controller had authorised train D231 to travel into the Moss Vale Up Refuge Siding, also over 140 points, thereby placing the two trains into direct conflict.

Fortunately the network controller recognised the error and stopped train D231 about 200 m before 140 points, the potential point of conflict. There were no injuries or damage to rolling stock or infrastructure as a result of the incident.

The investigation established that an error by the network controller was the main factor contributing to the incident. However, the ATSB considers that the use of a checklist or similar systemic defence measure by network controllers for this type of working may enhance the integrity of ARTC's current safeworking arrangements.

SAFETY ACTIONS AND RECOMMENDATIONS

The object of a safety investigation is to identify and reduce safety-related risk. The ATSB's contribution to the reduction of safety-related risk includes the facilitation of safety action arising from safety issues identified by the ATSB during the course of its investigations.

The ATSB prefers to encourage relevant stakeholders to initiate proactive safety action that addresses identified safety issues. Nevertheless, the ATSB may use its powers to make a formal safety recommendation either during or at the end of an investigation, depending on the level of risk associated with a safety issue and the extent of corrective action already undertaken by the relevant stakeholder.

When safety recommendations are issued, they focus on clearly describing the safety issue of concern rather than providing instructions or opinions on a preferred method of corrective action. As with equivalent overseas organisations, the ATSB has no power to enforce the implementation of its recommendations. It is a matter for the body to which an ATSB recommendation is directed to assess the costs and benefits of any particular means of addressing a safety issue.

When the ATSB issues a safety recommendation to a person, organisation or agency, the recipient must provide a written response within 90 days. That response must indicate whether they accept the recommendation, any reasons for not accepting part or all of the recommendation, and details of any

proposed safety action to give effect to the recommendation. The ATSB can also issue safety advisory notices suggesting that an organisation or an industry sector considers a safety issue and takes action where it believes it appropriate. There is no requirement for a formal response to an advisory notice, although the ATSB will publish any response it receives.

Safety issues are broadly classified in terms of their level of risk as follows:

- **Critical** safety issue: associated with an intolerable level of risk and generally leading to the immediate issue of a safety recommendation unless corrective safety action has already been taken.
- **Significant** safety issue: associated with a risk level regarded as acceptable only if it is kept as low as reasonably practicable. The ATSB may issue a safety recommendation or a safety advisory notice if it assesses that further safety action may be practicable.
- **Minor** safety issue: associated with a broadly acceptable level of risk, although the ATSB may sometimes issue a safety advisory notice.

The 2010–11 Portfolio Budget Statement (PBS) specifies, as two of the ATSB's key performance indicators (KPIs), that in the 2010–11 financial year and subsequent financial years:

- Safety action is taken by stakeholders to address 100 per cent of **critical** safety issues identified
- Safety action is taken by stakeholders to address 70 per cent of **significant** safety issues identified.

Closed safety issues can be deemed as adequately addressed (the post-action residual risk is either minor or as low as reasonably practicable), partially addressed, or not addressed.

Table 4 shows there was a total of 121 safety issues identified in 2010–11 across all transport mode level 1 to 4 occurrence investigations. Of these, 34 were assessed as a significant risk, and one as a critical risk.

Table 4: Safety issues identified, 2010–11

Assessed Risk	Mode	Number of safety issues
Critical		
	Aviation	1
	Marine	None
	Rail	None
	Total	**1**
Significant		
	Aviation	14
	Marine	16
	Rail	4
	Total	**34**
Minor		
	Aviation	60
	Marine	11
	Rail	15
	Total	**86**

Critical safety issue

During 2010/2011, the ATSB identified one critical safety issue related to the engine failure of one of the Rolls-Royce engines on a Qantas A380 aircraft on 4 November 2010. Details of the occurrence and the investigation appear in the Aviation Investigations section of this Report.

As a result of the identified critical safety issue, the ATSB issued the following safety recommendation on 1 December 2010.

Safety recommendation AO-2010-089-AR-012

The Australian Transport Safety Bureau recommends that Rolls-Royce plc address the safety issue and take actions necessary to ensure the safety of flight operations in transport aircraft equipped with Rolls-Royce plc Trent 900 series engines.

On 2 December 2010, Rolls-Royce plc issued revision 1 to NMSB 72-G595 incorporating assessment and engine rejection criteria for the measurement of potential counter-bore misalignment, and a tightening of the compliance time frame from 20 to 2 flight cycles.

Other actions to address the critical safety issue were also taken by the Australian Civil Aviation Safety Authority, Qantas and the European Aviation Safety Agency. Those actions are detailed in the ATSB Preliminary Factual Report (AO-2010-089) on the ATSB website.

The critical safety issue identified has been closed and deemed adequately addressed (100% of critical safety issues adequately addressed).

Significant safety issues

In 2010–11 stakeholders implemented proactive safety action for the majority of identified significant safety issues. From a total of 34 significant safety issues identified, 31[8] proactive safety actions were taken. In addition, eight safety recommendations and three safety advisory notices were issued to stakeholders. Table 5 provides further details for each transport mode.

Table 5: Significant safety issues identified and safety actions taken, 2010–11

Mode	Significant Safety Issues	Proactive Safety Actions	Safety Advisory Notices	Safety Recommendations
Aviation	14	19	1	2
Marine	16	14	2	3
Rail	4	2	0	3
Total	**34**	**35**	**3**	**8**

Table 6 shows the status of all identified significant safety issues that were identified through ATSB investigations during the 2010–2011 financial year. Of the 34 significant safety issues, 71% were adequately addressed at the time this report was prepared, and 86% have been either partially or adequately addressed.

8 For some safety issues, more than one stakeholder may take proactive action to address the issue.

Table 6: Status of all identified significant safety issues, 2010–11

Status of significant safety issues	Aviation	Marine	Rail	Total	Per cent of closed issues
Adequately addressed	8	13	3	24	71%
Partially addressed	3	2	0	5	15%
Not addressed	0	1	0	1	3%
No longer relevant	1	0	0	1	3%
Safety action still pending	2	0	0	2	6%
Withdrawn	0	0	1	1	3%

- There were two safety issues that were still awaiting safety action at the time this report was prepared. One involved an issue where a safety recommendation was made and the ATSB was waiting on an action or an initial response by the intended action organisation (AO-2008-003-SR-109 – recommendation to the US Federal Aviation Administration (FAA) is being monitored awaiting action by FAA). The other will be adequately addressed when CASA publish an advisory circulation as proposed.

Minor Safety Issues

Other safety actions were taken in response to minor safety issues. There were 66 proactive industry actions associated with minor safety issues (52 from aviation, 12 from marine and two from rail). Furthermore, there were 22 safety advisory notices issued associated with minor safety issues (11 from Rail, three from Marine and eight from Aviation).

Table 7: Safety recommendations issued in 2010–11

Number	AO-2010-089-SR-012
Transport Mode	Aviation
Release Date	1/12/2010
Status	Closed
Risk	Critical
Safety Issue Description	Misaligned stub pipe counter-boring is understood to be related to the manufacturing process. This condition could lead to an elevated risk of fatigue crack initiation and growth, oil leakage and potential catastrophic engine failure from a resulting oil fire.
Recommendation	The ATSB recommends that Rolls-Royce plc address this safety issue and take actions necessary to ensure the safety of flight operations in transport aircraft equipped with Rolls-Royce plc Trent 900 series engines.
Response	On 2 December 2010, Rolls-Royce plc issued revision 1 to NMSB 72-G595 incorporating assessment and engine rejection criteria for the measurement of potential counter-bore misalignment, and a tightening of the compliance time frame from 20 to 2 flight cycles.
	The ATSB is satisfied that the action taken by Rolls-Royce plc adequately addresses the immediate safety of flight concerns in respect of the operation of Trent 900 series engines.

Number	AO-2008-003-SR-108
Transport Mode	Aviation
Release Date	13/12/2010
Status	Closed
Risk	Significant
Safety Issue Description	The operator's flight crew quick reference handbook (QRH) did not include sufficient information for flight crew to manage the emergency.
Recommendation	The ATSB recommends that the aircraft manufacturer undertake further work to address this safety issue.
Response	In response to this occurrence, the aircraft manufacturer has performed several evaluations for the provision of additional formal guidance to 747-400 flight crew for operations on standby power, including reviews of Section 6 Electrical of the non-normal checklists in the 747-400 QRH. On 29 October 2010, the aircraft manufacturer reported that 'due to the results of these evaluations and the subsequent mitigating changes made to protect the MEC [Main Equipment Centre] and manage fluid spills, it does not plan any changes to the QRH'. The aircraft manufacturer provided the following justification: [The aircraft manufacturer], in conjunction with the FAA, continually reviews and updates the FCTM [Flight Crew Training Manual]. The FCTM is provided to Operators who decide when and how to train and distribute the information to their crews. During ATSB's investigation, [the aircraft manufacturer] attempted to develop a Non-Normal Checklist (NNC) which would provide flight crews with guidance when the airplane is on standby power. NNCs are used by the flight crew to cope with non-normal situations. The NNC topics are organised to match that of the Systems Descriptions of the FCOM [Flight Crew Operations Manual] Vol. 2 chapters. Numerous non-normal situations are covered for each system chapter. Although every attempt is made to establish necessary NNCs, it is not possible to develop checklists for all conceivable situations, especially those involving multiple or remote failures. [The aircraft manufacturer] spent a significant amount of time and resources to try and understand the problem and develop a NNC but they were unable to come up with a NNC that would cover the subject event for all 747 configurations in the fleet. Further, [the aircraft manufacturer] believes that one NNC cannot be useful as well as correct for all conditions that might lead to the situation (on standby power).
ATSB Response	The ATSB acknowledges the reviews already undertaken by the aircraft operator and manufacturer and action to amend the operator's operations manual to include guidance to flight crews on the effect and management of multiple AC electrical bus loss, including on battery life. The ATSB recognises that the various crew alerting systems in the 747-400 should inform flight crews of any aircraft systems that are affected by electrical systems failures. However, there is currently limited assurance that 747-400 flight crews would be aware of the expected duration of available battery power or of the possible need to expedite appropriate actions such as aircraft diversion that should be undertaken in the event of abnormal or unexpected battery discharge. The inclusion of a note or caution associated with the battery discharge message entry in the QRH to alert crews of the restricted battery life in such cases would help crews select and prioritise the most appropriate actions to recover from the emergency.
Further Response	We accept this recommendation and are taking steps to make changes to the 747-400 QRH. The change will include a note for flight crews to be aware of the expected duration of available battery power in the event of abnormal or unexpected battery discharge. This change will be incorporated at the next revision cycle of the QRH.

Number	AO-2008-003-SR-109
Transport Mode	Aviation
Release Date	13/12/2010
Status	Monitor
Risk	Significant
Safety Issue Description	The FAA regulations and associated guidance material did not provide detailed liquid protection requirements or guidance for electrical system units in transport category aircraft, increasing the risk of inadequate protection of those units.
Recommendation	The ATSB recommends that the US FAA take safety action to address this safety issue.
Response	The US FAA did not provide comment in response to this safety issue.
ATSB Response	During the investigation, the ATSB discussed the background for this safety issue and the associated safety risk with the FAA. The potential for a reduction in the associated risk to as low as reasonably practicable by proactive US FAA safety action was highlighted. The ATSB considers that the risk of ongoing or emerging design, operation and maintenance issues with the potential to result in liquid contamination of electrical system units in transport category aircraft could be significantly reduced over time by improved regulatory guidance and oversight. For example, existing designs and processes should be monitored for continuing effectiveness while consideration of alternative design principles may be applied to new aircraft designs.
Further Response	We are investigating the issue, considering the scope of the recommendation and planning the best course of action. We anticipate submitting a follow-on response updating our progress by 31 March 2012.

Number	MO-2008-013-SR-067
Transport Mode	Marine
Release Date	28/09/2010
Status	Closed
Risk	Significant
Safety Issue Description	In this instance, the consensus of the regulatory authorities is that *Karratha Spirit* was not in a navigable form at the time of the accident and was therefore under National Offshore Petroleum Safety Authority (NOPSA) jurisdiction according to the *Offshore Petroleum & Gashouse Gas Storage Act 2006* (OPGGSA). However, the point at which *Karratha Spirit* became 'navigable' is not clearly defined in the OPGGSA and is open to interpretation. Furthermore, had the accident occurred on board *Karratha Spirit* after it had departed the CALM buoy and while it was steaming off the coast to avoid a cyclone, without entering any ports, then it is possible that the ship would not come under the jurisdiction of any Australian safety regulatory regime.
Recommendation	The ATSB recommends that NOPSA should undertake further action to address this safety issue.
Response	NOPSA
ATSB Response	Based on the information provided by NOPSA on 25 March 2011 with regard to amendment of relevant legislation, the ATSB is satisfied that the proposed actions by NOPSA, AMSA and Department of Resources, Energy and Tourism (RET) will satisfactorily address this safety issue.
Further Response	NOPSA advises that RET have further considered the issue of the point of transition. NOPSA is aware that RET have been discussing options with both NOPSA and AMSA. At this stage RET are proposing to make clarifying amendments to the relevant legislation as part of a larger reform agenda and are targeting the winter session of Parliament.

Number	MO-2010-003-SR-005
Transport Mode	Marine
Release Date	14/04/2011
Status	Monitor
Risk	Significant
Safety Issue Description	There was no effective fatigue management system in place to ensure that the bridge watchkeeper was fit to stand a navigational watch after the loading in Gladstone.
Recommendation	The ATSB recommends that Tosco Keymax International takes further safety action to address this safety issue.
Response	Since the incident, and in accordance with our policy of continuous improvement Tosco Keymax has implemented additional inspection regimes and provided information and further training to ship's staff relevant to issues arising from the grounding.
ATSB Response	The ATSB remains concerned that there is no proper guidance provided to the master or crew with regard to how fatigue levels should be managed and when someone should make the fact known that they might not be fit to undertake a navigational watch.
Further Responses	No further correspondence on this safety recommendation was received from Tosco Keymax.

Number	MO-2010-003-SR-006
Transport Mode	Marine
Release Date	14/04/2011
Status	Monitor
Risk	Significant
Safety Issue Description	The ship's safety management system did not contain procedures or guidance on the proper use of GPS route plans and their relationship to the ship's passage plans.
Recommendation	The ATSB recommends that Tosco Keymax International takes further safety action to address this safety issue.
Response	Since the incident, and in accordance with our policy of continuous improvement Tosco Keymax has implemented additional inspection regimes and provided information and further training to ship's staff relevant to issues arising from the grounding.
ATSB Response	The ATSB remains concerned that there is no proper guidance in the ship's safety management system to ensure that the defences offered by a GPS route planning system are used in conjunction with the passage plan.
Further Responses	No further correspondence on this safety recommendation was received from Tosco Keymax.

Number	RO-2009-008-SR-034
Transport Mode	Rail
Release Date	11/02/2011
Status	Closed
Risk	Significant
Safety Issue Description	There was no RailCorp instruction that specifically referred to the need for train crew to prioritise tasks at safety critical locations or at times when workload is high.
Recommendation	The ATSB recommends that RailCorp takes action to address this safety issue.
Response	Safety action is questioned by RailCorp on the basis that drivers are trained to respond to unplanned situations and task prioritisation.
ATSB Response	Not accepted, on this occasion the driver did not prioritise tasks.

Number	RO-2010-007-SR-006
Transport Mode	Rail
Release Date	18/04/2011
Status	Closed
Risk	Significant
Safety Issue Description	Rule ANWT 304 (ARTC) NWT 304 (RailCorp) does not stipulate that the Protection Officer must inform all persons or work groups who may be within the boundaries of a Track Occupancy Authority of its existence. This is regardless of whether or not these persons or work groups fit the definition of 'work parties' or 'workers'.
Recommendation	Rule ANWT 304 does not stipulate that the Protection Officer must inform all persons who may be within the boundaries of a Track Occupancy Authority of its existence. This is regardless of whether or not these persons fit the definition of 'work parties' or 'workers'. The ATSB recommends that ARTC take action to address this safety issue.
Response	Nil.
ATSB Response	The ATSB recommends that the ARTC take action to address this safety issue.
Further Response	The responsibilities of the Protection Officer are clearly defined in Rule ANWT304. ARTC acknowledges the need for all affected workers to be aware of the protection arrangements and limits associated with a Track Occupancy Authority. However ARTC suggests that it is neither feasible nor realistic to expect the Protection Officer to inform persons other than those associated with the Track Occupancy Authority about the kinds and limits of protection in place. In this instance, the Network Controller was not contacted by Pacific National personnel. Had they complied with Network Rules and spoken to the Network Controller, prior to commencing activities within the danger zone, they would have been made aware of the TOA. It was clearly not the responsibility of the Protection Officer to contact Pacific National.

Number	RO-2010-007-SR-007
Transport Mode	Rail
Release Date	18/04/2011
Status	Closed
Risk	Significant
Safety Issue Description	Rule ANWT 304 (ARTC) NWT 304 (RailCorp) does not stipulate that the Protection Officer must inform all persons or work groups who may be within the boundaries of a Track Occupancy Authority of its existence. This is regardless of whether or not these persons or work groups fit the definition of 'work parties' or 'workers'.
Recommendation	Rule NWT 304 does not stipulate that the Protection Officer must inform all persons who may be within the boundaries of a Track Occupancy Authority (TOA) of its existence. This is regardless of whether or not these persons fit the definition of 'work parties' or 'workers'. The ATSB recommends that RailCorp take action to address this safety issue.
Response	RailCorp accepts the recommendation, but is claiming closure on the basis that Safety Management System (SMS) procedure SMS-06-PR-1419 Prework Briefings expressly requires all persons involved in activities at the work location to be given a pre-work brief (section 3). This procedure also mandates the inclusion of worksite protection details in such pre-work briefs. RailCorp considers that a TOA was an inappropriate method of protection and the existing requirements in NWT 304 would have precluded this method of protection being used. A TOA gives exclusive occupancy except where there is joint occupancy with: another TOA or Track Work Authority (TWA) and mutual arrangements have been made by the respective Protection Officers; or a train movement; or a disabled train. In this incident these exceptions to exclusive occupancy were not applicable and therefore a TOA should not have been authorised.
ATSB Response	The Australian Transport Safety Bureau accepts the RailCorp response to address this safety issue.
Further Response	RailCorp has accepted the ATSB's recommendation but RailCorp stated in their response that the incorrect rule was used to protect the worksite

A detailed description of all safety issues and safety actions identified through ATSB investigations in 2009–10 is available in the ATSB research report XR-2010-001 on the ATSB website <www.atsb.gov.au>.

MARINE SAFETY ACTIVITIES

The completed investigations involved three groundings, one collision, three fatalities, three fires and one incident each of serious injury and cargo loss. Those investigations recorded 36 safety actions voluntarily taken by stakeholders (in response to 30 safety issues) and included a total of three safety recommendations and five safety advisory notices directed to stakeholders.

RAIL SAFETY ACTIVITIES

In 2010–11, ATSB reports noted four rail safety actions that had been taken voluntarily by rail stakeholders in response to 19 safety issues. The ATSB issued three rail safety recommendations and 11 safety advisory notices.

Communication and education

The ATSB's primary communication and education role is to foster transport safety awareness, knowledge and action.

The lessons learnt from our investigations have a strong educational value for operators in the transport industry and the community. Effectively communicated, these lessons can help prevent a future occurrence of an incident or accident.

Under the *Transport Safety Investigation Act 2003* (TSI Act) the ATSB must communicate any factors that contribute to transport safety accidents and occurrences to the transport industry and the general public. We meet the requirements of the Act through our communication and education program including the publication of safety investigation and research reports, safety action notices, and safety alerts and recommendations.

In 2010–11 the ATSB continued to provide industry and the community with information and education material about transport safety in Australia through a range of accessible channels, including media, information products, our website and safety forums.

STRATEGIC COMMUNICATIONS

The delivery of our communication and education program aims to improve transport safety in Australia and facilitate industry and public safety awareness, knowledge, and action.

In 2010–11, we released our safety communication and education strategy for industry consultation. This resulted in a communication plan which provides an integrated and evidence-based approach for the ATSB to communicate key safety lessons to the transport industry and the community.

During the year, implementation of our communication plan has focused on:

- enhancing the ATSB website to provide regular and timely safety information
- developing and delivering targeted safety messages and products
- ensuring that the outcomes of the ATSB's research and investigations are communicated to help improve the system of safety in Australia.

We strive to ensure that our safety messages contribute to positive attitudes, proactive behaviours and overall awareness of transport safety throughout the transport industry and the travelling public.

The ATSB is committed to communicating investigation updates and findings in a timely and responsive manner. In November 2010, the uncontained engine failure of the Qantas Airbus A380 was a major test of this commitment.

During the early stages of our investigation, we received an intense level of interest from national and international media seeking regular updates. The investigation showcased our stronger focus on proactive communications. We provided regular updates through our internet site and released key information to the public as soon as it came to hand.

The ATSB focuses on updating the progress of our investigations as they unfold—not just when our investigation reports are released.

By being more proactive in our communications, we ensure industry has an early opportunity to become aware of, and where necessary respond to, relevant safety issues.

MEDIA

The ATSB implements a responsive and coordinated program to ensure the transport industry and the public are kept informed about transport accident investigations and safety findings.

During the year we worked closely with local, national, state and territory media to raise awareness in the broader community about transport safety. Our dealings with the media have demonstrated the ATSB's responsiveness to industry and community needs, as well as performing a vital education function. The ATSB issued 26 media releases in 2010–11.

The ATSB operates a 24-hour, seven day a week service for media enquiries. In 2010–11, we received and responded to more than 3,000 telephone calls from media outlets and the general public during and outside normal business hours.

This year, the ATSB conducted four media conferences, including one on-site media briefing at an accident site. Our media conferences helped ensure that the extensive media coverage of ATSB activities, in particular the reporting of progress and results from transport accident investigations, was accurate, informative and helped to promote the ATSB's contribution to transport safety.

INFORMATION REQUESTS

The ATSB responded to an estimated 1,700 email and telephone requests for safety information during 2010–11, including:

- transport safety-related enquiries
- accident and incident investigation reports and updates
- research and analysis reports
- safety occurrence data
- safety education products
- corporate materials.

SAFETY AWARENESS PRODUCTS

The ATSB published 206 safety information and awareness products in 2010–11 including safety investigation reports and bulletins, research and analysis reports, statistical publications, and safety alerts.

The ATSB continued to provide quality control of publications produced internally and externally, helping maintain and enhance the international reputation of the ATSB as Australia's national transport safety investigator.

To supplement our safety awareness products, the ATSB regularly contributes to key industry publications including *Flight Safety Australia* and *Shipping Australia* magazines.

Copies of ATSB publications can be ordered by calling 1800 020 616 or emailing atsbinfo@atsb.gov.au

WEBSITE

Our website is one of our most effective communication channels with 502,075 unique visitors in 2010–11. The number of hits increased markedly following the release of high-profile information or reports, particularly in the aviation mode.

The ATSB re-launched its website in November 2010 to provide a greater focus on transport safety news and information. The new website features:

- a scrolling news section
- a scrolling investigations report section
- easier access to investigations and reports
- a dedicated safety and awareness page.

Information can be accessed from the website by selecting navigation links within each transport mode, or by searching directly for specific information using a customised search engine. The site contains:

- aviation, marine and rail safety investigation reports
- reporting forms for both mandatory and confidential transport safety reporting systems
- research and analysis reports
- accident statistics
- safety recommendations
- media alerts and releases
- speeches and 'audio grabs' of media briefings
- safety articles and links of interest
- a free 'subscription' information service.

The ATSB recognises that the website has to evolve to continue to meet audience expectations and to allow for inclusion of new and emerging technologies in the longer term. The website will be further developed as the ATSB's key communication channel. We will publish more regular status reports and updates for ongoing investigations, timely and targeted news items, and announcements of new investigations.

The ATSB RSS feeds Latest Investigation Reports and News Items. RSS feeds contain headlines and a brief content summary which contains just enough information without overwhelming the reader with superfluous details. If the reader is interested and wants additional information they can click on the link and access the website which contains the full report.

The site's online notification forms for accidents and incidents, the aviation and marine confidential reporting schemes (REPCON and REPCON Marine), and the Aviation Self Reporting Scheme (ASRS), provide options for reporting transport accidents and incidents and submitting confidential reports. The site's free subscription information service continues to announce new releases and developments to interested parties and industry stakeholders by regular email notifications, which may be customised to provide information on specific modes to individual subscribers.

PARTICIPATION IN SAFETY FORUMS

The ATSB regularly participates in local, regional, national and international safety forums to communicate safety messages, share technical knowledge, strengthen industry engagement and keep up-to-date on industry policy and technical issues. The ATSB's participation ranges from attending and presenting at forums to providing technical training.

In 2010–11 the ATSB participated in the following safety forums:

- Aerial Agricultural Association of Australia convention, Adelaide
- AIR and MADA User Group meetings, United Kingdom
- Airline Safety Forum, Melbourne
- Australasian Society of Aerospace Medicine, Canberra
- Australian Society of Air Safety Investigators Reach Out, Darwin
- Australian Disaster Victim Identification Committee, Sydney
- Aviation Logistics and the Resources Sector Conference, Perth
- Conference on Railway Engineering 2010, Auckland
- International Bird Strike Conference, Cairns
- International Federation of Airworthiness, Sydney
- International Maritime Organization's Flag State Implementation Sub-committee meeting, London
- International Maritime Organization's Casualty Analysis Working Group, London International Rail Safety Conference 2010, Hong Kong
- International Society of Air Safety Investigators Conference, Japan
- Marine Accident Investigators International Forum
- Maritime Safety Group meeting, Brisbane
- National Council of Self-insurer's Symposium, Adelaide
- Queensland Fire and Rescue Symposium, Brisbane
- Qantas Safety Conference, Sydney
- Regional Aviation Association of Australia 2010 Annual Convention, Coolum
- Rail Safety 2011, Sydney
- Rail Safety Managers Group, Canberra
- Railway Technical Society of Australasia, Adelaide and Brisbane
- Safety in Action Conference 2011, Melbourne.

Judicial proceedings

In 2010–11, the ATSB's safety investigators appeared as witnesses in three coronial inquests. Evidence was given in a manner consistent with the ATSB's functions under the *Transport Safety Investigation Act 2003* (TSI Act). The ATSB also received the findings from a coronial inquiry that had been heard in May of 2010.

CORONIAL INQUESTS

O'Donoghue and Costin (ATSB investigation 200605843)

ATSB investigators gave evidence at a coronial inquest into a single aircraft accident that occurred on 5 October 2006 in the Turon State Forest about 20 km to the north-east of Bathurst, New South Wales, where two persons were fatally injured. The ATSB published its final report into the investigation in May 2008. See:

<http://www.atsb.gov.au/publications/investigation_reports/2006/aair/aair200605843.aspx>

The coronial inquiry before the Deputy State Coroner of NSW took place in March and June of 2011. The hearing will continue in October 2011.

Catargiu, Cousins, Pinney and Thomas (ATSB Investigation AO-2008-062)

An ATSB investigator gave evidence at a coronial inquiry into a single helicopter accident that occurred on 14 September 2008 in the Bungle Bungle ranges area of the Purnululu National Park, which is about 250 km south of Kununurra, Western Australia. The pilot and three passengers were fatally injured. The ATSB published its final report into the investigation in July 2010. See:

<http://www.atsb.gov.au/publications/investigation_reports/2008/aair/ao-2008-062.aspx>

The coronial inquiry before the Deputy State Coroner of Western Australia was held in April 2011. The coroner's findings are pending.

Poole – Level Crossing (ATSB Investigation 2006006)

An ATSB investigator gave evidence at a coronial inquiry into the collision of a car and the XPT-ST24 at Thurgoona Road, Albury on 5 June 2006, where the single occupant of the car was fatally injured. The ATSB published its final report into the investigation in June 2007. See:

<http://www.atsb.gov.au/publications/investigation_reports/2006/rair/rair2006006.aspx>

The coronial inquiry took place on 25 October 2010. The Deputy State Coroner's findings were substantially in accordance with those of the ATSB.

Chambers and James (ATSB investigation 200304074)

The Deputy State Coroner of Western Australia handed down her findings in September 2010 in relation to an accident involving a single helicopter 93km south of Derby in September 2003 where the pilot and the passenger were fatally injured. ATSB investigators gave evidence the inquest in Perth in May 2010. The coroner fully agrees with the ATSB's findings in its final report released in October 2004. See:

http://www.atsb.gov.au/publication/investigation_reports/2003/aair/aair200304074.aspx

Transport safety statistics

AUSTRALIAN TRANSPORT SAFETY BUREAU INVESTIGATIONS

Aviation safety trends

In contrast to rail and marine, the ATSB is the keeper of the national record for all reported aviation occurrences, including accidents and serious incidents (collectively termed Immediately Reportable Matters) and incidents (termed Routine Reportable Matters). The reporting of aviation occurrences is required across all aviation sectors, including aircraft registered with recreational aviation associations. For this reason, more comprehensive occurrence statistics can be generated by the ATSB for aviation than for rail and marine. The legislative basis for this reporting requirement is contained in the TSI Act and the associated Regulations.

The information contained in Table 8 represents those aviation accidents, serious incidents and incidents that have been reported to the ATSB. Information about those occurrences is entered into the ATSB's aviation occurrence database, and decisions are made about which of those occurrences will be investigated by the ATSB. The number of serious incidents increased from 2003 onwards. This, in part, was due to a review of the ATSB's classification of immediately reportable matters (IRMs) associated with the introduction of the TSI Act in July 2003.

Table 8: Aviation occurrences by occurrence category, 2001–2010

Category	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	Total
Accidents	199	164	154	168	135	107	165	190	167	208	1,657
Serious Incidents	10	10	41	72	66	60	114	127	95	116	711
Incidents	5,488	5,839	5,252	6,233	7,243	7,439	7,701	7,798	7,762	8,404	69,159
Total	**5,697**	**6,013**	**5,447**	**6,473**	**7,444**	**7,606**	**7,980**	**8,115**	**8,024**	**8,728**	**71,527**

Data includes all occurrences including non-VH registered recreational aircraft, but does not include parachute accidents that do not specifically relate to aircraft safety.

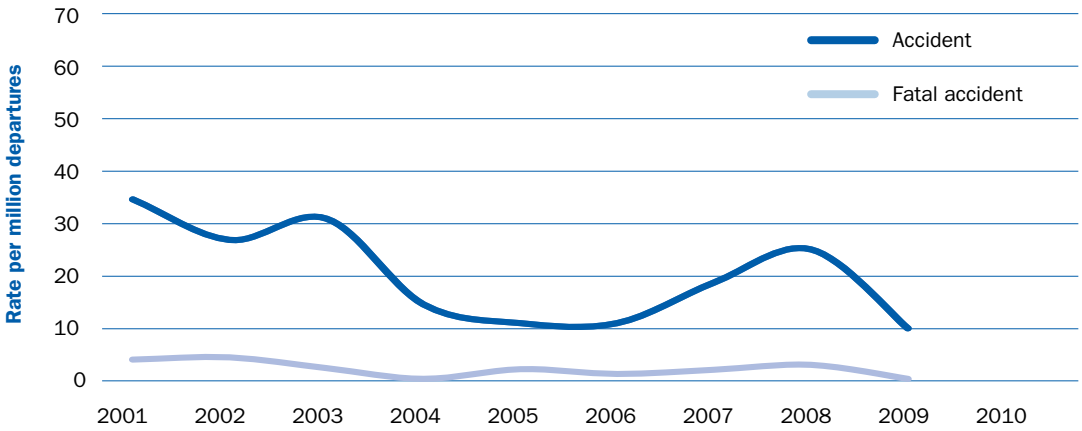
Aviation accidents rates by operation type

Commercial air transport

Commercial air transport refers to scheduled and non-scheduled commercial operations used for the purposes of transporting passengers and/or cargo for hire or reward. It includes high capacity regular public transport (RPT), low capacity RPT, and charter operations.

The accident rate per million departures showed a U-shaped line (Figure 1) from 2003 until 2008. In 2009, the accident rate returned to the pre-2007 levels. Charter aircraft account for the majority of accidents in commercial air transport and have an accident rate about five times higher than for high and low capacity RPT operations. The number of accidents in 2010 has increased from the 2009 figure. Accident rates were at about 30 per million departures prior to 2004, and between 2004 and 2006 the rate was less than half the pre-2004 rate. A spike in 2007 was followed by a decline in the accident rate to its lowest level in the reporting period.

Figure 1: Commercial air transport accident and fatal accident rates, 2001–2009



General aviation

General aviation is all flying activities outside of scheduled (RPT) and non-scheduled (charter) passenger and freight operations. It includes aerial work (ambulance and emergency medical services, agriculture, mustering, search and rescue, fire control, and survey and photography), flying training, and private/business and sports aviation. General aviation in this report does not include Australian non-VH registered aircraft.

The GA accident rate per million departures is lower than for hours flown. In the most recent year where departures information is available (2009), the accident rate (per million departures) was about three times as large in GA as in commercial air transport, and the fatal accident rate was about 4.8 times as large.

Figure 2: General aviation (VH- and foreign registered) rates, accidents and fatal accidents, 2001–2009

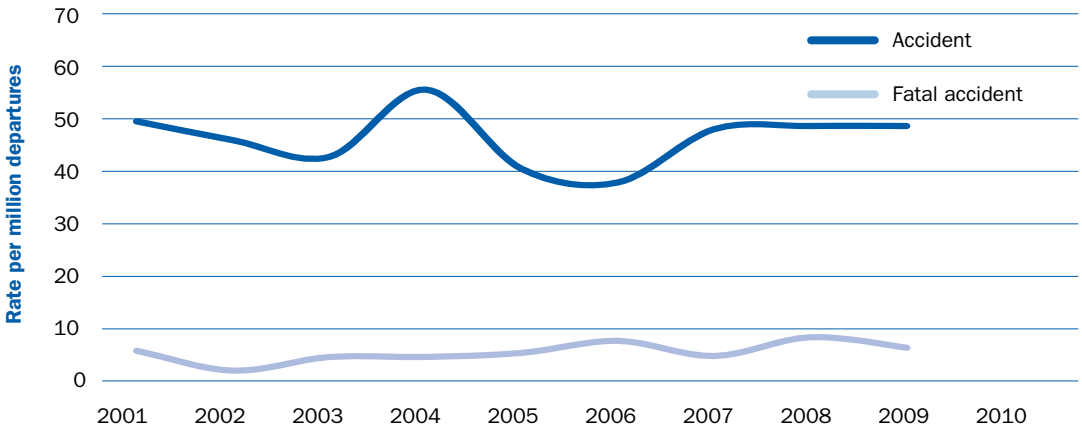


Table 9 compares the number of fatal accidents and fatalities for each operation type detailed in this chapter. Private aviation has by far the highest number of fatal accidents and fatalities. Fatal accidents in some aircraft operations are more likely to have a larger number of fatalities than other operation types. For example, over the period 2001 to 2010, there were 17 fatal accidents in charter operations, but 43 people killed as a result of these types of operations. This is because charter aircraft generally carry more passengers on each flight than agriculture. By comparison, there were 14 aircraft involved in fatal agricultural accidents over the same period, and 14 people killed.

Table 9: Fatal accidents and fatalities by operation type, 2001–2010

Operation type	Number of aircraft associated with a fatality	Number of fatalities
Commercial air transport	19	60
High capacity RPT	0	0
Low capacity RPT	2	17
Charter	17	43
General aviation	147	236
Aerial work	42	58
Agriculture	14	14
Mustering	9	10
Emergency medical	2	4
Fire control	2	2
Survey and photography	6	12
Other/unknown	8	14
Flying training	14	18
Private/business/sport	88	156
Private/business	70	135
Sport aviation	18	21
Foreign registered general aviation	2	3

Aviation occurrences by occurrence type

The ATSB records one or more occurrence types for all aircraft involved in accidents, incidents, and serious incidents. Accidents and serious incidents generally have more occurrence types than incidents, as they are more likely to be investigated. Table 10 and Table 12 show occurrence types for accidents and serious incidents, while Table 11 and Table 13 show occurrence types for incidents.

During 2010, the top five occurrence type events for air transport relating to accidents and serious incidents (Table 10) were aircraft separation, aircraft control, powerplant and propulsion, miscellaneous operational events and a combination of terrain collisions, runway events and ground operations events.

Commercial air transport

Accidents and serious incidents

Table 10: Air transport accidents and serious incidents by occurrence type, 2001–2010

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	Total
Aerodrome and airways facility											
Aerodrome related	0	0	0	0	1	0	0	0	0	0	1
Airspace											
Aircraft separation	1	4	16	14	9	5	21	11	10	18	109
FTC (Operational Non-compliance)	1	0	1	2	3	0	5	4	3	2	21
ATC Procedural Error	1	2	1	2	4	1	3	1	0	0	15
VCA (Airspace incursion)	0	0	0	0	0	0	1	1	1	0	3
Breakdown of co-ordination	1	0	0	0	0	0	0	0	0	1	2
Other	0	0	0	0	0	0	1	0	0	0	1
Environment											
Weather	2	1	2	3	1	0	5	6	1	2	23
Wildlife	4	1	0	0	0	0	2	0	0	1	8
Mechanical											
Powerplant/propulsion	5	8	6	9	6	7	10	17	8	10	86
Airframe	7	12	9	8	7	2	9	7	8	3	72
Systems	8	3	1	4	6	3	5	8	5	1	44
Operational											
Aircraft control	26	14	13	8	6	6	17	20	13	11	134
Miscellaneous	3	2	2	9	6	5	10	26	10	8	81
Terrain collisions	7	3	3	4	5	4	5	8	2	5	46
Runway events	0	6	6	1	2	5	6	9	1	5	41
Ground operations	7	2	6	2	0	2	5	4	1	5	34
Fuel related	3	3	4	5	2	0	4	5	2	0	28
Fumes, smoke, fire	1	1	2	4	4	1	1	7	3	1	25
Communications	0	2	3	3	1	2	2	6	1	4	24
Cabin safety	1	2	0	0	3	0	4	1	0	2	13
Flight preparation/navigation	1	1	0	1	4	0	4	0	0	1	12
Regulations and SOPs	3	2	1	0	1	1	0	1	0	0	9
GPWS / TAWS	0	1	0	1	1	0	2	0	1	0	6
Aircraft loading	1	1	1	1	0	0	0	0	0	1	5
Consequential events	18	14	13	12	17	12	18	29	16	17	166

Incidents

For incidents (Table 11), the top five occurrence types for commercial air transport were wildlife strikes, failure to comply with air traffic services instructions, mechanical systems and airframe events, and miscellaneous operational events.

Table 11: Air transport incidents by occurrence type, 2001–2010

Occurrence Type	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	Total
Aerodrome and airways facility											
Airways facility	37	28	38	27	52	16	17	13	12	22	262
Aerodrome related	22	17	18	21	16	20	20	24	28	18	204
Airspace											
FTC (Operational Non-compliance)	353	410	426	543	761	633	770	813	727	1,006	6,442
Aircraft separation	486	306	266	305	320	204	180	255	238	233	2,793
ATC Procedural Error	180	156	205	200	285	285	206	188	146	97	1,948
Breakdown of co-ordination	140	112	110	176	207	150	180	163	195	252	1,685
VCA (Airspace incursion)	74	47	55	72	58	50	93	73	52	51	625
Other	19	23	22	7	15	17	6	7	7	2	125
Environment											
Wildlife	602	614	645	855	951	921	960	1052	1164	1330	9,094
Weather	138	122	101	172	171	174	206	225	180	232	1,721
Mechanical											
Systems	291	288	204	278	316	323	324	388	325	415	3,152
Airframe	199	228	170	174	235	198	270	325	289	260	2,348
Powerplant/propulsion	238	214	159	162	170	163	210	216	221	196	1,949
Operational											
Miscellaneous	228	191	127	145	190	258	299	385	361	324	2,508
Fumes, smoke, fire	95	102	72	74	105	101	131	154	139	272	1,245
Communications	96	85	92	165	146	117	93	150	103	70	1,117
GPWS / TAWS	137	69	67	163	242	149	83	36	22	18	986
Aircraft loading	49	33	16	36	41	79	130	108	71	125	688
Flight preparation/navigation	61	76	42	65	74	60	74	56	29	38	575
Ground operations	42	59	53	55	45	55	67	72	56	50	554
Cabin safety	82	76	29	35	39	42	55	54	40	58	510
Aircraft control	36	40	23	46	55	66	66	52	37	26	447
Runway events	44	35	46	46	34	40	41	57	40	48	431
Fuel related	29	40	21	31	23	32	55	52	35	30	348
Loading related	28	8	6	23	21	19	63	45	30	0	243
Regulations and SOPs	6	12	3	7	7	10	28	22	6	0	101
Terrain collisions	8	10	8	9	11	10	6	13	8	8	91
Consequential events	580	483	348	410	446	602	594	685	674	623	5,445

General aviation

Table 12 shows occurrence type accidents and serious incidents recorded for general aviation aircraft. The five most frequently coded occurrence types were terrain collisions, aircraft control, powerplant/propulsion, aircraft separation and runway events.

Accidents and serious incidents

Table 12: General aviation accident and serious incidents by occurrence type, 2001–2010

Occurrence Type	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	Total
Aerodrome and airways facility											
Aerodrome related	0	0	1	0	0	1	0	0	1	0	3
Airspace											
Aircraft separation	0	8	37	38	25	40	34	65	52	58	357
FTC (Operational Non-compliance)	1	0	2	8	8	12	5	23	14	3	76
ATC Procedural Error	0	0	1	2	2	3	0	7	4	2	21
VCA (Airspace incursion)	0	0	0	0	2	1	1	3	4	1	12
Breakdown of co-ordination	0	2	0	0	0	0	0	0	0	0	2
Environment											
Weather	2	3	0	1	1	4	14	3	10	9	47
Wildlife	5	4	2	2	5	0	2	2	3	3	28
Mechanical											
Powerplant/propulsion	28	16	18	46	27	36	68	43	56	45	383
Airframe	17	16	23	12	11	12	11	12	12	10	136
Systems	3	4	6	6	4	2	4	6	7	9	51
Operational											
Terrain collisions	84	44	63	72	72	65	70	103	69	103	745
Aircraft control	55	65	38	53	46	33	51	52	48	36	477
Runway events	14	16	16	14	9	11	22	26	24	22	174
Ground operations	7	14	9	10	7	2	22	16	23	21	131
Miscellaneous	16	6	8	15	13	6	9	18	19	7	117
Fuel related	8	4	5	3	7	4	5	8	6	11	61
Communications	0	0	7	12	2	2	1	17	9	8	58
Fumes, smoke, fire	3	2	4	4	3	4	5	6	4	8	43
Flight preparation/navigation	2	1	3	4	2	2	4	3	4	0	25
Cabin safety	2	0	4	1	1	2	1	1	0	1	13
Regulations and SOPs	1	0	1	1	3	1	1	1	0	0	9
Aircraft loading	1	0	2	0	0	0	1	1	1	0	6
Consequential events	45	36	33	60	48	43	63	53	61	70	512

Incidents

The top five occurrence type events involving incidents between 2001 and 2010 were airspace incursion, failure to comply, wildlife, runway events and aircraft separation (Table 13).

Table 13: General aviation incidents by occurrence type, 2001–2010

Occurrence Type	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	Total
Aerodrome and airways facility											
Aerodrome related	6	7	12	3	10	10	8	5	4	10	75
Airways facility	13	7	16	2	4	10	1	5	2	4	64
Airspace											
VCA (Airspace incursion)	941	1,017	892	1,161	1,167	1,286	1,265	1,141	1,225	1,215	11,310
FTC (Operational Non-compliance)	330	374	257	172	338	646	820	1129	910	988	5,964
Aircraft separation	251	192	147	176	182	198	195	269	309	241	2,160
ATC Procedural Error	53	58	54	63	68	91	74	77	59	35	632
Breakdown of co-ordination	35	51	64	50	45	51	61	57	43	66	523
Other	37	80	42	6	11	6	1	4	1	2	190
Environment											
Wildlife	177	217	256	294	387	386	382	361	404	409	3,273
Weather	6	11	6	7	9	12	19	20	12	21	123
Mechanical											
Powerplant/propulsion	162	155	168	134	148	129	174	174	153	134	1,531
Systems	117	99	108	198	187	179	151	151	158	176	1,524
Airframe	131	127	101	127	112	164	171	184	168	128	1,413
Operational											
Runway events	125	147	148	166	244	274	238	315	481	318	2,456
Communications	145	119	94	105	85	191	138	222	163	156	1,418
Flight preparation/navigation	97	114	101	72	106	115	115	70	70	66	926
Aircraft control	46	33	34	45	66	48	67	52	55	32	478
Miscellaneous	32	45	33	45	51	49	46	49	57	53	460
Fumes, smoke, fire	32	23	35	38	29	37	41	37	36	44	352
Ground operations	25	28	29	37	42	28	34	36	42	44	345
Terrain collisions	36	34	25	35	35	25	35	37	41	24	327
Fuel related	24	25	27	16	20	13	18	19	13	20	195
Regulations and SOPs	5	3	3	7	3	3	9	15	4	0	52
Cabin safety	1	6	2	2	5	5	8	2	1	0	32
Aircraft loading	1	2	0	1	2	2	4	4	1	3	20
GPWS / TAWS	0	0	0	1	4	0	0	0	1	2	8
Consequential events	319	258	261	233	265	359	331	355	358	317	3,056

Marine safety trends

The information contained in Table 14 represents those marine accidents, serious incidents and incidents that were reported to the ATSB as Immediately Reportable Matters. The reporting of marine occurrences to the ATSB is primarily confined to Immediately Reportable Matters that have occurred in relation to ships that are engaged in interstate and international trade and commerce. Information about those occurrences is entered into the ATSB's marine occurrence database and decisions are made about which of those occurrences will be investigated by the ATSB. The legislative basis for this reporting requirement is contained in the TSI Act and the associated regulations.

Table 14 shows that there have been between 71 and 111 Immediately Reportable Matters per year made to the ATSB between 2006 and 2010, most of which were considered to be incidents. For 2010, there were three accidents and six serious incidents. Furthermore, there were between 20 and 36 injuries and fatalities per year, with only three fatalities recorded for 2010.

Table 14: Marine occurrences and injuries reportable to the ATSB, 2006–2010

	2006	2007	2008	2009	2010	Total
Occurrence category						
Accidents	8	8	3	3	3	25
Serious incidents	5	3	3	2	6	19
Incidents	98	81	65	94	72	410
Total occurrences	111	92	71	99	81	454
Number of people injured						
Serious injuries	22	24	17	24	23	110
Missing	2	3	1	0	0	6
Fatalities	7	9	2	3	3	24
Total injuries/fatalities	**31**	**36**	**20**	**27**	**26**	**140**

Table 15 shows that bulk carriers were the most common type of vessel involved in occurrences considered as Immediately Reportable Matters to the ATSB, followed by cargo ships.

Table 15: Marine vessel groups involved in occurrences reportable to the ATSB, 2006–2010

Vessel group	2006	2007	2008	2009	2010	Total
Bulk (dry bulk/OBO/self discharging)	43	47	25	33	41	189
Cargo (container/general/Ro-Ro/heavy lift/livestock)	25	29	20	25	26	125
Tanker (oil/chemical/liquefied gas)	18	7	5	12	4	46
Offshore support (supply/AHTS/survey/research)	11	2	2	16	7	38
Special-purpose vessel	4	4	7	8	3	26
Passenger (passenger/passenger & cargo)	6	3	6	3	2	20
Fishing	3	4	2	3	2	14
Tug	4	0	5	3	2	14
Recreational (motor/sailing/training)	3	2	0	2	0	7
Other (includes barges and dredgers)	1	3	1	0	2	7
Offshore platform (FPSO/FSO/development/production)	1	0	1	2	1	5
Total	**119**	**101**	**74**	**107**	**90**	**491**

Table 16 displays all occurrence types associated with each occurrence. The table shows that over the last five years, damage to ship or equipment was the most frequent type of event coded for reported occurrences, followed by serious injury and equipment failures.

Table 16: Marine occurrences by type, 2006–2010

Occurrence type	2006	2007	2008	2009	2010	Total
Damage to ship or equipment	40	28	21	42	33	**164**
Serious injury	20	20	16	23	18	**97**
Equipment failure	16	24	20	17	15	**92**
Fire/explosion	13	10	17	9	10	**59**
Machinery failure	22	7	2	7	8	**46**
Contact	5	5	7	13	12	**42**
Grounding/stranding	10	6	11	4	7	**38**
Collision	7	7	2	7	3	**26**
Hull failure/failure of watertight openings	6	6	2	6	5	**25**
Pollution	7	3	2	8	5	**25**
Fatality	6	6	2	3	3	**20**
Lifeboat accident	3	2	2	4	4	**15**
Flooding	2	4	2	2	0	**10**
Close quarters	2	2	1	2	2	**9**
Missing assumed lost	2	2	1	0	1	**6**
Capsizing/listing	1	1	0	2	2	**6**
Foundered	0	1	0	1	1	**3**
Other	12	11	7	22	17	**69**
Total	**174**	**145**	**115**	**172**	**146**	**752**

Rail safety trends

The responsibility for rail safety in Australia is shared by government and industry.

As part of this process of shared responsibility, industry operators are required to report rail safety occurrences to the state/territory regulators. Regulators and operators use this data to assist with their safety analyses and programs. In addition, the data described below is supplied to the ATSB twice a year by state and territory rail safety regulators to enable the publication of a national set of rail safety statistics, referred to as the National Rail Occurrence Database (NROD).

The NROD data is designed to assist rail safety professionals and researchers in understanding and mitigating risk. In addition, it can be used for international comparative research, while informing the public about emerging issues in rail safety. This data is collected and published on a jurisdictional basis. The NROD data contains frequency counts of the following safety-critical occurrence types:

- Derailment
- Collision
- Level Crossing Occurrence
- Signal Passed at Danger (SPAD)
- Loading Irregularity
- Track and Civil Infrastructure Irregularity.

Note that only one of these occurrence types is assigned to an individual occurrence (the top event), even if the occurrence involved more than one of the above types. Frequency counts for each of the above occurrences are normalised according to the size of the rail operation. The normalising data provided is:

- train kilometres
- freight-train kilometres
- passenger-train kilometres
- total track kilometres.

In addition, frequency counts are provided for:

- deaths
- serious injuries.

The definitions for data provided in each of the categories are taken from ON–S1: Occurrence Standard Notification 1, and OC–G1: Occurrence Classification Guideline 1. These definitions have been developed by rail safety regulators in collaboration with industry operators. Rail regulators provide the data to the ATSB for national publication.

The data is published at < http://www.atsb.gov.au/rail/statistics.aspx> and also features in Table 17.

Table 17: National rail safety occurrence data, 2005–2010

Occurrence type	2006	2007	2008	2009	2010	Total
Deaths (non-suicide)	39	42	31	24	28	164
Serious injuries (exc. NSW)	135	183	113	91	38	560
Derailments *	116	144	126	153	138	677
Collisions * with						
- infrastructure	108	100	156	117	123	604
- persons	46	43	50	51	49	239
- road vehicles	15	11	9	9	12	56
- rolling stock	11	4	8	8	7	38
- other trains	18	16	21	19	17	91
Level crossing collisions with						
- road vehicles	78	56	59	48	46	287
- persons	9	9	5	8	8	39
Signals passed at danger (exc. TAS, NT)						
- driver error	418	497	475	408	425	2,223
- signal restored as train approaches	756	771	805	870	869	4,071
Loading irregularities	540	479	504	497	563	2,583
Track/infrastructure irregularities	1,252	1,340	1,483	1,712	1,789	7,576

* Running line

Source: Rail Safety Regulators Panel (RSRP), ATSB

The regulators evaluate occurrence reports received from industry and provide those classified as Immediately Reportable Matters to the ATSB (Table 18). The information contained in Table 18 represents those rail accidents and serious incidents that have been reported to the ATSB as Immediately Reportable Matters. The reporting of rail occurrences is primarily confined to Immediately Reportable Matters that have occurred on the national Defined Interstate Rail Network. Information about those occurrences is entered into the ATSB's rail occurrence database and decisions are made about which of those occurrences will be investigated by the ATSB. The legislative basis for this reporting requirement is contained in the *Transport Safety Investigation Act 2003* (TSI Act) and the associated regulations. This data is a subset of the data presented in Table 18 which displays all occurrence types associated with each occurrence. The table shows that over the last five years, running derailments and collisions with road vehicles at level crossings were the most frequent occurrences reported to the ATSB, followed by running line collisions.

Table 18: Rail occurrences reported to the ATSB by occurrence type, 2006–2010

		Number of rail occurrences					
Occurrence type Level 1	Occurrence type Level 2	2006	2007	2008	2009	2010	Total
	Alcohol or Drugs Irregularity			2			2
Collision	Running Line Collision	6	6	10	6	7	35
	Yard Collision		1	2	1	1	5
Dangerous Goods	On Train				1		1
Derailment	Running Line Derailment	5	12	18	12	12	59
	Yard Derailment	3	2	6	7	10	28
Fire	Lineside Fires	1					1
	On Train		2	2	4	1	9
Level Crossing Occurrence	Collision with Person		1		2	1	4
	Collision with Road Vehicle	14	13	7	7	4	45
	Level crossing equipment damage/interference				1		1
	Near Miss with Road Vehicle			1	2		3
Load Irregularity	Door Open		1				1
	Load Shift	1	1				2
	Other load irregularity			1			1
	Out of Gauge				1		1
Proceed Authority Exceeded	Driver Misjudged				1		1
Railway network security	Vandalism				1		1
Rollingstock Irregularity	Braking System			1			1
	Defective Bearing	2	2	2		3	9
	Other rolling stock irregularity	5	1	1			7
	Train Parting	1			3		4
	Wheel/Axle Failure	3				1	4

		Number of rail occurrences					
Occurrence type Level 1	Occurrence type Level 2	2006	2007	2008	2009	2010	Total
Safeworking Rule or Procedure Breach	Communications Based System Procedure/Rule Breach				1	1	2
	Other safeworking rule or procedure breach		1	2	1		4
	Safeworking Rules or Procedures Deficiency	1			1		2
	Track Work Procedure/Rule Breach			2	2	2	6
	Wayside Signalling System Procedure/Rule Breach			1		1	2
Signal Passed at Danger	Completely Missed While Running					3	3
	Driver Misjudged			3	4	1	8
	Other signal passed at danger			1		1	2
	Starting Against Signal	1				1	2
Signalling and other Proceed Authority Systems Irregularity	Wayside Signalling System Irregularities			1	2		3
Slip, Trip or Fall	From Structure					1	1
	Other slip trip or Fall			1			1
	To/From Train				1		1
Suspected Suicide or Attempted Suicide	Attempted Suicide					2	2
	Suspected Suicide		2		2	1	5
Track and Civil Infrastructure Irregularity	Broken Rail		1				1
	Buckled Track	1					1
	Civil infrastructure irregularity				1		1
	Other Natural Events		1				1
	Other Track infrastructure irregularity		1			1	2
Total		**44**	**47**	**61**	**60**	**53**	**265**

Corporate governance

The ATSB has developed a corporate governance framework that assists the organisation in the achievement of performance outcomes expected by the government. The framework promotes leadership and clear strategic direction, provides a basis for consistent and transparent decision-making, and defines mechanisms for accountability and stewardship.

The governance framework recognises the need for:

Performance—having a clear understanding of our planned objectives, measuring and reporting on our progress and our outcomes, and understanding and managing the risks that may impede our progress

Conformance—having a clear understanding of what is expected of us and conforming to those expectations, knowing that we are working within the law and are consistent with our policies and procedures

Accountability—the efficient and effective use of Commonwealth resources, with clear lines of responsibility supported by decision-making by those with the requisite authority and information.

Corporate governance within the ATSB includes:

- our legislative framework, in particular the *Transport Safety Investigation Act 2003*, the *Public Service Act 1999*, and the *Financial Management and Accountability Act 1997*
- oversight and direction by the ATSB Commission
- an effective executive, committee and organisational structure
- sound risk management and fraud control
- internal audit arrangements that address key business and financial risks to improve business systems and practices
- an appropriately independent audit committee focusing on fraud, risk management and business improvement, and oversight of the preparation of the ATSB's financial statements
- effective planning and performance reporting processes
- Chief Executive Instructions, policies and procedures
- people and performance management practices that support the APS values and the ATSB's principles.

THE COMMISSION

The ATSB is governed by a Commission. As at 30 June 2011, the ATSB Commission comprises the Chief Commissioner and two part-time Commissioners. The Commission has endorsed an ATSB Commission Governance Manual which outlines its functioning, administrative policies and procedures and accountability mechanisms. The Commission meets at least quarterly, as well as regularly dealing with business electronically in accordance with agreed policies.

During 2010–11, the Commission met on four occasions. All Commissioners attended each meeting. Commissioners also attended a range of forums and events with members of the ATSB management team. These included planning workshops and emergency exercises.

EXECUTIVE MANAGEMENT

The Chief Commissioner, who is also the Chief Executive Officer, is accountable for the administration of the ATSB. The Chief Commissioner has established an Executive Management Team (EMT) to assist him in determining its policies and priorities and providing effective leadership and oversight. The EMT meets weekly. Its membership comprises the Chief Commissioner, three General Managers, Chief Financial Officer, Communication and Governance Manager, and Organisational Development Manager.

Supporting the Executive Management Team, the Chief Commissioner has also established an Occupational Health and Safety Committee, a Professional Committee and an Audit Committee.

The Occupational Health and Safety Committee has been established, consistent with obligations under the *Occupational Health and Safety Act 1991*. The Committee met on nine occasions during 2010–11. For more details, see Appendix D, Occupational health and safety.

The Professional Committee was established in March 2010 and continues to provide advice to the executive. The ATSB values open communication and cooperation with, and input from, employees and their representatives on matters that affect their workplace. The committee provides a further mechanism for consultation, and it draws on the professional capability and experience of our staff to improve organisational productivity and effectiveness. The Committee met on three occasions in 2010–11.

AUDIT COMMITTEE

The ATSB Audit Committee was established to provide independent assurance and assistance to the ATSB Chief Commissioner on the Commission's risk, control and compliance framework, as well as its external accountability responsibilities.

The Audit Committee met four times during 2010–11—in September 2010, December 2010, March 2011 and June 2011.

The main work of the Committee during the year was to develop and review:

- the Internal Audit Strategic Plan, Internal Audit Charter, and Audit Committee Charter
- Fraud Control, Risk Management and Business Continuity Plans
- the Annual Audit Program for 2010–11
- preparations for the ATSB's annual financial statements
- the proposed Audit Program for 2011–12.

The audit program for 2010–11 focused on assuring the existence and conformance of the financial management control framework. The program included audits of:

- financial statements 'hard close' quality assurance review.
- contract management
- travel expenses/use of credit cards
- Information Security Manual compliance/PSPF self assessment
- fixed asset review
- *Transport Safety Investigation Act 2003* compliance
- SIIMS user satisfaction, information availability and effectiveness in extracting information
- occupational health and safety.

BUSINESS PLANNING AND REPORTING

The Commission held a joint meeting with the senior management group of the ATSB in March 2011 to develop its Annual Plan for 2011–12.

On 9 May 2011, the Minister for Infrastructure and Transport provided his Statement of Expectations to the ATSB for the period 1 July 2011 to 30 June 2013. On 29 June 2011, the ATSB provided the Minister with a Statement of Intent and the ATSB Annual Plan 2011–12, which outlined how we intend to address the priorities outlined by the Minister. Both documents are available on the ATSB website, <www.atsb.gov.au>.

Consistent with the Statement of Intent, and obligations placed on the ATSB through the Aviation White Paper *Flight Path to the Future*, the government endorsed key performance indicators and deliverables for the ATSB, which were published as part of the Infrastructure and Transport Portfolio Budget Statements for 2011–12.

RISK MANAGEMENT AND FRAUD CONTROL

The ATSB's Risk Management Plan 2010–11 was developed during 2009–10 in parallel with business planning processes. Risk assessment and mitigation has been established as an integral part of business planning and performance reporting at both corporate and business unit levels. The Risk Management Plan 2010–11 was endorsed by the Commission and the ATSB Audit Committee prior to approval by the Chief Commissioner.

ATSB's initial risk focus has been in the areas of reputation, contribution to national transport regulatory reform, compliance and governance, and resourcing and capability.

The Commission receives regular reports on risk management at its quarterly meetings. Implementation of the Risk Management Plan is also a standing agenda item for the Audit Committee. The ATSB intends to review its Risk Management planning during 2010–11.

A Fraud Control Plan has been developed in accordance with the Commonwealth Fraud Control Guidelines. The ATSB Fraud Control Plan 2009–11 was endorsed by the Audit Committee prior to approval by the Chief Commissioner. Fraud control is a regular agenda item at Audit Committee meetings. Fraud control strategies during 2010–11 focused on ensuring staff awareness of fraud risks, controls and reporting obligations. In accordance with the Australian Government Fraud Control Guidelines and the ANAO Better Practice Guide, the ATSB will review its fraud risks in 2010–11.

No reports or instances of fraud were recorded during the financial year.

ETHICAL STANDARDS

During the reporting period, the ATSB demonstrated its commitment to the APS Values and Code of Conduct by:

- highlighting the APS Values and Code of Conduct in relevant employment procedures
- including briefing information on the APS Values and Code of Conduct in induction packages and training sessions
- referencing the Values and Code of Conduct in selection criteria for all ATSB positions

- acknowledging the upholding of the APS Values and Code of Conduct through individual performance management plans
- employees being able to access information on ethical standards via the ATSB's intranet, as well as by accessing the Australian Public Service Commission's website
- a review of action procedures, as provided for in Section 33 of the *Public Service Act 1999*, being made available to aggrieved employees as necessary.

EXTERNAL SCRUTINY

There were no judicial decisions or decisions of administrative tribunals during 2010–11 that have had or may have a significant impact on the operations of the ATSB. Similarly, there were no reports by the Auditor-General (other than the report on financial statements), Parliamentary Committees or the Commonwealth Ombudsman which referred to the ATSB.

There was one Senate Inquiry which referred to the ATSB.

Senate Inquiry

On 23 June 2011, the Senate Rural and Transport References Committee handed down its report from its inquiry into 'Pilot training and airline safety; and consideration of the Transport Safety Investigation Amendment (Incident Reports) Bill 2010'. A copy of the report is available at:

<http://www.aph.gov.au/Senate/committee/rat_cttee/pilots_2010/report/index.htm>

The Committee had terms of reference which required consideration of the ATSB's systems for receiving reports of accidents and incidents. The ATSB participated in the inquiry by providing a written submission and appearing in person at a number of hearings.

The Committee recommended that the Incident Reports Bill 2010 should not be passed. The ATSB had raised concerns in its submissions that the Bill provided blanket immunity to reporters of incidents, preventing legitimate safety action being taken by regulators and operators where it was necessary to change unsafe behaviour.

Recommendations made by the Committee to improve the accident and incident reporting included proposals that the ATSB put forward during its consultation on possible amendments to its mandatory reporting system in December 2010:

<http://www.atsb.gov.au/newsroom/news-items/regulation-consultation.aspx>

The Government has stated that it will respond to the Committee's recommendations in due course. The ATSB will provide appropriate assistance in this regard.

Management of human resources

From a human resource perspective, 2010–11 was a very productive year resulting in the completion of a number of key projects including a staff survey and the registration of a new enterprise agreement.

The first of these projects, the staff survey, was a purposely designed instrument that would allow for a comprehensive diagnosis of approximately 13 years of benchmarked data. Fortunately the results confirmed that the ATSB has a very positive organisational culture that has improved significantly since it was last measured in 2008. The survey was completed by 99 per cent of staff and therefore represented a genuine census.

Concurrently, the ATSB has successfully negotiated and registered a new enterprise agreement covering the period 2011–14. As part of this process, negotiations between management and bargaining representatives resulted in a number of improvements on the existing employment conditions. This new agreement was voted in favour by the majority of staff and will operate from 1 July 2011.

In addition to these key projects, the ATSB has continued to review, develop and progress the following human resource strategies and products:

- improved recruitment tools and processes
- a new probation report and procedure
- imbedding the upgraded performance management framework
- introduction of a new Workforce Diversity Program 2011–14
- continued fostering of the Professional Committee
- a new Drug and Alcohol procedure
- a new First Aid procedure
- revised Work Level Standards (continuing).

Based on these achievements, the ATSB is well positioned to persist with its longer term strategic goal of developing a fully integrated and mature People Management Plan.

STAFFING PROFILE

During 2010–11, the total number of staff employed at the ATSB remained stable with only a minor decrease from 115 at the start of July 2010 to 113 by the end of June 2011. Table 19 displays ATSB staff numbers, by classification, at 30 June 2011.

Table 19: ATSB staffing profile at 30 June 2011

Substantive Classification	Female (Full Time)	Female (Part Time)	Male (FT)	Male (Part Time)	Total
Statutory Office Holders		1	1	1	3
Senior Executive Service (SES) Band 1			2		2
EL 2	4		60		64
EL 1	5	2	15		22
APS 6	2	1	3		6
APS 5	7	1	1	1	10
APS 4	5		1		6
Total	**23**	**5**	**83**	**2**	**113**

This total is comprised of the following employment arrangements:

- 108 staff (representing all non-SES employees) covered by the Enterprise Agreement
- two SES employees covered by section 24(1) determinations
- three Statutory Office Holders (representing the commissioners) covered through the Remuneration Tribunal.

There are no employment arrangements in place which include provision for performance pay.

The ATSB staff turnover rate has risen from 4.3 to 7.0 per cent.

SALARY RATES

Table 20 displays the salary rates supporting the above employment arrangements, at 30 June 2011.

Table 20: ATSB salary rates at 30 June 2011

Substantive Classification	Minimum ($)	Maximum ($)
Statutory Office Holders	As determined through the Remuneration Tribunal	
SES1	156,612	182,902
EL 2	98,756	125,610*
EL 1	85,968	99,203*
APS 6	67,110	79,830*
APS 5	61,895	65,631
APS 4	55,442	60,246

*Maximums include Transport Safety Investigator and respective supervisor's salaries, representing a $3,053 – $8,962 increase on standard APS6 – EL2 rates.

TRAINING AND DEVELOPMENT

As a Registered Training Organisation, the ATSB awarded an additional seven Transport Safety Investigation Diplomas in 2010–11. In terms of other professional development and maintenance of industry awareness type programs, the ATSB, in accordance with individual staff development plans, facilitated many productive and worthwhile opportunities–including approximately 10 per cent of staff engaging in higher level tertiary pursuits.

The ATSB has also continued to develop and deliver a blended range of corporate and public service learning requirements.

Assets management

As at 30 June 2011, the ATSB had assets with a book value of $3.354m, which included specialised computer equipment and software such as teleconferencing units, air traffic control and aircraft data recorder equipment, electron and optical microscopes, as well as other sophisticated specialised technical equipment used in investigations by ATSB Staff.

During the 2010–11 year, further redevelopment of the ATSB's Safety Investigation Information Management System (SIIMS) software was undertaken. SIIMS provides an integrated view of transport safety notifications, occurrences, investigations, research, analysis and safety actions, and it establishes the definitive record of an investigation.

PURCHASING

The ATSB's approach to the procurement of all goods and services is consistent with the requirements of the Commonwealth Procurement Guidelines (CPGs). The CPGs are applied to the procurement activities of the ATSB through the Chief Executive Instructions (CEIs). The agency's procurement policies and processes have been developed to help ensure that it undertakes competitive, non-discriminatory procurements, uses resources efficiently, effectively, economically and ethically, and makes all procurement decisions in an accountable and transparent manner.

The ATSB has published the following on AusTender:

- details of publicly available procurement opportunities with a value of $10,000 or more <www.tenders.gov.au>
- details of all contracts, standing offers and consultancies awarded with a value of $10,000 or more <www.tenders.gov.au>.

LEGAL SERVICES EXPENDITURE

Paragraph 11.1(a) of the Legal Services Directions 2005, issued by the Attorney-General under the *Judiciary Act 1903*, requires chief executives of departments and agencies to ensure that legal services expenditure is appropriately recorded and monitored. Chief executives must also ensure that their agencies make records of their legal services expenditure for the previous financial year available by 30 October in the following financial year. The following figures are inclusive of GST.

The expenditure on legal services for 2010–11 was $432,036. This was comprised of:

- $67,198 on External Legal Services[9]
- $364,838 on Internal Legal Services[10].

This compares favourably with $580,683 in 2009–11 and reflects better utilisation of the agency internal legal team.

9 The majority of the ATSB's expenditure on external legal services is due to the need to use private firms and, in some circumstances, counsel, for preparation and representation in coronial inquests.

10 The cost of internal legal services was estimated on salary levels for 1.7 Executive Level 2 lawyers increased by typical overheads for staffing costs which is consistent with the Australian National Audit Office's August 2006 *Better Practice Guide*.

CONSULTANTS

The ATSB engages consultants to carry out research or to provide professional or technical advice that cannot be provided by agency staff. Consultants are procured as required and in accordance with the CPGs, the Agency's Chief Executive Instructions and other internal procurement guidelines.

During 2010–11, eight consulting firms were engaged. The total expenditure that related to those consultants was $0.167m exclusive of GST.

Table 21 presents details of consultancy contracts to the value of $10,000 or more.

Table 21: Consultancy services let during 2010–11, of $10,000 or more

Consultant Name	Description	Actual Cost (excl. GST)	Selection Process (1)	Justification (2)
Cre8tive	WEBSITE Review & Design Services	$20,350	Select Tender	A
Instinct and Reason	Market Research	$13,270	Select Tender	B
KPMG	Internal Audit Services	$80,841	Select Tender	C
Kit Filor	Advice on Coastal Pilotage Safety	$10,000	Direct Sourcing	C
Saltbush Consulting	Business Continuity Planning	$28,600	Direct Sourcing	C
TOTAL		**$153,061**		

1 Explanation of selection process terms drawn from the *Commonwealth Procurement Guidelines* (January 2005):

Select tender: A procurement procedure in which the procuring agency selects which potential suppliers are invited to submit tenders. Tenders are invited from a short list of competent suppliers.

Direct sourcing: A form of restricted tendering, available only under certain defined circumstances, with a single potential supplier or suppliers being invited to bid because of their unique expertise and/or their ability to supply the goods and/or services sought.

2 Justification for decision to use consultancy:
A – skills currently unavailable within agency
B – need for specialised or professional skills
C – need for independent research or assessment.

AUSTRALIAN NATIONAL AUDIT OFFICE ACCESS CLAUSES

In 2010–11, no contracts within the ATSB were exempted from access by the Australian National Audit Office for review.

EXEMPT CONTRACTS

In 2010–11, no contracts were exempted from publication on AusTender on public interest grounds.

Financial Statements

for the year ended 30 June 2011

Australian National
Audit Office

INDEPENDENT AUDITOR'S REPORT

To the Minister for Infrastructure and Transport

I have audited the accompanying financial statements of the Australian Transport Safety Bureau for the year ended 30 June 2011, which comprise: a Statement by the Chief Executive and Chief Financial Officer; Statement of Comprehensive Income; Balance Sheet; Statement of Changes in Equity; Cash Flow Statement; Schedule of Asset Additions; and Notes comprising a Summary of Significant Accounting Policies and other explanatory information.

Chief Executive's Responsibility for the Financial Statements

The Chief Executive of the Australian Transport Safety Bureau is responsible for the preparation of financial statements that give a true and fair view in accordance with the Finance Minister's Orders made under the *Financial Management and Accountability Act 1997*, including the Australian Accounting Standards, and for such internal control as the Chief Executive determines is necessary to enable the preparation of the financial statements that are free from material misstatement, whether due to fraud or error.

Auditor's Responsibility

My responsibility is to express an opinion on the financial statements based on my audit. I have conducted my audit in accordance with the Australian National Audit Office Auditing Standards, which incorporate the Australian Auditing Standards. These auditing standards require that I comply with relevant ethical requirements relating to audit engagements and plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgement, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the Australian Transport Safety Bureau's preparation of the financial statements that give a true and fair view in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Australian Transport Safety Bureau's internal control. An audit also includes evaluating the appropriateness of the accounting policies used and the reasonableness of accounting estimates made by the Chief Executive of the Australian Transport Safety Bureau as well as evaluating the overall presentation of the financial statements.

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I believe that the audit evidence I have obtained is sufficient and appropriate to provide a basis for my audit opinion.

Independence

In conducting my audit, I have followed the independence requirements of the Australian National Audit Office, which incorporate the requirements of the Australian accounting profession.

Opinion

In my opinion, the financial statements of the Australian Transport Safety Bureau:

(a) have been prepared in accordance with the Finance Minister's Orders made under the *Financial Management and Accountability Act 1997*, including the Australian Accounting Standards; and

(b) give a true and fair view of the matters required by the Finance Minister's Orders including the Australian Transport Safety Bureau's financial position as at 30 June 2011 and of its financial performance and cash flows for the year then ended.

Australian National Audit Office

Peter Kerr

Executive Director

Delegate of the Auditor-General

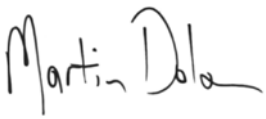
Canberra

6 October 2011

Australian Government
Australian Transport Safety Bureau

STATEMENT BY THE CHIEF EXECUTIVE OFFICER AND CHIEF FINANCIAL OFFICER

In our opinion, the attached financial statements for the year ended 30 June 2011 are based on properly maintained financial records and give a true and fair view of the matters required by the Finance Minister's Orders made under the *Financial Management and Accountability Act 1997*, as amended.



Martin Dolan
Chief Executive Officer

6 October 2011

Chris Williams
Chief Financial Officer

6 October 2011

STATEMENT OF COMPREHENSIVE INCOME

for the period ended 30 June 2011

	Notes	2011 $'000	2010 $'000
EXPENSES			
Employee benefits	3A	**14,965**	14,095
Supplier expenses	3B	**6,115**	7,053
Depreciation and amortisation	3C	**1,165**	1,673
Finance costs	3D	**2**	6
Write-down and impairment of assets	3E	**1**	13
Total expenses		**22,248**	22,840
LESS:			
OWN-SOURCE INCOME			
Own-source revenue			
Sale of goods and rendering of services	4A	**1,006**	660
Total own-source revenue		**1,006**	660
Gains			
Sale of assets	4B	**-**	1
Other	4C	**47**	45
Total gains		**47**	46
Total own-source income		**1,053**	706
Net cost of (contribution by) services		**21,195**	22,134
Revenue from Government	4D	**19,806**	22,423
Surplus (Deficit) on continuing operations		**(1,389)**	289
Surplus (Deficit) attributable to the Australian Government		**(1,389)**	289

The above statement should be read in conjunction with the accompanying notes.

BALANCE SHEET

as at 30 June 2011

	Notes	2011 $'000	2010 $'000
ASSETS			
Financial Assets			
Cash and cash equivalents	5A	**833**	22
Trade and other receivables	5B	**7,204**	8,407
Accrued Revenue		**9**	-
Total financial assets		**8,046**	8,429
Non-Financial Assets			
Property, plant and equipment	6A,6B	**1,135**	1,051
Intangibles	6C, 6D	**2,219**	2,745
Other	6E	**137**	104
Total non-financial assets		**3,491**	3,900
Total assets		**11,537**	12,329
LIABILITIES			
Payables			
Suppliers	7A	**274**	368
Other	7B	**415**	752
Total payables		**689**	1,120
Interest Bearing Liabilities			
Loans (overdraft)	8A	**-**	160
Leases	8B	**24**	72
Total interest bearing liabilities		**24**	232
Provisions			
Employee provisions	9A	**4,232**	3,687
Total provisions		**4,232**	3,687
Total liabilities		**4,945**	5,039
Net assets		**6,592**	7,290
EQUITY			
Parent Entity Interest			
Contributed equity		**7,606**	7,001
Reserves		**85**	-
Retained surplus (accumulated deficit)		**(1,099)**	289
Total parent entity interest		**6,592**	7,290

The above statement should be read in conjunction with the accompanying notes.

STATEMENT OF CHANGES IN EQUITY

for the period ended 30 June 2011

	Retained earnings		Asset revaluation reserve		Contributed equity/capital		Total equity	
	2011	2010	**2011**	2010	**2011**	2010	**2011**	2010
	$'000	$'000	**$'000**	$'000	**$'000**	$'000	**$'000**	$'000
Opening balance								
Balance carried forward from previous period	**289**	-	**-**	-	**7,001**	-	**7,290**	-
Adjustment for errors	**-**	-	**-**	-	**219**	-	**219**	-
Adjusted opening balance	**289**	-	**-**	-	**7,220**	-	**7,509**	-
Comprehensive income								
Revaluation for the period	**-**	-	**85**	-	**-**	-	**85**	-
Surplus (Deficit) for the period	**(1,389)**	289					**(1,389)**	289
Total comprehensive income	**(1,389)**	289	85	-	**-**	-	**(1,304)**	289
of which:								
Attributable to the Australian Government	**(1,389)**	**289**	**85**	**-**	**-**	**-**	**(1,304)**	289
Transactions with owners								
Return of prior year appropriation receivable	**-**	**-**	**-**	-	**-**	(1,312)	**-**	(1,312)
Contributions by owners								
Departmental capital budget	**-**	-	**-**	-	**386**	-	**386**	-
Contributed Equity – S32 FMA Act						8,313		8,313
Sub-total transactions with owners	**-**	-	**-**	-	**386**	7,001	**386**	7,001
Closing balance attributable to the Australian Government as at 30 June	**(1,099)**	**289**	**85**	**-**	**7,606**	7,001	**6,592**	7,290

The above statement should be read in conjunction with the accompanying notes.

CASH FLOW STATEMENT

for the period ended 30 June 2011

	Notes	2011 $'000	2010 $'000
OPERATING ACTIVITIES			
Cash received			
Appropriations		**21,206**	19,398
Goods and services		**925**	708
Net GST received		**152**	357
Other		**184**	-
Total cash received		**22,467**	20,463
Cash used			
Employees		**14,738**	13,622
Suppliers		**6,543**	6,605
Borrowing costs		**2**	6
Other		**199**	-
Total cash used		**21,482**	20,233
Net cash from (used by) operating activities	11	**985**	230
INVESTING ACTIVITIES			
Cash received			
Proceeds from sales of property, plant and equipment		**-**	1
Total cash received		**-**	1
Cash used			
Purchase of property, plant and equipment		**39**	53
Internally developed software		**233**	192
Purchase of software		**79**	63
Total cash used		**352**	308
Net cash from (used by) investing activities		**(352)**	(307)
FINANCING ACTIVITIES			
Cash received			
Capital Appropriation		**386**	-
Loan (overdraft)		**-**	160
Total cash received		**386**	160
Cash used			
Repayment of finance leases		**48**	61
Repayment of overdraft		**160**	-
Total cash used		**208**	61
Net cash from (used by) financing activities		**178**	99
Net increase (decrease) in cash held		**811**	22
Cash and cash equivalents at the beginning of the reporting period		**22**	-
Cash and cash equivalents at the end of the reporting period	5A	**833**	22

The above statement should be read in conjunction with the accompanying notes.

SCHEDULE OF ASSET ADDITIONS

for the period ended 30 June 2011

The following non-financial non-current assets were added in 2010-11:

	Other property, plant & equipment	Intangibles	Total
	$'000	$'000	$'000
Additions funded in the current year			
By purchase – appropriation ordinary annual services			
Departmental capital budget	**120**	**300**	**420**
Adjustment for errors	**219**	**-**	**219**
Total funded additions funded in the current year	**339**	**300**	**639**

The following non-financial non-current assets were added in 2009-10:

	Other property, plant & equipment	Intangibles	Total
	$'000	$'000	$'000
Additions funded in the previous year			
By purchase – appropriation ordinary annual services			
Departmental capital budget	53	254	307
Total funded additions funded in the current year	**53**	**254**	**307**

NOTE 1: SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

1.1 Objectives of the Australian Transport Safety Bureau

The Australian Transport Safety Bureau (ATSB) is an Australian Government controlled entity and is established by the Transport Safety Investigation Act 2003 (the TSI Act). The Bureau is governed by a Commission and is entirely separate from transport regulators, policy makers and service providers.

The objective of the ATSB is to work actively with the aviation, marine and rail industries, transport regulators and governments at a state, national and international level to improve transport safety standards for all Australians, particularly those travelling within Australia and overseas. Investigations and related activities seek to raise awareness of identified safety issues and to encourage stakeholders to implement actions to improve future safety.

The ATSB is structured to meet the following outcome:

Improved transport safety in Australia including through: independent, 'no blame' investigation of transport accidents and other safety occurrences; safety data recording, analysis and research; and fostering safety awareness, knowledge and action.

The continued existence of the entity in its present form and with its present programs is dependent on Government policy and on continuing funding by Parliament for the entity's administration and programs.

The ATSB is funded by an Appropriation from the Parliament and its funding must be spent so as to achieve the above outcome. The ATSB has no Administered funding.

1.2 Basis of Preparation of the Financial Statements

The financial statements are general purpose financial statements and are required by section 49 of the *Financial Management and Accountability Act 1997* (the FMA Act).

The Financial Statements have been prepared in accordance with:

- Finance Minister's Orders (FMOs) for reporting periods ending on or after 1 July 2010; and
- Australian Accounting Standards and Interpretations issued by the Australian Accounting Standards Board (AASB) that apply for the reporting period.

The financial statements have been prepared on an accrual basis and in accordance with the historical cost convention, except for certain assets and liabilities, which, as noted, are at fair value or net amortised cost. Except where stated, no allowance is made for the effect of changing prices on the results or the financial position.

The financial statements are presented in Australian dollars and values are rounded to the nearest thousand dollars unless otherwise specified.

Unless an alternative treatment is specifically required by an accounting standard or the FMOs, assets and liabilities are recognised in the balance sheet when and only when it is probable that future economic benefits will flow to the entity or a future sacrifice of economic benefits will be required and the amounts of the assets or liabilities can be reliably measured. However, assets and liabilities arising under executory contracts are not recognised unless required by an accounting standard. Liabilities and assets that are unrecognised are reported in the schedule of commitments or the schedule of contingencies, when known.

Unless alternative treatment is specifically required by an accounting standard, income and expenses are recognised in the Statement of Comprehensive Income when, and only when, the flow, consumption or loss of economic benefits has occurred and can be reliably measured.

1.3 Significant Accounting Judgements and Estimates

In the process of applying the accounting policies listed in this note, the ATSB has made the following judgements and estimates that have the most significant impact on the amounts recorded in the financial statements:

a) The fair value of the ATSB's property plant and equipment was determined by an independent valuer;

b) Assessing the fair value of the intangible software asset the ATSB's Safety Investigation Information System as being equivalent to the asset's cost less amortisation at 30 June 2011; and

c) The estimate of the ATSB's long service leave liabilities as at 30 June 2011 were determined using the short hand method set out in the Finance Minister's Orders.

1.4 New Australian Accounting Standards

Adoption of New Australian Accounting Standards Requirements

No accounting standard has been adopted earlier than the application date as stated in the standard.

No new standards, revised standards, interpretations and amending standards that were issued prior to the signing of the statement by the Chief Executive Officer and Chief Financial Officer that were applicable to the current reporting period had a material impact on the ATSB.

Future Australian Accounting Standards Requirements

No new standards, revised standards, interpretations and amending standards that were issued by the AASB prior to the signing of the statement by the Chief Executive Officer and Chief Financial Officer that were applicable to the current reporting period are expected to have material impact on the ATSB for future reporting periods.

1.5 Revenue

Revenue from Government

Amounts appropriated for departmental appropriations for the year (adjusted for any formal additions and reductions) are recognised as revenue when the ATSB gains control of the appropriation, except for amounts which are reciprocal in nature, in which cases revenue is recognised only when it is earned.

Appropriations receivable are recognised at their nominal amounts.

Resources Received Free of Charge

Resources received free of charge are recognised as revenue when, and only when, a fair value can be reliably determined and the services would have been purchased if they had not been donated. Use of those resources is recognised as an expense. Resources received free of charge are recorded as either revenue or gains depending on their nature.

Contributions of assets at no cost of acquisition or for nominal consideration are recognised as gains at their fair value when the asset qualifies for recognition, unless received from another Government agency or authority as a consequence of a restructuring of administrative arrangements.

Other Types of Revenue

Revenue from the sale of goods is recognised when:

- the risks and rewards of ownership have been transferred to the buyer;
- the agency retains no managerial involvement or effective control over the goods;
- the revenue and transaction costs incurred can be reliably measured; and
- it is probable that the economic benefits associated with the transaction will flow to the ATSB.

Revenue from rendering of services is recognised by reference to the stage of completion of contracts at the reporting date. The revenue is recognised when:

- the amount of revenue, stage of completion and transaction costs incurred can be reliably measured; and
- the probable economic benefits associated with the transaction will flow to the entity.

The stage of completion of contracts at the reporting date is determined by reference the proportion that costs incurred to date bear to the estimated total costs of the transaction.

Receivables for goods and services, which have 30 day terms, are recognised at the nominal amounts due less any impairment allowance account. Collectability of debts is reviewed on an ongoing basis and at year end and those that are judged to be uncollectable are written off when identified.

At 30 June 2011, there are no debts which have been assessed as being uncollectable and there is no impairment allowance account.

Interest revenue is recognised using the effective interest method as set out in AASB 139 Financial Instruments: Recognition and Measurement.

1.6 Gains

Resources received free of charge

Resources received free of charge are recognised as gains when, and only when, a fair value can be reliably determined and the services would have been purchased if they had not been donated. Use of those resources is recognised as an expense.

Resources received free of charge are recorded as either revenue or gains depending on their nature.

Contributions of assets at no cost of acquisition or for nominal consideration are recognised as gains at their fair value when the asset qualifies for recognition, unless received from another Government entity as a consequence of a restructuring of administrative arrangements.

Sale of Assets

Gains from disposal of assets are recognised when control of the asset has passed to the buyer.

1.7 Transactions with the Australian Government as Owner

Equity Injections

Amounts appropriated which are designated as 'equity injections' for a year (less any formal reductions) and Departmental Capital Budgets (DCBs) are recognised directly in contributed equity in that year.

1.8 Employee Benefits

Liabilities for 'short-term employee benefits' (as defined in AASB 119 Employee Benefits) and termination benefits due within twelve months of the end of reporting period are measured at their nominal amounts.

The nominal amount is calculated with regard to the rates expected to be paid on settlement of the liability.

Other long-term employee benefits are measured as net total of the present value of the defined benefit obligation at the end of the reporting period minus the fair value at the end of the reporting period of plan assets (if any) out of which the obligations are to be settled directly.

Leave

The liability for employee benefits includes provision for annual leave and long service leave. No provision has been made for sick leave as all sick leave is non-vesting and the average sick leave taken in future years by employees of the Agency is estimated to be less than the annual entitlement for sick leave.

The leave liabilities are calculated on the basis of employees' remuneration at the estimated salary rates that will apply at the time the leave is taken, including the ATSB's employer superannuation contribution rates to the extent that the leave is likely to be taken during service rather than paid out on termination.

The liability for long service leave has been determined by reference to Australian Government Shorthand Method under FMO 2010-2011 as at 30 June 2011. The estimate of the present value of the liability takes into account attrition rates and pay increases through promotion and inflation.

Superannuation

Staff of the ATSB are members of the Commonwealth Superannuation Scheme (CSS), the Public Sector Superannuation Scheme (PSS) or the PSS accumulation plan (PSSap).

The CSS and PSS are defined benefit schemes for the Australian Government. The PSSap is a defined contribution scheme.

The liability for defined benefits is recognised in the financial statements of the Australian Government and is settled by the Australian Government in due course. This liability is reported by the Department of Finance and Deregulation as an Administered Item.

The ATSB makes employer contributions to the employee superannuation scheme at rates determined by an actuary to be sufficient to meet the current cost to the Government. The ATSB accounts for the contributions as if they were contributions to defined contribution plans.

The liability for superannuation recognised as at the reporting date represents outstanding contributions for the final fortnight of the year.

1.9 Leases

A distinction is made between finance leases and operating leases. Finance leases effectively transfer from the lessor to the lessee substantially all the risks and rewards incidental to ownership of leased assets. In operating leases, the lessor effectively retains substantially all such risks and benefits.

Where an asset is acquired by means of a finance lease, the asset is capitalised at either the fair value of the lease property or, if lower, the present value of minimum lease payments at the inception of the contract and a liability is recognised at the same time and for the same amount.

The discount rate used is the interest rate implicit in the lease. Leased assets are amortised over the period of the lease. Lease payments are allocated between the principal component and the interest expense.

Operating lease payments are expensed on a straight-line basis which is representative of the pattern of benefits derived from the leased assets.

1.10 Borrowing Costs

All borrowing costs are expensed as incurred.

1.11 Cash and Cash Equivalents

Cash and cash equivalents includes cash on hand, cash held with outsiders, demand deposits in bank accounts with an original maturity of 3 months or less that are readily convertible to known amounts of cash and subject to insignificant risk of changes in value. Cash is recognised at its nominal amount.

1.12 Financial Assets

The ATSB classifies its financial assets as cash or loans and receivables.

Financial assets are recognised and derecognised upon trade date.

Loans and Receivables

Trade receivables, loans and other receivables that have fixed or determinable payments that are not quoted in an active market are classified as ‘loans and receivables’. Loans and receivables are measured at amortised cost using the effective interest method less impairment. Interest is recognised by applying the effective interest rate.

Impairment of Financial Assets

Financial assets are assessed for impairment at the end of each reporting period.

Financial assets held at amortised cost – if there is objective evidence that an impairment loss has been incurred for loans and receivables or held to maturity investments held at amortised cost, the amount of the loss is measured as the difference between the asset’s carrying amount and the present value of estimated future

cash flows discounted at the asset's original effective interest rate. The carrying amount is reduced by way of an allowance account. The loss is recognised in the statement of comprehensive income.

Available for sale financial assets – if there is objective evidence that an impairment loss on an available-for-sale financial asset has been incurred, the amount of the difference between its cost, less principal repayments and amortisation, and its current fair value, less any impairment loss previously recognised in expenses, is transferred from equity to the statement of comprehensive income.

Financial assets held at cost – If there is objective evidence that an impairment loss has been incurred, the amount of the impairment loss is the difference between the carrying amount of the asset and the present value of the estimated future cash flows discounted at the current market rate for similar assets.

1.13 Financial Liabilities

Financial liabilities are classified as either financial liabilities 'at fair value through profit or loss' or other financial liabilities.

Financial liabilities are recognised and derecognised upon 'trade date'.

Financial Liabilities at Fair Value through Profit or Loss

Financial liabilities at fair value through profit or loss are initially measured at fair value. Subsequent fair value adjustments are recognised in profit or loss. The net gain or loss recognised in profit or loss incorporates any interest paid on the financial liability.

Other Financial Liabilities

Other financial liabilities, including borrowings, are initially measured at fair value, net of transaction costs.

Other financial liabilities are subsequently measured at amortised cost using the effective interest method, with the interest expense recognised on an effective yield basis.

The effective interest method is a method of calculating the amortised cost of a financial liability and of allocating the interest expense over the relevant period. The effective interest rate is the rate that exactly discounts estimated future cash payments through the expected life of the financial liability, or, where appropriate, a shorter period.

Supplier and other payables are recognised at amortised cost. Liabilities are recognised to the extent that the goods or services have been received (and irrespective of having been invoiced).

1.14 Contingent Liabilities and Contingent Assets

Contingent liabilities and contingent assets are not recognised in the balance sheet but are reported in the relevant schedules and notes. They may arise from uncertainty as to the existence of a liability or asset or represent an asset or liability in respect of which the amount cannot be reliably measured. Contingent assets are disclosed when settlement is probable but not virtually certain and contingent liabilities are disclosed when settlement is greater than remote.

The ATSB has no quantifiable, unquantifiable or remote contingent assets or liabilities.

1.15 Financial Guarantee Contracts

Financial guarantee contracts are accounted for in accordance with AASB 139 Financial Instruments: Recognition and Measurement. They are not treated as a contingent liability, as they are regarded as financial instruments outside the scope of AASB 137 Provisions, Contingent Liabilities and Contingent Assets.

1.16 Acquisition of Assets

Assets are recorded at cost on acquisition except as stated below. The cost of acquisition includes the fair value of assets transferred in exchange and liabilities undertaken. Financial assets are initially measured at their fair value plus transaction costs where appropriate.

Assets acquired at no cost, or for nominal consideration, are initially recognised as assets and income at their fair value at the date of acquisition, unless acquired as a consequence of restructuring of administrative arrangements. In the latter case, assets are initially recognised as contributions by owners at the amounts at which they were recognised in the transferor agency's accounts immediately prior to the restructuring.

1.17 Property, Plant and Equipment

Asset Recognition Threshold

Purchases of plant and equipment are recognised initially at cost in the Balance Sheet, except purchases costing less than $5,000, which are expensed in the year of acquisition (other than where they form part of a group of similar items which are significant in total).

The initial cost of an asset includes an estimate of the cost of dismantling and removing the item and restoring the site on which it is located.

Revaluations

The ATSB has property plant and equipment assets and the fair values for each asset are measured at market selling price, or depreciated replacement cost in isolated instances where no market prices or indicators are available for specialised, diagnostic equipment.

Following initial recognition at cost, plant and equipment are carried at fair value less subsequent accumulated depreciation and accumulated impairment losses. A valuation was conducted on 30 June 2011 and the resulting revaluation increment was credited to equity under the heading of asset revaluation reserve. There were no revaluation decrements.

Any accumulated depreciation as at the revaluation date is eliminated against the gross carrying amount of the asset and the asset restated to the revalued amount.

Depreciation

Depreciable property, plant and equipment assets are written-off to their estimated residual values over their estimated useful lives to the ATSB using, in all cases, the straight-line method of depreciation.

Depreciation rates (useful lives), residual values and methods are reviewed at each reporting date and necessary adjustments are recognised in the current, or current and future reporting periods, as appropriate.

Finance Leases and Leasehold improvements are depreciated over the lesser of the term of the lease or the useful life of the actual asset in question.

Depreciation rates applying to Property, Plant and Equipment are based on useful lives of between 5 and 10 years, which is the same as 2009-10.

Impairment

All assets were assessed for impairment at 30 June 2011. Where indications of impairment exist, the asset's recoverable amount is estimated and an impairment adjustment made if the asset's recoverable amount is less than its carrying amount.

The recoverable amount of an asset is the higher of its fair value less costs to sell and its value in use. Value in use is the present value of the future cash flows expected to be derived from the asset. Where the future economic benefit of an asset is not primarily dependent on the asset's ability to generate future cash flows, and the asset would be replaced if ATSB were deprived of the asset, its value in use is taken to be its depreciated replacement cost.

De-recognition

An item of property, plant and equipment is de-recognised upon disposal or when no further future economic benefits are expected from its use or disposal.

1.18 Intangible Assets

The ATSB's intangible assets comprise internally developed software for internal use and purchased software. Intangible software assets are carried at cost less accumulated amortisation and accumulated impairment losses. Software is amortised on a straight line basis over its anticipated useful life and the default useful life is five years.

All software assets were assessed for indications of impairment as at 30 June 2011.

1.19 Taxation / Competitive Neutrality

The ATSB is exempt from all forms of taxation except Fringe Benefits Tax (FBT) and the Goods and Services Tax (GST). Revenues, expenses and assets are recognised net of GST except:

- where the amount of GST incurred is not recoverable from the Australian Taxation Office; and
- for receivables and payables.

1.20 Change in Accounting Policies

In 2010-11, changes to the classifications of some expenses were altered:

- Commissioners' fees for part-time Commissioners are now included in Wages and Salaries; and
- The ATSB's Comcare premium, some administration expenses with Comsuper and some relocation expenses are now included in Other Employee Expenses.

This resulted in a change in comparatives with Employee Benefits increasing by $246,550 and Total Goods and Services Expense decreasing by $246,550. As such, there was no effect to the surplus attributable to the ATSB in 2009-10.

The change in classification results in providing reliable and more relevant information about the ATSB's financial performance.

NOTE 2: EVENTS AFTER THE REPORTING PERIOD

No events have occurred after the balance date that should be brought to account or noted in the 2010-11 financial statements.

NOTE 3: EXPENSES

	2011 $'000	2010 $'000
Note 3A: Employee Benefits		
Wages and salaries	**11,274**	10,477
Superannuation:		
Defined contribution plans	**508**	365
Defined benefit plans	**1,415**	1,440
Leave and other entitlements	**1,460**	1,495
Separation and redundancies	**127**	158
Other employee expenses	**181**	160
Total employee benefits	**14,965**	14,095
Note 3B: Suppliers		
Goods and services		
Office rent	**1,649**	1,636
Travel expenses	**991**	1,121
Contracted Services	**550**	162
Services from Department of Infrastructure	**492**	483
Information technology	**461**	598
Training and conferences	**306**	616
Communications	**238**	281
Contract staff	**223**	374
Investigation services	**204**	123
Publications and printing	**201**	177
Services from consultants	**167**	443
Legal	**68**	274
Audit Fees	**45**	45
Other goods and services	**520**	720
Total goods and services	**6,115**	7,053
Goods and services are made up of:		
Provision of goods – external parties	**72**	235
Rendering of services – related entities	**3,108**	3,887
Rendering of services – external parties	**2,935**	2,931
Total goods and services	**6,115**	7,053
Note 3C: Depreciation and Amortisation		
Depreciation:		
Property, plant and equipment	**294**	315
Finance Leases	**45**	58
Total depreciation	**339**	373
Amortisation:		
Intangibles	**826**	1,300
Total amortisation	**826**	1,300
Total depreciation and amortisation	**1,165**	1,673

NOTE 3: EXPENSES CONTINUED

	2011 $'000	2010 $'000
Note 3D: Finance Costs		
Finance leases	**2**	6
Total finance costs	**2**	6
Note 3E: Write-Down and Impairment of Assets		
Asset write-downs and impairments from:		
Write down of property, plant and equipment not in use	**1**	-
Impairment of property, plant and equipment	**-**	13
Total write-down and impairment of assets	**1**	13

NOTE 4: INCOME

	2011	2010
REVENUE	**$'000**	$'000
Note 4A: Sale of Goods and Rendering of Services		
Rendering of services – related entities	**851**	555
Rendering of services – external parties	**155**	105
Total sale of goods and rendering of services	**1,006**	660
GAINS		
Note 4B: Sale of Assets		
Property, plant and equipment:		
Proceeds from sale	**-**	1
Carrying value of assets sold	**-**	-
Selling expense	**-**	-
Net gain from sale of assets	**-**	1
Note 4C: Other Gains		
Resources received free of charge – ANAO Audit	**45**	45
Other Gains	**2**	-
Total other gains	**47**	45
REVENUE FROM GOVERNMENT		
Note 4D: Revenue from Government		
Appropriations:		
Departmental appropriation	**19,806**	22,423
Total revenue from Government	**19,806**	22,423

NOTE 5: FINANCIAL ASSETS

	2011 $'000	2010 $'000
Note 5A: Cash and Cash Equivalents		
Cash on hand or on deposit	**833**	22
Total cash and cash equivalents	**833**	22
Note 5B: Trade and Other Receivables		
Good and Services:		
Goods and services – related entities	**4**	2
Goods and services – external parties	**72**	18
Total receivables for goods and services	**76**	20
Appropriations receivable:		
for existing programs	**-**	3,025
for departmental supplementations	**6,727**	5,101
Total appropriations receivable	**6,727**	8,126
Other receivables:		
GST receivable from the Australian Taxation Office	**401**	261
Total other receivables	**401**	261
Total trade and other receivables	**7,204**	8,407
Receivables are expected to be recovered in:		
No more than 12 months	**477**	1,200
More than 12 months	**6,727**	7,207
Total trade and other receivables (net)	**7,204**	8,407
Receivables are aged as follows:		
Not overdue	**7,186**	8,405
Overdue by:		
0 to 30 days	**14**	-
31 to 60 days	-	-
61 to 90 days	-	-
More than 90 days	**4**	2
Total receivables (gross)	**7,204**	8,407

NOTE 6: NON-FINANCIAL ASSETS

	2011 $'000	2010 $'000
Note 6A: Property, Plant and Equipment		
Other property, plant and equipment:		
Fair value	**1,347**	1,530
Accumulated depreciation	**(212)**	(479)
Total other property, plant and equipment	**1,135**	1,051
Total property, plant and equipment	**1,135**	1,051

All revaluations were conducted in accordance with the revaluation policy stated at Note 1. On 30 June 2011, an independent valuer conducted the revaluations.

A revaluation increment of $84,890 for plant and equipment was credited to the asset revaluation reserve and included in the equity section of the balance sheet. No decrements were recognised in 2011.

No indicators of impairment were found for property, plant and equipment.

No property, plant or equipment is expected to be sold or disposed of within the next 12 months.

Note 6B: Reconciliation of the Opening and Closing Balances of Property, Plant and Equipment (2010-11)

	Other property, plant & equipment $'000	Total $'000
As at 1 July 2010		
Gross book value	**1,530**	**1,530**
Accumulated depreciation and impairment	**(479)**	**(479)**
Net book value 1 July 2010	**1,051**	**1,051**
Additions*	**120**	**120**
Revaluations recognised in the revaluation reserve	**85**	**85**
Depreciation expense	**(339)**	**(339)**
Other movements	**219**	**219**
Write down of property, plant and equipment not in use	**(1)**	**(1)**
Net book value 30 June 2011	**1,135**	**1,135**
Net book value as of 30 June 2011 represented by:		
Gross book value	**1,347**	**1,347**
Accumulated depreciation and impairment	**(212)**	**(212)**
	1,135	**1,135**

* Disaggregated additions information are disclosed in the Schedule of Asset Additions.

Other movements: The $219,481 of assets relates to assets not identified during the restructure in 2009-10. These assets have not been recognised in the prior period as it has been ruled as impracticable to determine the amount of the adjustment that related to 2009-10.

NOTE 6: NON-FINANCIAL ASSETS CONTINUED

Note 6B (Cont'd): Reconciliation of the Opening and Closing Balances of Property, Plant and Equipment (2009-10)

	Other property, plant & equipment $'000	Total $'000
As at 1 July 2009		
Gross book value	1,384	1,384
Accumulated depreciation and impairment	-	-
Net book value 1 July 2009	1,384	1,384
Additions*	53	53
Impairments recognised in the operating result	(13)	(13)
Depreciation expense	(373)	(373)
Net book value 30 June 2010	1,051	1,051
Net book value as of 30 June 2010 represented by:		
Gross book value	1,530	1,530
Accumulated depreciation and impairment	(479)	(479)
	1,051	1,051

Note 6C: Intangibles	**2011 $'000**	2010 $'000
Computer software:		
Internally developed – in progress	**173**	192
Internally developed – in use	**3,998**	3,758
Purchased	**174**	95
Accumulated amortisation	**(2,126)**	(1,300)
Total computer software	**2,219**	2,745
Total intangibles	**2,219**	2,745

* Disaggregated additions information are disclosed in the Schedule of Asset Additions.

Intangible assets are carried at cost less any accumulated amortisation.

No indicators of impairment were found for intangible assets.

No intangibles are expected to be sold or disposed of within the next 12 months.

NOTE 6: NON-FINANCIAL ASSETS CONTINUED

Note 6D: Reconciliation of the Opening and Closing Balances of Intangibles (2010-11)

	Computer software internally developed $'000	Computer software purchased $'000	Total $'000
As at 1 July 2010			
Gross book value	**3,950**	**95**	**4,045**
Accumulated amortisation and impairment	**(1,283)**	**(17)**	**(1,300)**
Net book value 1 July 2010	**2,667**	**78**	**2,745**
Additions*	**221**	**79**	**300**
Amortisation	**(799)**	**(27)**	**(826)**
Net book value 30 June 2011	**2,089**	**130**	**2,219**
Net book value as of 30 June 2011 represented by:			
Gross book value	**4,171**	**174**	**4,345**
Accumulated amortisation and impairment	**(2,082)**	**(44)**	**(2,126)**
	2,089	**130**	**2,219**

* Disaggregated additions information is disclosed in the Schedule of Asset Additions.

Note 6D (Cont'd): Reconciliation of the Opening and Closing Balances of Intangibles (2009-10)

	Computer software internally developed $'000	Computer software purchased $'000	Total $'000
As at 1 July 2009			
Gross book value	3,758	33	3,791
Accumulated amortisation and impairment	-	-	-
Net book value 1 July 2009	3,758	33	3,791
Additions*	192	62	254
Amortisation	(1,283)	(17)	(1,300)
Net book value 30 June 2010	2,667	78	2,745
Net book value as of 30 June 2010 represented by:			
Gross book value	3,950	95	4,045
Accumulated amortisation and impairment	(1,283)	(17)	(1,300)
	2,667	78	2,745

* Disaggregated additions information are disclosed in the Schedule of Asset Additions.

NOTE 6: NON-FINANCIAL ASSETS CONTINUED

	2011 $'000	2010 $'000
Note 6E: Other Non-Financial Assets		
Prepayments	**137**	104
Total other non-financial assets	**137**	104
Total other non-financial assets – are expected to be recovered in:		
No more than 12 months	**137**	104
More than 12 months	**-**	-
Total other non-financial assets	**137**	104

No indicators of impairment were found for other non-financial assets.

NOTE 7: PAYABLES

	2011 $'000	2010 $'000
Note 7A: Suppliers		
Accrued Expenses	**274**	-
Trade Creditors	**-**	368
Total supplier payables	**274**	368
Supplier payables expected to be settled within 12 months:		
Related entities	**-**	57
External parties	**274**	311
Total	**274**	368
Total supplier payables	**274**	368
Note 7B: Other Payables		
Salaries and wages	**332**	697
Superannuation	**83**	39
Unearned income	**-**	16
Total other payables	**415**	752
Total other payables are expected to be settled in:		
No more than 12 months	**415**	752
More than 12 months	**-**	-
Total other payables	**415**	752

NOTE 8: INTEREST BEARING LIABILITIES

	2011 $'000	2010 $'000
Note 8A: Loans		
Bank overdraft	-	160
Total loans	-	160
Payable:		
Within one year	-	160
Total loans	-	160

No interest was charged on the overdraft.

Note 8B: Leases		
Finance leases	**24**	72
Total finance leases	**24**	72
Payable:		
Within one year:		
Minimum lease payments	**20**	50
Deduct: future finance charges	**(1)**	(2)
In one to five years:		
Minimum lease payments	**5**	25
Deduct: future finance charges	-	(1)
Finance leases recognised on the balance sheet	**24**	72

Finance leases exist in relation to certain office equipment assets. The leases are non-cancellable and for fixed terms averaging 4 years. The interest rate implicit in the leases averaged 12.35%. The lease assets secure the lease liabilities. ATSB guarantees the residual values of all assets leased. There are no contingent rentals.

NOTE 9: PROVISIONS

	2011 $'000	2010 $'000
Note 9A: Employee Provisions		
Leave	**4,232**	3,687
Total employee provisions	**4,232**	3,687
Employee provisions are expected to be settled in:		
No more than 12 months	**1,816**	1,347
More than 12 months	**2,416**	2,340
Total employee provisions	**4,232**	3,687

NOTE 10: RESTRUCTURING

Note 10: Departmental Restructuring

Current Year Restructuring

There were no restructures in 2010-11.

Prior Year Restructuring

The Australian Transport Safety Bureau (ATSB) previously had been a division of the Department of Infrastructure, Transport, Regional Development and Local Government. As a result of a restructuring of administrative arrangements, the ATSB was established on 1 July 2009 as an independent Statutory Agency with a Commission structure operating under the *Financial Management and Accountability Act 1997*

The net book value of assets and liabilities transferred to ATSB for no consideration and recognised as at 1 July 2009 was $8.313m, as shown below:

	2011	2010
	$'000	$'000
Department of Infrastructure, Transport, Regional Development and Local Government		
ASSETS		
Financial Assets		
Appropriation receivable	-	6,413
Other receivables	-	49
Total financial assets	**-**	6,462
Non-financial Assets		
Infrastructure, plant and equipment	-	1,384
Intangibles	-	3,791
Other non-financial assets	-	88
Total non-financial assets	**-**	5,263
	-	
Total assets to be recognised	**-**	11,725
LIABILITIES		
Payables		
Suppliers	-	68
Other payables	-	187
Total payables	**-**	255
Interest Bearing Liabilities		
Leases	-	134
Total interest bearing liabilities	**-**	134
Provisions		
Employee provisions	-	3,023
Total provisions	**-**	3,023
Total liabilities to be recognised	**-**	3,412
Net assets/(liabilities) assumed	**-**	8,313

NOTE 11: CASH FLOW RECONCILIATION

	2011 $'000	2010 $'000
Reconciliation of cash and cash equivalents as per Balance Sheet to Cash Flow Statement		
Cash and cash equivalents as per:		
Cash flow statement	**833**	22
Balance sheet	**833**	22
Difference	**-**	-
Reconciliation of net cost of services to net cash from operating activities:		
Net cost of services	**(21,195)**	(22,134)
Add revenue from Government	**19,806**	22,423
Adjustments for non-cash items		
Add depreciation / amortisation	**1,165**	1,673
Add net write down of non-financial assets	**1**	13
Less gain on disposal of assets	**-**	(1)
Changes in assets / liabilities		
(Increase) / decrease in net receivables	**1,194**	(3,267)
(Increase) / decrease in prepayments	**(33)**	(14)
Increase / (decrease) in unearned revenue	**(16)**	16
Increase / (decrease) in employee provisions	**545**	665
Increase / (decrease) in supplier payables	**(118)**	348
Increase / (decrease) in other payable	**(315)**	556
Increase / (decrease) in finance lease payables	**(49)**	(48)
Net cash from (used by) operating activities	**985**	230

NOTE 12: SENIOR EXECUTIVE REMUNERATION

Note 12A: Senior Executive Remuneration Expense for the Reporting Period

	2011	2010
	$	$
Short-term employee benefits:		
Salary	**710,288**	825,277
Annual leave accrued	**62,012**	75,672
Allowances	**15,296**	10,084
Total short-term employee benefits	**787,596**	911,033
Post-employment benefits:		
Superannuation	**110,465**	124,466
Total post-employment benefits	**110,465**	124,466
Other long-term benefits:		
Long-service leave	**20,218**	24,672
Total other long-term benefits	**20,218**	24,672
Total	**918,279**	1,060,171

Notes:

1. Note 12A was prepared on an accrual basis.
2. Note 12 A excludes acting arrangements and part-year service where remuneration expensed was less than $150,000.

NOTE 12: SENIOR EXECUTIVE REMUNERATION CONTINUED

Note 12B: Average Annual Remuneration Packages Paid for Substantive Senior Executives as at the end of the Reporting Period

	as at 30 June 2011				as at 30 June 2010			
		Fixed elements				Fixed elements		
Fixed Elements and Bonus Paid[1]	**Senior Executives No.**	**Salary $**	**Allowances $**	**Total $**	**Senior Executives No.**	**Salary $**	**Allowances $**	**Total $**
Total remuneration (including part-time arrangements):								
$180,000 to $209,999	-	-	-	-	4	200,745	2,521	203,266
$210,000 to $239,999	**3**	**206,299**	**3,824**	**210,123**	-	-	-	-
$330,000 to $359,999	**1**	**296,667**	**60,047**	**356,714**	1	300,114	42,307	342,421
Total	**4**				5			

Notes:

1. This table reports on substantive senior executives who are employed by the entity as at the end of the reporting period. Fixed elements are based on the employment agreement of each individual – each row represents an average annualised figure (based on headcount) for the individuals in that remuneration package band (i.e. the 'Total' column).
2. No Senior Executives are entitled to a performance bonus under their employment arrangements.

Variable Elements:

With the exception of performance bonuses, variable elements are not included in the 'Fixed Elements and Bonus Paid' table above. The following variable elements are available as part of senior executives' remuneration package:

(a) On average senior executives are entitled to the following leave entitlements:
20 days annual leave, 9 days long service leave and 25 days of personal circumstances leave per year.

- Annual Leave (AL): entitled to 20 days (2010:20 days) each full year worked (pro-rata for part-time SES);
- Personal Leave (PL): entitled to 25 days (2010:25 days) or part-time equivalent;
- Long Service Leave (LSL): in accordance with Long Service Leave (Commonwealth Employees) Act 1976;

(b) Senior executives are members of the following superannuation fund:

PSS

- Public Sector Superannuation Scheme (PSS): this scheme is closed to new members, with current employer contributions set at 13.0 per cent (plus an additional productivity component of 2-3 per cent). More information on PSS can be found at http://www.pss.gov.au;

(c) Various salary sacrifice arrangements are available to senior executives including superannuation, motor vehicle and expense payment fringe benefits.

Note 12C: Other Highly Paid Staff

During the reporting period, there were no employees whose salary plus performance bonus was $150,000 or more.

NOTE 13: REMUNERATION OF AUDITORS

	2011	2010
	$'000	$'000
Financial statement audit services were provided free of charge to the entity.		
The fair value of the services provided was:		
Auditor's fees	**45**	45
	45	45

No other services were provided by the auditors of the financial statements.

NOTE 14: FINANCIAL INSTRUMENTS

	Note	**2011 $'000**	2010 $'000
Note 14A: Categories of Financial Instruments			
Financial Assets			
Loans and receivables:			
Cash at hand and at bank	5A	**833**	22
Trade receivables	5B	**76**	20
Total		**909**	42
Carrying amount of financial assets		**909**	42
Financial Liabilities			
At amortised cost:			
Trade creditors	7A	**-**	368
Bank overdraft	8A	**-**	160
Finance lease	8B	**24**	72
Total carrying amount of financial liabilities		**24**	600
Note 14B: Net Expense from Financial Liabilities			
Financial liabilities at amortised costs			
Interest expense	3D	**2**	6
Net gain/(loss) held-to-maturity		**2**	6
Net gain/(loss) from financial assets		**2**	6

Note 14C: Fair Value of Financial Instruments

		Carrying amount 2011 $'000	**Fair value 2011 $'000**	Carrying amount 2010 $'000	Fair value 2010 $'000
Financial Assets					
Cash and cash equivalents	5A	**833**	**833**	22	22
Trade receivables	5B	**76**	**76**	20	20
Total		**909**	**909**	42	42
Financial Liabilities					
Trade creditors	7A	**-**	**-**	368	368
Bank overdraft	8A	**-**	**-**	160	160
Finance lease	8B	**24**	**24**	72	72
Total		**24**	**24**	600	600

Note 14D: Credit Risk

ATSB is exposed to minimal credit risk as loans and receivables are cash, trade and other receivables. ATSB assessed the risk of default on payment and has allocated nil in 2011 to an impairment allowance account.

NOTE 14: FINANCIAL INSTRUMENTS CONTINUED

The following table illustrates ATSB's gross exposure to credit risk:

		2011	2010
		$'000	$'000
Financial assets			
Trade receivables	5B	**76**	20
Total		**76**	20

The ATSB holds no collateral to mitigate against credit risk.

Credit quality of financial instruments not past due or individually determined as impaired

		Not past due nor impaired	Not past due nor impaired	**Past due or impaired**	Past due or impaired
		2011	2010	**2011**	2010
		$'000	$'000	**$'000**	$'000
Trade receivables	5B	**58**	18	**18**	2
Total		**58**	18	**18**	2

Trade receivables that are past due are not impaired and the ATSB has not made any provision for bad or doubtful debts.

NOTE 14: FINANCIAL INSTRUMENTS CONTINUED

Ageing of financial assets that were past due but not impaired for 2011

	0 to 30 days $'000	31 to 60 days $'000	61 to 90 days $'000	90+ days $'000	Total $'000
Trade receivables	**14**	**-**	**-**	**4**	**18**
Total	**14**	**-**	**-**	**4**	**18**

Ageing of financial assets that were past due but not impaired for 2010

	0 to 30 days $'000	31 to 60 days $'000	61 to 90 days $'000	90+ days $'000	Total $'000
Trade receivables	-	-	-	2	2
Total	-	-	-	2	2

Note 14E: Liquidity Risk

ATSB's financial liabilities are trade payables and finance leases on office equipment. Given the financial position of the ATSB and the source and nature of its future funding from the Government, the risk that the ATSB would be unable to meet its financial obligations to its creditors is extremely low.

Maturities for non-derivative financial liabilities 2011

	On demand $'000	within 1 year $'000	1 to 2 years $'000	2 to 5 years $'000	> 5 years $'000	Total $'000
Finance lease	**-**	**19**	**5**	**-**	**-**	**24**
Total	**-**	**19**	**5**	**-**	**-**	**24**

Maturities for non-derivative financial liabilities 2010

	On demand $'000	within 1 year $'000	1 to 2 years $'000	2 to 5 years $'000	> 5 years $'000	Total $'000
Trade creditors	-	368	-	-	-	368
Bank overdraft	160	-	-	-	-	160
Finance lease	-	48	19	5	-	72
Total	160	416	19	5	-	600

The ATSB has no derivative financial instruments

Note 14F: Market Risk

The ATSB holds basic financial instruments which do not expose the Agency to market risks. The ATSB is not exposed to currency or other risks.

The only interest bearing item on the balance sheet is the finance leases on office equipment. The leases were established at a fixed rate of interest and repayments do not fluctuate with movements in market interest rates.

NOTE 15: APPROPRIATIONS

Table A: Annual Appropriations ('Recoverable GST exclusive')

	2011 Appropriations							Appropriation applied in 2011 (current and prior years)	Variance
	Appropriation Act			*FMA Act*					
	Annual Appropriation	Appropriations reduced	AFM	Section 30	Section 31	Section 32	Total appropriation		
	$'000	$'000	$'000	$'000	$'000	$'000	$'000	$'000	$'000
DEPARTMENTAL									
Ordinary annual services	**19,806**	**-**	**-**	**152**	**1,104**	**-**	**21,062**	**(21,143)**	**(81)**
Other services									
Equity	**386**	**-**	**-**	**-**	**-**	**-**	**386**	**(320)**	**66**
Total departmental	**20,192**	**-**	**-**	**152**	**1,104**	**-**	**21,448**	**(21,463)**	**(15)**

	2010 Appropriations							Appropriation applied in 2010 (current and prior years)	Variance
	Appropriation Act			FMA Act					
	Annual Appropriation	Appropriations reduced	AFM	Section 30	Section 31	Section 32	Total appropriation		
	$'000	$'000	$'000	$'000	$'000	$'000	$'000	$'000	$'000
DEPARTMENTAL									
Ordinary annual services	22,423	-	-	357	708	6,500	29,988	(19,755)	10,233
Other services									-
Previous years' outputs	-	(1,312)	-	-	-	-	(1,312)	(280)	(1,592)
Total departmental	22,423	(1,312)	-	357	708	6,500	28,676	(20,035)	8,641

Notes:

The large variance between Total Appropriation and Appropriation Applied in 2010 is largely reflected in the prior year appropriations provided to the ATSB when it was established on 1 July 2009 – $7.6m.

NOTE 15: APPROPRIATIONS CONTINUED

Table B: Unspent Departmental Annual Appropriations ('Recoverable GST exclusive')

	2011	2010
Authority	**$'000**	$'000
Appropriation Act 1 2007-08	**5,101**	5,101
Appropriation Act 1 2008-09	**1,625**	3,025
Total	**6,726**	8,126

Table C: Disclosure by Agent in Relation to Annual Appropriations ('Recoverable GST exclusive')

	Department of Infrastructure and Transport – Portfolio Agency
2011	**$'000**
Total receipts	**1,667**
Total payments	**2,817**

	Department of Infrastructure and Transport – Portfolio Agency
2010	$'000
Total receipts	519
Total payments	2,751

NOTE 16: REPORTING OF OUTCOMES

Note 16A: Net Cost of Outcome Delivery

	Outcome 1		Total	
	2011	2010	**2011**	2010
	$'000	$'000	**$'000**	$'000
Expenses				
Departmental	**22,248**	22,840	**22,248**	22,840
Total	**22,248**	22,840	**22,248**	22,840
Income from non-government sector				
Departmental				
Activities subject to cost recovery	**21**	12	**21**	12
Total departmental	**21**	12	**21**	12
Total	**21**	12	**21**	12
Other own-source income				
Departmental	**1,032**	694	**1,032**	694
Total	**1,032**	694	**1,032**	694
Net cost/(contribution) of outcome delivery	**21,195**	22,134	**21,195**	22,134

NOTE 16: REPORTING OF OUTCOMES CONTINUED

Note 16B: Major Classes of Departmental Expense, Income, Assets and Liabilities by Outcome

	Outcome 1		Total	
	2011	2010	**2011**	2010
	$'000	$'000	**$'000**	$'000
Departmental Expenses:				
Employee benefits	**14,965**	14,095	**14,965**	14,095
Supplier expenses	**6,115**	7,053	**6,115**	7,053
Depreciation and amortisation	**1,165**	1,673	**1,165**	1,673
Finance costs	**2**	6	**2**	6
Write-down of assets	**1**	13	**1**	13
Total	**22,248**	22,840	**22,248**	22,840
Departmental Income:				
Income from Government	**19,806**	22,423	**19,806**	22,423
Sale of goods and services	**1,006**	660	**1,006**	660
Gain on sale of assets	**-**	1	**-**	1
Other Revenue	**47**	45	**47**	45
Total	**20,859**	23,129	**20,859**	23,129
Departmental Assets				
Cash and other equivalents	**833**	22	**833**	22
Trade receivables and other	**7,213**	8,407	**7,213**	8,407
Property, plant and equipment	**1,135**	1,051	**1,135**	1,051
Intangibles	**2,219**	2,745	**2,219**	2,745
Other assets	**137**	104	**137**	104
Total	**11,537**	12,329	**11,537**	12,329
Departmental Liabilities				
Suppliers	**274**	368	**274**	368
Other payables	**415**	752	**415**	752
Interest bearing liabilities	**24**	232	**24**	232
Employee provisions	**4,232**	3,687	**4,232**	3,687
Other provisions	**-**	-	**-**	-
Total	**4,945**	5,039	**4,945**	5,039

Outcome 1 is described in Note 1.1. Net costs shown include intra-government costs that were eliminated in calculating the actual Budget outcome.

NOTE 17: COMPREHENSIVE INCOME (LOSS) ATTRIBUTABLE TO THE ENTITY

	2011	2010
	$'000	$'000
Total Comprehensive Income (loss) Attributable to the entity		
Total comprehensive income (loss) attributable to the Australian Government[1]	**(1,389)**	289
Plus: non-appropriated expenses		
Depreciation and amortisation expenses	**1,165**	-
Total comprehensive income (loss) attributable to the entity	**(224)**	289

1. As per the Statement of Comprehensive Income.

APPENDIX A: Disability reporting

Since 1994, Commonwealth departments and agencies have reported on their performance as policy adviser, purchaser, employer, regulator and provider under the Commonwealth Disability Strategy. In 2007–08, reporting on the employer role was transferred to the Australian Public Service Commission's *State of the Service Report* and the *APS Statistical Bulletin*. These reports are available at <www.apsc.gov.au>. From 2010–11, departments and agencies are no longer required to report on these functions.

The Commonwealth Disability Strategy has been overtaken by a new National Disability Strategy which sets out a ten year national policy framework for improving life for Australians with disability, their families and carers. A high level report to track progress for people with disability at a national level will be produced by the Standing Council on Community, Housing and Disability Services to the Council of Australian Governments and will be available at <www.fahcsia.gov.au>. The Social Inclusion Measurement and Reporting Strategy agreed by the Government in December 2009 will also include some reporting on disability matters in its regular *How Australia is Faring* report and, if appropriate, in strategic change indicators in agency Annual Reports. More detail on social inclusion matters can be found at <www.socialinclusion.gov.au>.

APPENDIX B: Agency resource statement

Table B1: Agency Resource Statement 2010-11

	Actual available appropriation for 2010-11 $'000 (a)	Payments made 2010-11 $'000 (b)	Balance remaining 2010-11 (a) – (b)
Ordinary Annual Services			
Departmental appropriation			
Total	**19,806**	**20,966**	**(1,160)**
Total net resourcing for the ATSB	**19,806**	**20,966**	**(1,160)**

APPENDIX C: Resources for outcomes

Table C1: Resources available for outcomes, 2010–11

Expenses and Resources for Outcome 1

Outcome 1: Improved transport safety in Australia including through: independent, 'no-blame' investigation of transport accidents and other safety occurrences; other safety recording, analysis and research; and fostering safety awareness, knowledge.	Budget* 2010-11 $'000	Actual 2010-11 $'000	Variation 2010-11 $'000
Program 1.1: Australian Transport Safety Bureau			
Departmental expenses			
Ordinary annual services (Appropriation Bill No. 1)	19,806	19,806	-
Revenues from independent sources (Section 31)	945	1,104	159
Total for Program 1.1	**20,751**	**20,910**	**159**
Total expenses for Outcome 1	**21,914**	**22,072**	**158**
Average Staffing Level (number)	**112**	**113**	**1**

* Full year budget, including any subsequent adjustment made to the 2010-11 budget.

APPENDIX D: Occupational health and safety

The ATSB's well-established OH&S Committee dedicated this year to reviewing, maintaining and improving the ATSB health and safety management arrangements. This committee, consisting of ten highly experienced health and safety representatives, has been responsible for a number of workplace initiatives including:

- continued improvements in OH&S reporting arrangements
- establishing a duty fitness and capability sub-working group
- revised first aid procedure
- upgraded investigator issued clothing and equipment
- introduction of 4WD awareness training
- introduction of workplace hazard inspection checklist
- revised helicopter winching procedures (continuing)
- facilitating a health week 9–13 May 2011 that provided employees with the opportunity to receive flu shots and a comprehensive health assessment.

During 2010–11, there were two claims accepted by Comcare and the ATSB compensation premium for next year is expected to increase significantly. There were no reportable incidents under Section 68, nor were there any investigations conducted under sections 29, 46 or 47 of the *Occupational Health and Safety Act 1991*.

In terms of other wellbeing indicators, 3.5 per cent of staff accessed the employee assistance program, and the unscheduled absence rate per full time equivalent was 12 days. The unscheduled absence rate is slightly inflated due to a small number of staff on long term personal circumstances leave.

The ATSB has recently developed a new Workforce Diversity Program that will supersede the parent arrangements currently existing with the Department of Infrastructure and Transport. When implemented, this will allow separate reports on workplace diversity, disability strategies, Indigenous employment strategies and mature age strategies to be generated.

The ATSB has also contracted an external provider to undertake an OH&S audit to evaluate the risk of investigators being exposed to hazards at accident sites and to determine if the necessary systems, procedures, training, awareness, planning and equipment are in place to ensure the risk is managed through elimination or minimisation. The final report will be available in early July 2011.

APPENDIX E: Report under the *Freedom of Information Act 1982*

From 1 May 2011 agencies subject to the *Freedom of Information Act 1982* (FOI Act) are required to publish information to the public as part of the Information Publication Scheme (IPS). The ATSB is an agency subject to the FOI Act. The requirement to publish information is in Part II of the FOI Act and has replaced the former requirement to publish a section 8 statement in an annual report. An agency plan showing what information is published in accordance with the IPS requirements is accessible from the ATSB website <http://www.atsb.gov.au/about_atsb/information-publication-scheme.aspx>

Until 30 April 2011 Section 8 of the FOI Act required each Australian Government agency to publish detailed information about:

- its agency plan
- the structure of the agency's organisation including appointments other than for APS employees
- the functions of the agency, including its decision-making powers and other powers affecting members of the public
- the document categories held by the agency and how members of the public may obtain access to documents
- arrangements for public involvement in the work of the agency
- information routinely provided to the public
- the operational information of the agency.

The following information explains how to request access to documents held by the ATSB under the FOI Act as it applied until 30 April 2011, what records the ATSB holds, and what arrangements the ATSB has in place for outside participation.

Detailed information about the FOI Act is available via the Office of the Australian Information Commissioner (OAIC) website at <www.oaic.gov.au> and the ComLaw website at <www.comlaw.gov.au>.

Table E1 provides information of the number of requests received and handled by the ATSB during 2010–11.

Table E1: Freedom of Information requests made to the Australian Transport Safety Bureau, 2010–11

Volume of requests handled	2010–11
Requests on hand at 1 July 2010 (A)	1
New requests received (B)	13
Requests withdrawn or transferred in full (C)	8
Requests on hand at 30 June 2011 (D)	1
Total requests resolved (A+B-C-D)	5
Timeliness of responses to requests[4]	
Resolved in <30 days	3
Resolved in 31–60 days	2
Resolved in 61–90 days	0
Resolved in >90 days	0

REVIEW OF FOI DECISIONS

No ATSB FOI decisions were subject to internal reviews in 2010–11.

How to lodge a request for information

A request made under the FOI Act must:

- be in writing
- state that the request is an application for the purposes of the FOI Act
- provide enough information to enable the document(s) sought to be identified
- give details of how notices under the FOI Act may be sent (for example, by providing an electronic address to which notices may be sent by electronic communication).

The request may be sent in any of the following ways:

email: FOI@atsb.gov.au
post: Freedom of Information Coordinator
Australian Transport Safety Bureau
PO Box 967
Civic Square ACT 2608
by hand: Freedom of Information Coordinator
Australian Transport Safety Bureau
62 Northbourne Avenue
Canberra ACT 2601

11 These statistics cannot be compared with the deadlines set in the *Freedom of Information Act 1982*, as the Act provides for extensions of time to allow for consultation with third parties, negotiation of charges and other issues. Resolved requests include transfers to other agencies.

FEES AND CHARGES

All application fees, including fees for internal review, have been abolished. No costs will apply where a person requests access to their personal information. If a statutory timeframe for processing an FOI request is not met, no charge will apply.

The ATSB may impose a charge for the work involved in providing access to document(s) to a request under the FOI Act. These charges are imposed in accordance with the FOI Act and the *Freedom of Information (Charges) Regulations*. These charges may relate to the time spent searching for and retrieving relevant document(s), decision-making time, photocopying and other costs. The ATSB usually imposes these charges. The applicant will be notified as soon as possible of an estimate of the charges associated with processing of the request. The request will not be processed until the applicant responds to such notification.

In some circumstances, charges associated with the processing of the request may be remitted. Should the applicant wish to seek the remission of the charges, the criteria considered by the ATSB include whether:

- the payment of the charges or part of the charges would cause financial hardship to the applicant or a person on whose behalf the application was made
- the giving of access to document(s) is in the general public interest or in the interest of a substantial section of the public.

The applicant would need to contact the ATSB in writing or by email and explain why he/she meets the criteria or that the overall circumstances justify not paying the charges. Request for the remission of the charges should be forwarded to the Freedom of Information Coordinator.

It may not be possible to obtain access to all the documents sought in an FOI request. Access is limited by exemptions such as Section 38 – secrecy provisions of the FOI Act.

It is important to note that the ATSB is required to perform its functions under Section 12AA of the *Transport Safety Investigation Act 2003* (TSI Act). A significant amount of information gathered by the ATSB during the course of its investigations is defined as restricted information under Section 3 of the TSI Act, and access to such information is exempt from release under subparagraph 38(1)(b)(i) of the FOI Act.

Any enquiries regarding access to documents in ATSB's possession should be directed to:

Freedom of Information Coordinator
Australian Transport Safety Bureau
PO Box 967
CIVIC SQUARE ACT 2608

Phone: + 61 2 6274 6488
Fax: + 61 2 6247 3117
Email: FOI@atsb.gov.au

RECORDS THE ATSB HOLDS

The ATSB holds records such as:

- human and financial resource management records
- briefing papers and submissions prepared for ministers, parliamentary secretaries, the Cabinet and the Executive Council (most of these are classified documents)
- business papers, briefing notes and meeting records for committees and conferences which the ATSB services or takes part in
- documents prepared by international agencies
- documents relating to the development of legislation
- internal administration documents
- international treaties, memorandums of understanding and international conventions
- legal documents, including legislation, contracts, leases and court documents
- maps and other geographical information
- ministerial responses to parliamentary questions, interdepartmental and general correspondence and papers
- policy documents, recommendations and decisions
- registers of documents, agreements and approvals
- statistics and databases
- technical standards, guidelines, specifications, charts, photographs, drawings and manuals
- accident and incident investigation and notification records.

FUNCTIONS AND DECISION-MAKING POWERS

The ATSB's functions are detailed in section 12AA of the TSI Act and are further described throughout this report.

Certain officers exercise decision-making powers under portfolio legislation and other matters. These responsibilities are set out in the Administrative Arrangements Order (AAO) for the Commonwealth of Australia and relate to transport safety, including investigations.

For a complete and up-to-date copy of the AAO, visit < www.dpmc.gov.au>.

To assist ATSB employees in exercising their powers appropriately and enable access to their decision-making authorities, the ATSB uses an intranet which allows employees to access delegations online. It also allows employees to check information about the powers and authorities assigned under the legislation set out in the AAO and by laws such as the *Financial Management and Accountability Act 1997* and the *Public Service Act 1999*. Powers delegated under the TSI Act are recorded on the back of identity cards for all investigators.

To view a list of manuals and other documents the ATSB uses when making decisions or recommendations that affect the public, contact any office of the National Archives Australia, or visit <www.naa.gov.au>.

ARRANGEMENTS FOR OUTSIDE PARTICIPATION

The ATSB consults widely to gain the views of its stakeholders and clients about future policy directions and program delivery. This includes consulting with other Australian state and territory government departments and agencies, as appropriate, and with foreign governments, particularly in the context of transport safety investigations. For particular policy issues, the ATSB may also contact a very broad range of stakeholders.

APPENDIX F: Advertising and market research

During 2010–11, the ATSB paid $14,577 to the market research agency *instinct and reason* to undertake communications and engagement research with key stakeholders in the transport safety industry as well as members of the public. During 2010–11, the ATSB spent $7604.95 on advertising for recruitment.

The ATSB did not conduct any advertising campaigns during 2010–11.

APPENDIX G: Ecologically sustainable development and environmental performance

During 2010–11, the ATSB continued to seek ways to minimise the environmental impact of its day-to-day activities, including by:

- contributing to the Online System for Comprehensive Activity Reporting (OSCAR), a tool designed to report energy use under the Energy Efficiency in Government Operation policy
- participating in Earth Hour in March 2011, by shutting down power for an hour in the Canberra and interstate offices.

We are committed to an environmentally responsive approach in all of our actions, policies and procedures. Additional initiatives include:

- operating a virtualised IT server environment
- desktop IT equipment utilises energy saving policies, such as automatic turn-off for monitors and hard drives after a period of inactivity (30 minutes and three hours, respectively)
- promotion of the use of portable notebook computers over desktops, as the former use up to 30 per cent less energy to run
- further reduction, by 10 per cent, in the number of printers
- setting each printer's default settings to mono (black) and double-sided printing
- using photocopy paper containing 60% recycled paper, for internal use
- active recycling of our paper waste
- promotion of the separation of general waste into recyclable and non-recyclable items before disposal
- promotion of videoconferencing as an alternative to travel, where practical
- use of motion-sensor-activated office lighting in our offices
- reduction of the effects of direct sunlight on air-conditioning systems by installing blinds or tinting, where appropriate.

APPENDIX H: Grant programs

The ATSB did not provide any grants in the 2010–11 financial year.

APPENDIX I: List of requirements

Part of Report	Description	Requirement	Location
	Letter of transmittal	Mandatory	1
	Table of contents	Mandatory	iii–iv
	Index	Mandatory	138
	Glossary	Mandatory	134–7
	Contact officer(s)	Mandatory	2
	Internet home page address and Internet address for report	Mandatory	2
Review by Secretary			
	Review by departmental secretary	Mandatory	3–8
	Summary of significant issues and developments	Suggested	3–8
	Overview of department's performance and financial results	Suggested	22–4
	Outlook for following year	Suggested	8
	Significant issues and developments – portfolio	Portfolio departments – suggested	Not Applicable
Departmental Overview			
	Overview description of department	Mandatory	9–21
	Role and functions	Mandatory	9–10
	Organisational structure	Mandatory	11
	Outcome and program structure	Mandatory	18
	Where outcome and program structures differ from PB Statements/PAES or other portfolio statements accompanying any other additional appropriation bills (other portfolio statements), details of variation and reasons for change	Mandatory	Not Applicable
	Portfolio structure	Portfolio departments – mandatory	Not Applicable
Report on Performance			
	Review of performance during the year in relation to programs and contribution to outcomes	Mandatory	22–32
	Actual performance in relation to deliverables and KPIs set out in PB Statements/PAES or other portfolio statements	Mandatory	22–3
	Where performance targets differ from the PBS/ PAES, details of both former and new targets, and reasons for the change	Mandatory	Not Applicable
	Narrative discussion and analysis of performance	Mandatory	22–55
	Trend information	Mandatory	7–8, 57–68
	Performance of purchaser/ provider arrangements	If applicable, suggested	Not Applicable
	Significant changes in nature of principal functions/ services	Suggested	8, 32
	Factors, events or trends influencing departmental performance	Suggested	3–4, 25–32,
	Contribution of risk management in achieving objectives	Suggested	70, 71
	Social inclusion outcomes	If applicable. mandatory	119
	Performance against service charter customer service standards, complaints data, and the department's response to complaints	If applicable, mandatory	Not Applicable
	Discussion and analysis of the department's financial performance	Mandatory	23–4
	Discussion of any significant changes from the prior year or from budget.	Suggested	23–4

Part of Report	Description	Requirement	Location
	Agency resource statement and summary resource tables by outcomes	Mandatory	120–1
	Developments since the end of the financial year that have affected or may significantly affect the department's operations or financial results in future	If applicable, mandatory	94
Management Accountability			
Corporate Governance			
	Agency heads are required to certify that their agency complies with the Commonwealth Fraud Control Guidelines.	Mandatory	71
	Statement of the main corporate governance practices in place	Mandatory	69–72
	Names of the senior executive and their responsibilities	Suggested	12–17
	Senior management committees and their roles	Suggested	70
	Corporate and operational planning and associated performance reporting and review	Suggested	70–1
	Approach adopted to identify areas of significant financial or operational risk	Suggested	71
	Policy and practices on the establishment and maintenance of appropriate ethical standards	Suggested	71–2
	How nature and amount of remuneration for SES officers is determined	Suggested	74
External Scrutiny			
	Significant developments in external scrutiny	Mandatory	72
	Judicial decisions and decisions of administrative tribunals	Mandatory	56, 72
	Reports by the Auditor-General, a Parliamentary Committee or the Commonwealth Ombudsman	Mandatory	72
Management of Human Resources			
	Assessment of effectiveness in managing and developing human resources to achieve departmental objectives	Mandatory	73–4
	Workforce planning, staff turnover and retention	Suggested	73–4
	Impact and features of enterprise or collective agreements, individual flexibility arrangements (IFAs), determinations, common law contracts and AWAs	Suggested	73–4
	Training and development undertaken and its impact	Suggested	74
	Occupational health and safety performance	Suggested	122
	Productivity gains	Suggested	3–4
	Statistics on staffing	Mandatory	74
	Enterprise or collective agreements, IFAs, determinations, common law contracts and AWAs	Mandatory	73–4
	Performance pay	Mandatory	74
Assets management	Assessment of effectiveness of assets management	If applicable, mandatory	75–6
Purchasing	Assessment of purchasing against core policies and principles	Mandatory	75–6
Consultants	The annual report must include a summary statement detailing the number of new consultancy services contracts let during the year, the total actual expenditure on all new consultancy contracts let during the year (inclusive of GST), the number of ongoing consultancy contracts that were active in the reporting year, and the total actual expenditure in the reporting year on the ongoing consultancy contracts (inclusive of GST). The annual report must include a statement noting that information on contracts and consultancies is available through the AusTender website.	Mandatory	76

Part of Report	Description	Requirement	Location
Australian National Audit Office Access Clauses	Absence of provisions in contracts allowing access by the Auditor-General	Mandatory	76
Exempt contracts	Contracts exempt from the AusTender	Mandatory	76
Financial Statements	Financial Statements	Mandatory	77–118
Other Mandatory Information			
	Occupational health and safety (section 74 of the *Occupational Health and Safety Act 1991*)	Mandatory	122
	Freedom of information for the period 1 July 2010 to 30 April 2011 inclusive (see terms of subsection 8(1) of the *Freedom of Information Act 1982* as it existed prior to 1 May 2011	Mandatory	123–7
	Advertising and Market Research (Section 311A of the *Commonwealth Electoral Act 1918*) and statement on advertising campaigns	Mandatory	128
	Ecologically sustainable development and environmental performance (Section 516A of *the Environment Protection and Biodiversity Conservation Act 1999*)	Mandatory	129
	Grant programs	Mandatory	130
	Disability reporting – explicit and transparent reference to agency-level information available through other reporting mechanisms	Mandatory	119
	Correction of material errors in previous annual report	If applicable, mandatory	Not Applicable
	List of Requirements	Mandatory	131–3

GLOSSARY

Accident	An investigable matter involving a transport vehicle where: a) A person dies or suffers serious injury as a result of an occurrence associated with the operation of a vehicle. b) The vehicle is destroyed or seriously damaged as a result of an occurrence associated with the operation of the vehicle. c) Any property is destroyed or seriously damaged as a result of an occurrence associated with the operation of the vehicle.
Accident Investigation Commission (AIC)	The Papua New Guinea Government institution responsible for the investigation of safety deficiencies in aviation transport
Aerial work	Aircraft operations, including ambulance and emergency medical services, agriculture, mustering, search and rescue, fire control, and survey and photography
Agricultural operations	Operations involving the carriage and/or spreading of chemicals, seed, fertiliser or other substances for agricultural purposes, including the purposes for pest and disease control
AMSA	Australian Maritime Safety Authority
ASRS	Aviation Self Reporting Scheme
ATSB safety action	Formal activities conducted by the ATSB to initiate safety action by relevant organisations to address a safety issue. Includes safety recommendations and safety advisory notices
Australian Accredited Representative	An Australian appointed representative appointed in the case of safety occurrences involving Australian registered aircraft outside Australian territory, normally an ATSB investigator
Blood-borne pathogen	A blood-borne agent causing disease that can be spread by contamination by blood
CALM buoy	Catenary Anchor Leg Mooring (CALM) buoys are often employed as offshore loading facilities for transferring oil from an onshore or offshore location to an oil tanker, or from an oil tanker to a reception facility. These types of buoys are so named because they employ a plurality of catenary anchor chains to hold the buoy generally in place.
CASA	Civil Aviation Safety Authority
CASA PNG	Civil Aviation Safety Authority of Papua New Guinea
Catastrophic accident	Sudden disastrous investigable matter involving a transport vehicle
Charter	Operations that involve the carriage of cargo or passengers but do not involve scheduled flights; the lack of scheduled flights and fixed departure and arrival points distinguishes charter operations from RPT operations
Commercial air transport	Commercial air transport refers to scheduled and non-scheduled commercial operations used for the purposes of transporting passengers and/or cargo for hire or reward; specifically, this includes high capacity regular public transport (RPT), low capacity RPT, and charter operations
Contributing safety factor	A safety factor that, if it had not occurred or existed at the relevant time, then: • The occurrence would probably not have occurred • Adverse consequences associated with the occurrence would probably not have occurred or have been as serious • Another contributing safety factor would probably not have occurred or existed
CVR	Cockpit Voice Recorder

Defined Interstate Rail network (DIRN) –	The DIRN comprises over 10,000 route kilometres of standard gauge interstate track linking the Capital cities of mainland Australia.
Directly Involved Party (DIP)	Those individuals or organisations that were directly involved in a transport safety occurrence or may have influenced the circumstances that led to an occurrence and/or whose reputations are likely to be affected following the release of the investigation report
Fatal accident	A transport accident in which at least one fatality results within 30 days of the accident
Fatality/Fatal injury	Any injury acquired by a person involved in a transport accident and which results in death within 30 days of the accident
Flight recorder (black box)	A recorder placed in an aircraft for the purpose of facilitating the investigation of an aircraft accident or incident.
Flying training	Flying under instruction for the issue or renewal of a licence, rating, aircraft type endorsement or any other type of flying aimed at upgrading an individual's flight qualification, including solo navigation exercises conducted as part of a course of applied flying training; check and training operations conducted by RPT operators are also included
General aviation (GA)	All flying activities outside of scheduled(RPT) and non-scheduled (charter) passenger and freight operations, including aerial work, flying training, private/business operations, and sports aviation; general aviation in this report does not include Australian non-VH registered aircraft
Hours flown	Calculated from the time that the wheels start, with the intention of flight, to the time the wheels stop after completion of the flight
Human factors	The practice of applying scientific knowledge from varied, mostly human science disciplines such as psychology, medicine, anthropometrics and physiology to designing, building, maintaining and managing systems and products; includes 'Ergonomics'
IFA	individual flexibility arrangement
Immediately reportable matter	A serious transport safety matters that covers occurrences such as: • accidents involving death • serious injury • destruction or serious damage of vehicles or property • when an accident nearly occurs
Incident	An occurrence, other than an accident, associated with the operation of a transport vehicle that affects or could affect the safety of operation
Military aviation	Any aircraft registered to a military authority such as the Australian Defence Force
Minor injury	An injury sustained by a person in an accident that was not a fatal or serious injury and does not require hospitalisation
Missing aircraft	An aircraft is considered to be missing when the official search has been terminated and the wreckage has not been located.
Multi-modal	Across the three modes: aviation, marine and rail
National Transportation Safety Committee (NTSC)	Indonesian Government institution responsible for the investigation of safety deficiencies in aviation, maritime and land transport
NOPSA	National Offshore Petroleum Safety Authority
Occurrences – accidents and incidents	Occurrences are reportable matters: either an immediately reportable matter (IRM) or routine reportable matter (RRM). They comprise accidents, serious incidents and incidents.

OPGGSA	Offshore Petroleum & Gashouse Gas Storage Act 2006
Other aerial work	Includes operations conducted for the purposes of aerial work other than 'flying training' and 'agricultural operations'; operations classified as other aerial work include aerial surveying and photography, spotting, aerial stock mustering, search and rescue, ambulance, towing (including glider, target and banner towing), advertising, cloud seeding, fire fighting, parachute dropping, and coastal surveillance
Portfolio Budget Statements (PBS)	These statements explain the provisions of the Appropriation Bills (Budget Bills), that is, where the appropriate funds are going to be spent.
Private/business	Private flying is conducted for recreational or personal transport, while the business category refers only to the use of aircraft as a means of transport to support a business or profession without the aircraft generating revenue directly.
REEFVTS	Great Barrier Reef and Torres Strait Vessel Traffic Service, a coastal Vessel Traffic Service which has been put in place by the Australian and Queensland Governments to improve safety and efficiency of vessel traffic and to protect the environment.
Regular public transport (RPT)	Refers to aircraft that transport passengers and/or cargo according to fixed schedules and fixed departure and arrival points in exchange for monetary reward; these services can be further divided into low and high capacity aircraft: • Low capacity RPT—An RPT aircraft that provides a maximum of 38 passenger seats, or a maximum payload no greater than 4,200 kg • High capacity RPT—An RPT aircraft that provides more than 38 passenger seats, or a maximum payload greater than 4,200 kg
Registered Training Organisation (RTO)	An organisation registered, in accordance with the Australian Quality Training Framework Standards for Registered Training Organisations, to provide specific vocational education and training and/or assessment services
REPCON	Report Confidential—The aviation confidential reporting scheme
REPCON Marine	Report Confidential—The marine confidential reporting scheme
RET	Department of Resources, Energy and Tourism
RFDS	Royal Flying Doctor Service
Safety action	The things that organisations and individuals do in response to the identification of safety issues in order to prevent accidents and incidents. There are two main types: • ATSB safety action • Non-ATSB safety action.
Safety advisory notice	Formal advice by the ATSB to an organisation or relevant parts of the aviation industry that it should consider the safety issue and take action where it believes it is appropriate; a safety advisory notice is a 'softer' output to a safety recommendation used for less significant safety issues when the available evidence is more limited or when the target audience is not a specific organisation.
Safety factor	An event or condition that increases safety risk; in other words, something that increases the likelihood of an occurrence, and/or the severity of the adverse consequences associated with an occurrence

Safety issues	A safety factor that: • can reasonably be regarded as having the potential to adversely affect the safety of future operations • is a characteristic of an organisation or a system, rather than a characteristic of a specific individual, or characteristic of an operational environment at a specific point in time
Safety recommendation	ATSB safety recommendations are formal recommendations by the ATSB to an organisation for it to address a specific safety issue. They focus on stating the problem (i.e. the description of the safety issue.) They do not identify specific solutions for reducing risk.
SAR	Search and rescue
Serious incident	An incident involving circumstances indicating that an accident nearly occurred
Serious Injury	An injury which is sustained by a person in an accident and which: a) requires hospitalisation for more than 48 hours, commencing within seven days from the date the injury was received b) results in a fracture of any bone (except simple fractures of fingers, toes, or nose) c) involved lacerations which cause severe haemorrhage, nerve, muscle or tendon damage d) involves injury to any internal organ e) involves second or third degree burns, or any burns affecting more than five per cent of the body surface f) involves verified exposure to infectious substances or injurious radiation
SIIMS	Safety Investigation Information Management System
Sports Aviation	This category includes aircraft excluded from the RPT, GA or military aircraft categories including ultralights, glider, hang gliders, rotorcraft and balloon aviation. Most, if not all, sport aviation craft are registered with various sporting bodies rather than with the Civil Aviation Safety Authority (CASA), although exceptions to this rule occur. Sports aviation also includes parachute operations and acrobatics. Sports aviation in this report does not include Australian non-VH registered aircraft.
Statutory agency	A body or group of persons declared by an Act to be a Statutory Agency for the purposes of the *Public Service Act 1999*.
Systemic failure	A breakdown in the system as a whole
Transport safety matter	As defined by *Transport Safety Investigation Act 2003*, these matters consist of occurrences in which: • the transport vehicle is destroyed • the transport vehicle is damaged • the transport vehicle is abandoned, disabled, stranded or missing in operation • a person dies as a result of an occurrence associated with the operation of the transport vehicle • a person is injured or incapacitated as a result of an occurrence associated with the operation of the transport vehicle • any property is damaged as a result of an occurrence associated with the operation of the transport vehicle • the transport vehicle is involved in a near-accident • the transport vehicle is involved in an occurrence that affected, or could have affected, the safety of the operation of the transport vehicle • something that occurred that affected, is affecting, or might affect transport safety.
TSI Act	Transport Safety Investigation Act 2003

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